

Multiple Perspectives on Education and Society in
Newfoundland and Labrador

Editors

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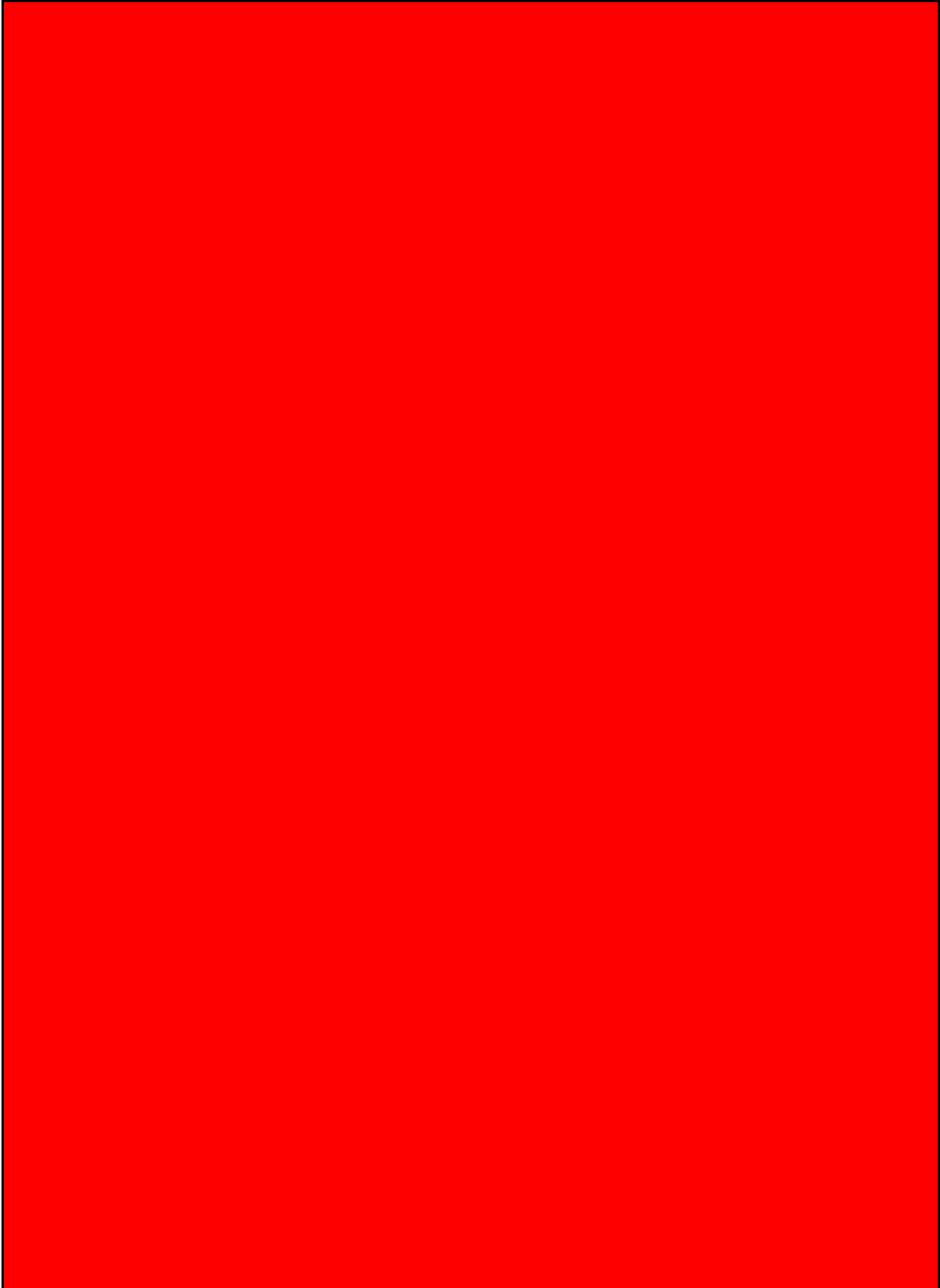
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**MULTIPLE PERSPECTIVES ON EDUCATION
AND SOCIETY IN NEWFOUNDLAND AND LABRADOR**

Editors

**Amarjit Singh, Ishmael J. Baksh,
George Haché and Joan Oldford
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INTRODUCTION

This book, which comprises 1273 pages within 117 chapters, contains all articles published in *the Morning Watch: Educational and Social Analysis*, during the period of 1996 to 2005 (Vol. 23, No. 2-3, Winter, 1996 to Vol.33, No. 1-2, Fall, 2005). The Table of Contents organizes the material according to twelve themes. There may be some overlap; certain articles could have been included under more than one category. The Table of Contents identifies volumes, numbers and years of *the Morning Watch* where articles were originally published. At the end of the book, there is a Name Index of the eighty-six colleagues who contributed articles for publications in *the Morning Watch* during the period of 1996-2005.

The themes or categories are: Science Education, Curriculum Development and Teaching Strategies, Effective Teaching, Parents and Community, Special Education, Technology and Education, Literacy Education, Teacher Education, Rural Education, Change and Structure of Education, Global Market Place, and Other Diverse Issues in Education.

Currently, there are many forces and trends in Newfoundland and Labrador's cultures that appear to be changing the face of education in the province. Included are: a developing oil industry, a surge in pride of being a "Newfoundlander and Labradorian" (as shown in the political discourses of Premier Danny Williams' government vis-a-vis the Federal government), the attitudes and actions of a young generation of local public intellectuals and leaders in business and education, continuous reorganizations of the Faculty of Education and Memorial University in the context of a global marketplace, and an emerging relationship between global corporations and institutions of higher education.

A group of people in the Faculty of Education started *the Morning Watch* as a project in 1973, with the goal of creating a space in the form of a local journal sensitive to local, political, social, cultural, economic, historical, educational, and philosophical nuances. It was imagined that colleagues in the Faculty and the field, who had a vested interest in the state of education and society in our province, could articulate their multiple voices for action. The journal was basically seen as a venue for communicating educational and social ideas relating to different levels of schooling processes among teachers, students, professionals, policy makers, and to some extent, the general public. This focus of *the Morning Watch* basically remains the same today, i.e., a desire to keep our local voices and identities in the context of global forces affecting almost all aspects of our daily lives. It is being said that there are some intangible cultural contexts in this province that we have to articulate and hold on to. We believe these perceived intangible cultural contexts can best be understood through thinking and rethinking the interaction between things local and global in the age of globalization, transnationality and growing surges in diasporic consciousness.

The Morning Watch has been dedicated to this vision since its inception in 1973. What continues to be produced in it by our colleagues is a new local knowledge that attempts to expand on old ideas in response to contemporary issues and concerns as they arise from emerging social forces and trends. The collection of articles in this volume, we hope, will serve as the next step in the journey of examining educational change from multiple perspectives in the context of changing

ideologies in Newfoundland and Labrador society and cultures. It can also be a step towards capturing a sense of hope for what our educational system could be in a fast changing world.

Amarjit Singh (Co- Founding Editor, 1973-) & Joan Oldford (Associate Editor, 2005-)
Professors

St. John's
2007

ACKNOWLEDGEMENT

We wish to thank all the authors who have contributed to *the Morning Watch* since its inception in 1973, and we sincerely hope that others will contribute to *the Morning Watch* in the future.

As we have always maintained, any publication of this kind requires collaboration, cooperation, commitment in terms of time, energy and morale and, above all, an understanding of various people. We once more wish to thank all those who have been encouraging and helpful in generous and diverse ways in the production of *the Morning Watch*. If there is any merit in this anthology, the credit is due to these people. However, the editors bear the sole responsibility for any shortcomings which this anthology might have.

Amarjit Singh
Joan Oldford
St. John's
January 2007

PREFACE

The articles from *the Morning Watch* collected in this volume cover the period 1996-2005. Internationally, these dates fall within the era of what has come to be called globalization, characterised by the rapid, world-wide increase of international trade, capital flows, electronic communications and computerisation, and also the theory of post-modernism. These developments have had a profound effect on educational content and classroom practice. Equally significant has been the concurrent advent of the theory of human capital – the belief that the quality of a country's educational output makes a significant contribution to a country's economic growth and ability to compete in world markets provided the curriculum is modified along scientific, mathematical and technological lines.

The Morning Watch was founded in 1973 by members of the Department of Educational Foundations in a very different world. The Faculty of Education was departmentalised, the main departments being Foundations (History, Philosophy and Sociology of Education), Administration, Psychology and Curriculum, and much of the writing by Faculty members at this period centred around these disciplines. The aims of education were embedded in the liberal-humanist tradition of individual development and social responsibility.

The abolition of departments in the 1980s, and the growth of ideological trends associated with globalization led to a gradual change, and the work of the Faculty took on a wider, inter-disciplinary and more diffuse character, as the articles in this volume exemplify. Increasing attention was paid to the role of the computer in education, the exploration of new trends in mathematics, literacy studies, technological communication, rural and special education and so on, with due recognition of the over-arching importance of globalization.

It is clear, from the diversity of the contributions by over eighty authors, that this volume represents a democratic enterprise. The list of topics is not, however, exhaustive, and some might claim that room could be found, for instance, for a critical analysis of testing, and the exploration of teaching for social justice. Decisions as to content, in the last analysis, must rest with those engaged in the practice and theory of education in Newfoundland and Labrador, who will continue to make *the Morning Watch* a forum for the discussion and advancement of education in the public sphere, an education that will meet the intellectual and social demands of the twenty-first century.

Phillip McCann
Professor Emeritus
St. John's, NL
13 November 2007

TABLE OF CONTENTS

Introduction	i-ii
Acknowledgement	iii
Preface	iv
PART I: Science Education	
Chapter 1: The Challenge of Scientific Literacy (Vol. 33, Nos. 1-2, Fall 2005) Karen Goodnough	2-3
Chapter 2: What is Scientific Literacy and Why Do We Need It? (Vol. 33, Nos. 1-2, Fall 2005) Derek Hodson	4-9
Chapter 3: Fostering Higher Levels of Scientific Literacy: Confronting Potential Barriers to Science Understanding (Vol. 33, Nos. 1-2, Fall 2005) Karen Sullenger	10-17
Chapter 4: Understanding and Addressing Evolutions in “Scientific Literacy” using Web-based Tools (Vol. 33, Nos. 1-2, Fall 2005) G. Michael Bowen	18-26
Chapter 5: Scientific Literacy to Avoid a “Progress Trap” (Vol. 33, Nos. 1-2, Fall 2005) Leo Elshof	27-37
Chapter 6: Scientific Literacy, STS and Assessment: Lessons from TIMSS (Vol. 33, Nos. 1-2, Fall 2005) Anthony W. Bartley & Graham Orpwood	38-51
Chapter 7: Learning in Communities of Practice: The Science Across The Curriculum Project (Vol. 33, Nos. 1-2, Fall 2005) Karen Goodnough	52-59
Chapter 8: Action Research on the Use of WebCT™ with a Late French Immersion Science Class: A Teacher’s Perspective (Vol. 33, Nos. 1-2, Fall 2005) Jessica Web	60-68
Chapter 9: Using Vermicomposting to Increase Environmental Awareness in Primary School: An Action Research Project (Vol. 33, Nos. 1-2, Fall 2005) Norma Aylward, Darlene Halleran & Carol Ann Fagan	69-81

Chapter 10: Electronic Messaging and Student Achievement in Second-Year Science Classes (Vol. 30, Nos. 1-2, Fall 2005) Michael Barbour & Michael Collins	82-88
--	-------

PART II: Curriculum Development and Teaching Strategies

Chapter 11: "Where I Come From" - A Collection of Class Poems (Vol. 31, Nos. 1-2, Fall 2003) Joan Oldford	90-148
Chapter 12: Gadgetry, Magic, Storytelling and Teaching: The Computer Conference as Writerly Text (Vol. 29, Nos. 3-4, Winter 2002) Elizabeth Yeoman	149-156
Chapter 13: Technology-based Learning Environments as Trojan Horses (Vol. 28, Nos. 1-2, Fall 2000) Elizabeth Murphy	157-168
Chapter 14: THE NEW MATH....TEACHER! (Vol. 27, Nos. 3-4, Winter 2000) Paul Gosse	169-180
Chapter 15: Re-thinking Teaching Strategies: Implications of the APEF English Language Arts Curriculum for Pre-Service and In-Service Teachers (Vol. 26, Nos. 3-4, Winter 1999) Roberta F. Hammett	181-190
Chapter 16: The Nature of Student-Tutor Interactions: A Look Inside a Math Help Center (Vol. 26, Nos. 3-4, Winter 1999) John Grant McLoughlin	191-200
Chapter 17: Placement Testing and Remedial Mathematics for Post-Secondary Students: Prescription for Success? (Vol. 26, Nos. 3-4, Winter 1999) Chris Brown	201-213
Chapter 18: Reflections on Religion in Schools of Newfoundland and Labrador (Vol. 26, Nos. 1-2, Fall 1999) Harry G. Elliott	214-219
Chapter 19: Teaching French through Music in the French Immersion Kindergarten Classroom (Vol. 32, Nos. 3-4, Winter 2005) Sharyn Power-Piercey & Elizabeth Murphy	220-230
Chapter 20: School Curriculum: A Place for Social Justice (Vol. 32, Nos. 1-2, Fall 2004) William T. Fagan	231-237
Chapter 21: The Role of Mediating Teachers in Newfoundland's New Model of Distance Education (Vol. 32, Nos. 1-2, Fall 2004) Michael Barbour & Dennis Mulcahy	238-253

Chapter 22: The Relationship of Starting Time and Cumulative Time to Second Language Acquisition and Proficiency (Vol. 28, Nos. 3-4, Winter 2001) Elizabeth Murphy	254-265
Chapter 23: Intelligence and Education (Vol. 27, Nos. 1-2, Fall 1999) Tim Seifert	266-276
Chapter 24: The Nature of Student-Tutor Interactions: A Look Inside a Math Help Center (Vol. 26, Nos. 3-4, Winter 1999) John Grant McLoughlin	277-286
Chapter 25: Secondary and Tertiary School Constructions of English Studies in Atlantic Canada (Vol. 25, Nos. 3-4, Winter 1998) Barrie R.C. Barrell	287-292
Chapter 26: Career Guidance: A Shot in the Dark (Vol. 24, Nos. 1-2, Fall 1996) Edward Drodge	293-297
PART III: Effective Teaching	
Chapter 27: Don't Smile Until Christmas: An Historical Look at Effective Teaching (Vol. 25, Nos. 1-2, Fall 1997) Barrie Barrell	299-308
Chapter 28: One Man's Perspective of Discipline in the Schools: Part I (Vol. 24, Nos. 3-4, Winter 1997) Irwin L. King	309-321
Chapter 29: Part II: Some Important Aspects of Classroom Discipline (Vol. 24, Nos. 3-4, Winter 1997) Irwin L. King	322-345
Chapter 30: Voices of Teacher Interns and the Fear of Classroom Management and Discipline (Vol. 24, Nos. 3-4, Winter 1997) Amarjit Singh	346-362
Chapter 31: Toward a Comprehensive Practical Guide for Reflective Classroom Management (Vol. 24, Nos. 3-4, Winter 1997) Amarjit Singh	363-368
Chapter 32: Reflecting on Teaching (Vol. 25, Nos. 3-4, Winter 1998) Wayne Williams	369-370
Chapter 33: Reflecting on What was being Reflected (Vol. 25, Nos. 3-4, Winter 1998) Cindy May-Follett	371-372

Chapter 34: Constructivism: From Personal Beliefs to Theoretical Principles (Vol. 30, Nos. 1-2, Fall 2002) Elizabeth Murphy	373-380
Chapter 35: A Teacher's Interpretation of Motivational Strategies: Tools to Help Students Succeed (Vol. 24, Nos. 1-2, Fall 1996) Barbara A. O'Keefe	381-390
Chapter 36: Considerations on Motivation: Self-Assuredness and Agency (Vol. 24, Nos. 1-2, Fall 1996) Timothy L. Seifert	391-398
Chapter 37: An Examination of the Relationship Between Teacher Expectations, Attribution Theory and Student Achievement (Vol. 24, Nos. 1-2, Fall 1996) Craig Janes	399-410
Chapter 38: What's Worth Measuring? Teachers, Hard-to-Measure Outcomes, and Accountability (Vol. 25, Nos. 3-4, Winter 1998) Jean Brown & Bruce Sheppard	411-415
Chapter 39: Equality of Educational Attainment in Newfoundland (1993) (Vol. 23, Nos. 3-4, Winter 1996) Jeff Bulcock & Ron Dawe	416-433
PART IV: Parents and Community	
Chapter 40: Mothers' Involvement in their Children's Reading: The SORT Program (Vol. 29, Nos. 3-4, Winter 2002) Joan Oldford-Matchim & Amarjit Singh.....	435-447
Chapter 41: Fathers' Involvement in their Children's Reading: The SORT Program (Vol. 29, Nos. 1-2, Fall 2002) Joan Oldford-Matchim & Amarjit Singh.....	448-461
Chapter 42: Parents in the School: The Impact of Fathers' Participation in Children's Education in Newfoundland (Vol. 27, Nos. 1-2, Fall 1999) Tammy Constantine, Garry Davis, Karen McCarthy, & Amarjit Singh.....	462-473
Chapter 43: Some Observations on School-Community-Family Relations in Selected Schools in Newfoundland (Vol. 26, Nos. 3-4, Winter 1999) J. Andrews, L. Andrews, D. Coady, R. Cowan, K. Dwyer, P. Edwards, C. Finn-Pike, V. Harris-Anstey, & Amarjit Singh.....	474-485

Chapter 44: Cultural and Social Capital, Parents' Involvement and Academic and Social Achievement of Children in Schools: Reflecting on Some suggestions From A South Asian American Mother (Vol. 32, Nos. 1-2, Fall 2004) Amarjit Singh	486-499
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PART V: Special Education

Chapter 45: Where Are We Going on Pathways? (Vol. 27, Nos. 1-2, Fall 1999) Lynda Younghusband	501-507
Chapter 46: Inclusion Education: Reviewing the Criticism to Find Direction (Vol. 28, Nos. 3-4, Winter 2001) David Philpott	508-521
Chapter 47: When "Pathways" Cross (Vol. 30, Nos. 1-2, Fall 2002) Kimberly Maich	522-536
Chapter 48: Informed Consent in Special Education Conceptual Definitions and Implications for Practice (Vol. 32, Nos. 1-2, Fall 2004) David Philpott	537-552

PART VI: Technology and Education

Chapter 49: Perceptions of Effective Web-Based Design for Secondary School Students: A Narrative Analysis of Previously Collected (Vol. 32, Nos. 3-4, Winter 2005) Michael Barbour	554-571
Chapter 50: K-12 Virtual Schools and Schooling (Vol. 32, Nos. 3-4, Winter 2005) Doug Furey & Elizabeth Murphy	572-581
Chapter 51: Making your own Educational Materials for the Web (Vol. 32, Nos. 3-4, Winter 2005) Bruce Mann	582-590
Chapter 52: Broadband in Teaching and Learning in Newfoundland and Labrador (Vol. 31, Nos. 1-2, Fall 2003) Elizabeth Murphy & Rob Power	591-600
Chapter 53: Digital Video in Distance Education at Memorial University: Choosing a Format among the Alternatives (Vol. 30, Nos. 1-2, Fall 2002) Kevin J. O'Leary & Elizabeth Murphy	601-611

Chapter 54: Re-Conceptualizing Distance Education: Implications for the Rural Schools of Newfoundland and Labrador (Vol. 30, Nos. 1-2, Fall 2002) Dennis Mulcahy	612-640
Chapter 55: Global Village or Global City? The Urban Communications Revolution and Education (Vol. 28, Nos. 3-4, Winter 2001) Phillip McCann	641-650
Chapter 56: WEBCT: Serving Educators in Newfoundland and Labrador (Vol. 28, Nos. 1-2, Fall 2000) Bruce L. Mann	651-659
Chapter 57: Network-Intensive Research at Memorial University (Vol. 28, Nos. 1-2, Fall 2000) Bruce Mann, Mark Whitmore & Wilf Bussey.....	660-666
Chapter 58: Future Directions for Rural Schools in Newfoundland and Labrador: Is the "Virtual School" the Way to Go? (Vol. 27, Nos. 1-2, Fall 1999) Dennis M. Mulcahy.....	667-682
Chapter 59: Evaluating Online Discussion Forums: Usenet Newsgroups and the Classroom (Vol. 26, Nos. 1-2, Fall 1998) Michael K. Barbour.....	683-693
Chapter 60: Technological Determinism and the English Classroom (Vol. 24, Nos. 3-4, Winter 1997) Barrie Barrell	694-698
Chapter 61: Motor Learning, Metacognition and Teacher Competencies: Critical Competitors in Educational Technology (Vol. 25, Nos. 3-4, Winter 1998) Bruce L. Mann	699-705
Chapter 62: Three Dimensions of Leadership in a Telelearning Environment: School Networking, Collaborative Teaching and Open Administration (Vol. 25, Nos. 1-2, Fall 1997) Ken Stevens	706-710
PART VII: Literacy Education	
Chapter 63: The Literacy Maze: Practice without Policy (Vol. 29, Nos. 1-2, Fall 2002) William T. Fagan.....	712-726
Chapter 64: Literacy Development: A Community Perspective (Vol. 29, Nos. 1-2, Fall 2002) Mike Wadden & Bill Fagan	727-732

Chapter 65: Validating the IN and FOR Distinctions of the Workplace Literacy Program (Vol. 27, Nos. 1-2, Fall 1999) William Fagan & Della Coish	733-740
Chapter 66: Exploring Literacy Development: A Comparative Study of Low-achieving Grade 9 Students in Newfoundland and Alberta (Vol. 26, Nos. 1-2, Fall 1998) William T. Fagan.....	741-753
Chapter 67: Adult Basic Education (ABE) and Literacy: Newfoundland and Labrador (Vol. 25, Nos. 1-2, Fall 1997) William Fagan.....	754-766
Chapter 68: Early Literacy Development: Circumventing the Home-School Gap (Vol. 24, Nos. 3-4, Winter 1997) William T. Fagan.....	767-777

PART VIII: Teacher Education

Chapter 69: The Peter Effect: Encouraging the Writing Habits and Attitudes of Preservice Teachers (Vol. 32, Nos. 3-4, Winter 2005) Joan Oldford	779-786
Chapter 70: Improving the Connections: Facilitating Student Internships (Vol. 28, Nos. 3-4, Winter 2001) Harry Elliott	787-794
Chapter 71: Views of Post-secondary Instructors and their Employers on the Importance of Pre-service Teacher Training (Vol. 26, Nos. 3-4, Winter 1999) Beverly Fleet & George Hache	795-807
Chapter 72: The Reflective and Critical Internship Program (RCIP Model) and the QUAD Relationship (Vol. 25, Nos. 3-4, Winter 1998) Andrea M. Rose.....	808-816
Chapter 73: Partnerships in Education: The Internship Program (Vol. 25, Nos. 3-4, Winter 1998) Nancy Hiscock Pugh	817-820
Chapter 74: The Principles of Collaborative Partnerships Between School Districts and the Faculty of Education (Vol. 25, Nos. 3-4, Winter 1998) Alice Collins & Judith Mellor	821-822
Chapter 75: Reflecting on What was being Reflected (Vol. 25, Nos. 3-4, Winter 1998) Cindy May-Follett.....	823-824

Chapter 76: Reflecting on Teaching (Vol. 25, Nos. 3-4, Winter 1998) Wayne Williams	825-826
Chapter 77: Linking Three Cultures in Teacher Internship (Vol. 25, Nos. 3-4, Winter 1998) Amarjit Singh	827-833
Chapter 78: The Teaching Internship at Memorial University: A University-School-District Partnership (Vol. 25, Nos. 1-2, Fall 1997) Dennis Treslan	834-839
Chapter 79: Structural Change Combined with Training: Effective Site-Based Management (Vol. 24, Nos. 3-4, Winter 1997) Lorraine Devereaux	840-847
Chapter 80: Professional Development: What do we Know and Where are we Going? (Vol. 24, Nos. 3-4, Winter 1997) Jean Brown & Bruce Sheppard	848-865
Chapter 81: Collaborative Research and the Voices of Seconded Teachers as Internship Supervisors (Vol. 23, Nos. 3-4, Winter 1996) Amarjit Singh, Andrea Rose, Clar Doyle & William Kennedy.....	866-880
Chapter 82: Training and Networks (Vol. 25, Nos. 3-4, Winter 1998) George J. Hache	881-887
PART IX: Rural Education	
Chapter 83: Why Rural Education? (Vol. 24, Nos. 1-2, Fall 1997) Dennis M. Mulcahy	889-901
Chapter 84: Critical Perspectives on Rural Education Reform (Vol. 26, Nos. 3-4, Winter 1999) Dennis M. Mulcahy	902-920
Chapter 85: Is it just Me? Self-Doubt and Delusion in Moving to Shared Decision-Making: The Case of Red River Elementary (Vol. 25, Nos. 1-2, Fall 1997) Jean Brown & Bruce Sheppard	921-932
PART X: Change and the Structure of Schools	
Chapter 86: Rethinking Globalization as a Guiding Paradigm for Educational Change (Vol. 32, Nos. 1-2, Fall 2004) Barrie Barrell	934-947
Chapter 87: Reflective Notes on Modernity, Changing Organizations and Teacher Education (Vol. 28, Nos. 3-4, Winter 2001) Amarjit Singh	948-964

Chapter 88: Multi-Age at Gander Academy (Vol. 28, Nos. 3-4, Winter 2001) Dennis Mulcahy	965-977
Chapter 89: Reflective Notes on Downsizing and Change Processes (Vol. 28, Nos. 1-2, Fall 2000) Amarjit Singh	978-993
Chapter 90: Multi-age and Multi-Grade: Similarities and Differences (Vol. 27, Nos. 3-4, Winter 2000) Dennis Mulcahy	994-1001
Chapter 91: One School District's Experience in Building a Learning Organization (Vol. 24, Nos. 1-2, Fall 1996) Bruce Sheppard & Jean Brown	1002-1012
Chapter 92: School-Based Management: Implications for School Improvement in Newfoundland and Labrador (Vol. 23, Nos. 3-4, Winter 1996) Jerome Delaney	1013-1019
Chapter 93: What are Learner-Centered Schools? (Vol. 26, Nos. 3-4, Winter 1999) Jerome G. Delaney.....	1020-1028
Chapter 94: Forecasting the Future: Speculating on the Next 25 Years (Vol. 25, Nos. 1-2, Fall 1997) Terry Piper.....	1029-1035
PART XI: Global Marketplace	
Chapter 95: Globalization and the Teaching Profession (Vol. 26, Nos. 1-2, Fall 1998) Ki Su Kim.....	1037-1041
Chapter 96: The State and Education in Newfoundland in the Age of Market Globalization (Vol. 25, Nos. 1-2, Fall 1997) Ki Su Kim.....	1042-1049
Chapter 97: Globalization: Some Implications for Educators (Vol. 23, Nos. 3-4, Winter 1996) William Kennedy.....	1050-1056
Chapter 98: World Englishes, Curriculum Change and Global Career Opportunities (Vol. 23, Nos. 3-4, Winter 1996) Amarjit Singh	1057-1067

PART XII: Other Diverse Issues in Education

Chapter 99: The Effectiveness of School Councils: Views of Chairpersons (Vol. 27, Nos. 3-4, Winter 2000) Alice Collins	1069-1079
Chapter 100: School Councils: A Pilot Study (Vol. 23, Nos. 3-4, Winter 1996) Alice Collins	1080-1090
Chapter 101: Joking in the Classroom: Student Views in Atlantic Canada (Vol. 23, Nos. 3-4, Winter 1996) Wilfred B.W. Martin & Ishmael Baksh.....	1091-1099
Chapter 102: Reflections on Religion in Schools of Newfoundland and Labrador (Vol. 26, Nos. 1-2, Fall 1998) Harry G. Elliott	1100-1105
Chapter 103: Starting a Thesis, Folio, Project or Internship Proposal (Vol. 26, Nos. 1-2, Fall 1998) Gary H. Jeffery	1106-1112
Chapter 104: Teachers, Child Abuse, and the Coordination of Services to Children and Youth: Policy Revisions in Newfoundland and Labrador (Vol. 26, Nos. 1-2, Fall 1998) Rosonna Tite	1113-1121
Chapter 105: Teacher Stress in One School District of Newfoundland and Labrador: A Pilot Study (Vol. 28, Nos. 1-2, Fall 2000) Lynda J. Younghusband.....	1122-1142
Chapter 106: Yes, Virginia, There is a Teacher Shortage and it may get a Whole Lot Worse! A Personal Reflection on a Current Issue (Vol. 29, Nos. 1-2, Fall 2002) Dennis Mulcahy	1143-1147
Chapter 107: The Background to the Royal Commission on Education (Vol. 29, Nos. 3-4, Winter 2002) Phillip McCann	1148-1155
Chapter 108: Newfoundland Humor as a Survival Strategy (Vol. 32, Nos. 3-4, Winter 2005) Gordon Ralph	1156-1167
Chapter 109: The "New" Morning Watch (Vol. 24, Nos. 1-2, Fall 1996) Terry Piper.....	1168-1169

Chapter 110: Cultural Diversity and Interface Issues (Vol. 32, Nos. 1-2, Fall 2004) David F. Philpott, Wayne C. Nesbit, Mildred F. Cahill & Gary H. Jeffery	1170-1176
Chapter 111: Teacher Demand in Newfoundland and Labrador (Vol. 30, Nos. 1-2, Fall 2002) David Dibbon	1177-1192
Chapter 112: Practising “Cultural Work” and “Roving” Leadership (Vol. 27, Nos. 3-4, Winter 2000) Amarjit Singh	1193-1212
Chapter 113: First-Semester University Performance Under A Changing System of High School Grading and Admission Requirements: Decision Errors and Cut Points (Vol. 26, Nos. 1-2, Fall 1998) Robert K. Crocker	1213-1222
Chapter 114: Notes on Overseas Consulting and Project Management (Vol. 25, Nos. 3-4, Winter 1998) Amarjit Singh	1223-1242
Chapter 115: Participation in Post-Secondary Education in Newfoundland (Vol. 23, Nos. 3-4, Winter 1996) Samuel McGrath	1243-1253
Chapter 116: School Retention and the Cancellation of OAC's” Can Ontario Learn from Newfoundland's Experience? (Vol. 23, Nos. 3-4, Winter 1996) Noel P. Hurley	1254-1258
Chapter 117: Dasein (Vol. 32, Nos. 3-4, Winter 2005) Tim Seifert	1259-1269
Name Index	1270-1273

SCIENCE EDUCATION

The Challenge of Scientific Literacy

**Karen Goodnough, Special Guest Editor
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One of the goals of science education (K-12) in Atlantic Canada is to help all students develop high levels of scientific literacy. Although conceptions of scientific literacy vary, many conceptions are multi-faceted and extend well beyond simply learning the concepts, principles, and theories of science. For example, science curriculum framework documents in New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island define scientific literacy as an evolving combination of the science-related attitudes, skills, and knowledge students need to develop inquiry, problem-solving, and decision-making abilities; to become lifelong learners; and to maintain a sense of wonder about the world around them” (Department of Education, 2002, p.1). Helping students develop understandings, skills, and dispositions that align with this notion of scientific literacy is no easy task, especially in the current landscape of educational change that places many demands on educators—coping with more administrative responsibilities, working with fewer resources, teaching increasingly diverse student populations, and staying abreast of new innovations in teaching and learning.

This special edition of the *Morning Watch* is devoted to exploring the notion of scientific literacy and how to foster scientific literacy. Each of the eight contributors raises a unique perspective. Derek Hodson, Professor, Ontario Institute for Studies in Education of University of Toronto, addresses the nature of scientific literacy and why it is important, and argues for a notion of scientific literacy that relies more on learning about science than learning the concepts, principles, and theories of science. Karen Sullenger, Professor, University of New Brunswick, identifies barriers to students learning science and how to overcome these barriers. Michael Bowen, Associate Professor, University of New Brunswick, explores the changing nature of scientific literacy as a result of new insights about student learning and the nature of science itself, and describes a new web-based tool that can be used to foster scientific literacy. Leo Elshof, Assistant Professor, Acadia University, presents a “critical” notion of scientific literacy and questions whether science education can prepare students for a society in which complex socio-scientific problems and issues abound. Anthony Bartley, Professor, Lakehead University, and Graham Orpwood, Professor, York University, examine the science-society-technology (STS) emphasis of scientific literacy in the context of assessment and instruction, and argue that educators need to embrace STS as an important component of science teaching and learning. Karen Goodnough, Assistant Professor, Memorial University of Newfoundland, focuses on the importance of supporting science teacher learning in achieving the goal of scientific literacy, and describes how a professional community of practice can be supported and nurtured. Jessica Webb, Grade Nine Teacher, St. Paul’s Junior High School, Eastern School District, shares the outcomes of a classroom-based action research project in which she integrated Web Course Tools (WebCT) into her face-to-face science teaching. Norma Aylward, Carol Ann Fagan, and Darlene Halleran, K-6 teachers at Bishop Feild Elementary School, Eastern School District, share the outcomes of an action research project that helped students develop environmental awareness through participation in a composting project. In summary, this volume explores the “what,” “why,” and “how” of scientific literacy. The issues raised have

import for many stakeholders, including children, educators, parents, and citizens in general.

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WHAT IS SCIENTIFIC LITERACY AND WHY DO WE NEED IT?

**Derek Hodson
O.I.S.E., University of Toronto**

The history of science education is easily traced through the slogans, catchphrases and rallying calls that have come and gone: “Children as scientists”, “Process, not product”, “Science for all”, “Children making sense of the world”, and so on. In recent years, the call for increased levels of scientific literacy has assumed centre-stage in science education rhetoric in several parts of the world and organizations such as the American Association for the Advancement of Science (AAAS, 1989, 1993), the Council of Ministers of Education, Canada (CMEC, 1997) and UNESCO (1993) have used it to frame major efforts to reform the science curriculum. Its prominence in the contemporary science education literature prompts the two questions in my title.

What Is Scientific Literacy?

The term scientific literacy first appeared in the US educational literature in papers by Paul Hurd (1958) and Richard McCurdy (1958). It was enthusiastically taken up by others as a useful rallying call, but had little in the way of precise or agreed meaning until Pella, O’Hearn, & Gale (1966) suggested that it comprises an understanding of the basic concepts of science, the nature of science, the ethics that control scientists in their work, and the interrelationships of science, technology and society. Almost a quarter century later, Science for All Americans (AAAS 1989, p.4) drew upon very similar categories to define a scientifically literate person as “one who is aware that science, mathematics, and technology are interdependent human enterprises with strengths and limitations; understands key concepts and principles of science; is familiar with the natural world and recognizes both its diversity and unity; and uses scientific knowledge and scientific ways of thinking for individual and social purposes.” To suggest that debate had been stagnant between 1966 and 1989 would be to seriously misinterpret matters. Indeed, following the work of Milton Pella and his co-workers, there was a period of intense debate, definition and counter-definition, culminating in Gabel’s (1976) detailed analysis of the literature in terms of eight dimensions (organization of knowledge; intellectual processes; values and ethics; process and inquiry; human endeavour; interaction of science and technology; interaction of science and society; interaction of science, technology and society) and nine categories of educational objectives (Bloom’s six categories of cognitive objectives plus three affective objectives – valuing, behaving and advocating). As Roberts (1983) comments, “What is immediately striking about Gabel’s model is that it includes, under the definition of scientific literacy, every category of science education objectives . . . it now means virtually everything to do with science education” (p. 22). In more recent times, the Royal Society’s (1985) assertion that scientific literacy “can be a major element in promoting national prosperity, in raising the quality of public and private decision making and in enriching the life of the individual” (p. 9) underlines the key distinction between those who see scientific literacy as the knowledge, skills and attitudes deemed essential to a career as a professional scientist, engineer or technician, and those who see it as the capacity to access, read and understand material with a scientific and/or technological dimension, make a careful appraisal of it, and use that evaluation to inform everyday decisions, including those made at the ballot box. According to Klopfer (1969), this

distinction should be reflected in a differentiated school science curriculum: "One curricular stream...designed for students planning to enter careers as scientists, physicians, and engineer...the other...designed for students who will become the nonscientist citizenry . . . housewives, service workers, salesmen etc. ... Differentiation of students (should) begin at about age fourteen when they choose the high school they will attend" (p. 203). As a variant of this position, the authors of *Beyond 2000: Science Education for the Future* (Millar & Osborne, 1998) state that the science curriculum from age five to sixteen (the years of compulsory schooling in the UK) should be a course to enhance general scientific literacy, with more specialized science education delayed to later years: "the structure of the science curriculum needs to differentiate more explicitly between those elements designed to enhance 'scientific literacy', and those designed as the early stages of a specialist training in science, so that the requirement for the latter does not come to distort the former" (p. 10). Considerations such as these prompt the second question: Why do we need scientific literacy?

Why Do We Need Scientific Literacy?

Reviewing what they describe as an extensive and diverse literature, Thomas and Durant (1987) identify a range of arguments for promoting scientific literacy. Among the perceived benefits to society as a whole, they identify the familiar economic argument (to which I return below), enrichment of the cultural health of the nation and intellectual life in general, and enhancement of democracy. On the latter score, they note that increased scientific literacy "may be thought to promote more democratic decision-making by encouraging people to exercise their democratic rights), which may be regarded as good in and of itself; but in addition, it may be thought to promote more effective decision-making (by encouraging people to exercise their democratic right wisely" (pp. 5-6). In my view, whether wise decision-making is the likely outcome of enhanced scientific literacy in the wider community depends crucially on how scientific literacy is defined and how it is translated into curriculum practice. Thomas and Durant identify several strands of argument that increased scientific literacy would be of major benefit to science itself, including increased numbers of 'recruits', greater support for scientific research and more realistic public expectations of science. Shortland (1988), for example, states that confidence in scientists and public support for science depends on "at least a minimum level of general knowledge about what scientists do" (p. 307). More significantly, support depends on whether the public values what scientists do. Of course, it is naïve to assume that enhanced scientific literacy will inevitably translate into simple trust of scientists and unqualified support for the work they choose to do. A scientifically literate population, with a rational view of the world, a predisposition to think critically and the capacity to appraise scientific evidence, is much more likely to challenge the priorities of scientific research and the direction of technological innovation (Hodson, 1994).

Arguments that scientific literacy confers individual benefits come in a variety of guises. For example, it is widely argued that scientifically literate individuals have access to a wide range of employment opportunities and are better prepared to respond to the introduction of new technologies. Moreover, they are better able to cope with the demands of everyday life in an increasingly technology-dominated society, better positioned to evaluate and respond appropriately to scientific and pseudoscientific arguments used by advertisers, commercial organizations and

politicians, and better equipped to make important decisions that affect their health, security and economic well-being.

In recent years, the economic argument has become dominant, especially in North America. It is both powerful and persuasive, and it carries a substantial sub-text intended to create a particular view of the world. Its power is located in the way it influences how we think about society and our relations with others, and the consequent impact on how we act in the world. When school confronts students, almost daily, with a language that promotes economic globalization, increasing production and unlimited expansion, it is implicated in the manufacture and maintenance of what Bowers (1996, 1999) calls the myths of modernity. Some would claim that the resulting mind-set puts at risk the freedoms of individuals, the spiritual well-being of particular societies, and the very future of the planet. In Edmund O'Sullivan's (1999, p.27) words:

Our present educational institutions which are in line with and feeding into industrialism, nationalism, competitive transnationalism, individualism, and patriarchy must be fundamentally put into question. All of these elements together coalesce into a world view that exacerbates the crisis we are now facing.

What is abundantly clear is that little of the world's poverty, injustice, terrorism and war will be eliminated, and few of the world's environmental crises (ozone depletion; global warming; land, air and water pollution; deforestation; desertification; and so on) will be solved, without a major shift in the practices of western industrialized society and the values that sustain them. Interestingly, one of the keys to ameliorating the current situation may lie in increased levels of scientific literacy among the world's citizens – an idea explored a little in the following section and at length in Hodson (2003).

What Can We Conclude?

Where does all this propaganda for scientific literacy leave us? It seems that the case for greater scientific literacy, and the kind of curriculum proposals that would follow from it, change with social context. They are a product of their time and place: they do not easily cross national or cultural boundaries (Tippens, Nichols, & Bryan, 2000) and do not transfer comfortably from one era to another. We should also note that as science itself changes, so our view about what counts as legitimate scientific literacy also changes. The kind of science currently studied in conventional science curricula (the work of Newton, Darwin and Dalton, for example) bears very little resemblance to the kind of research carried out in the laboratories of the early 21st century, and the values that underpin this research are very far removed from the traditional portrayal of science as the disinterested pursuit of objective truth. Given the increasing industrialization and militarization of the scientific enterprise, claims for the cultural and ethical value of scientific literacy seem hopelessly misplaced, if not downright dishonest. At the same time, claims that scientific literacy builds economic prosperity have become more believable – to some – as they have become more stridently promoted.

Are there any elements of scientific literacy that are valid in all contexts and for all time? Is there a conception of scientific literacy that can re-direct science and

technology along more socially just, environmentally responsible and ethically sound lines? Yes, if scientific literacy means knowing what scientific resources to draw on, where to find them and how to use them (Fourez, 1997). Yes, if the real function of scientific literacy is to help people learn to think for themselves and to reach their own conclusions about a range of issues that have a scientific and/or technological dimension. Yes, if scientific literacy is sought not because it improves the economy, produces more technological 'goodies' or provides job opportunities for individuals, but because it liberates the mind. Yes, if it enables us to decide which experts to trust and which conclusions to rely on.

We are increasingly dependent on scientists and the inquiries they conduct to tell us about the safety hazards associated with various products and procedures, the toxic effects of pesticides, pharmaceuticals and other materials we encounter in everyday life, the threats to our health posed by the proximity of toxic waste dumps, nuclear power plants and overhead power lines, and the large scale compromising of environmental health through loss of biodiversity, increasing desertification, pollution and global warming. It is crucial, therefore, that each of us understands how reliable and valid data are collected and interpreted. It is crucial, too, that we understand the ways in which contextual interests can and do shape the inquiry and its interpretation and reporting. Without this insight, we have no alternative but to take reports that blame or exonerate at face value.

What I am arguing here is that scientific literacy for active citizenship, responsible environmental behaviour and social reconstruction lies more in learning about science than it does in learning science. No science curriculum can equip citizens with thorough first-hand knowledge of all the science underlying all important issues, but it can enable them to understand the significance of knowledge presented by others and it can enable them to evaluate the validity and reliability of that knowledge and to understand why scientists often disagree among themselves on major matters such as global warming, without taking it as evidence of bias or incompetence. It is not my intent to argue that knowledge of the major concepts, ideas and theories of science is unimportant; indeed, it would be a very curious state of affairs indeed to claim scientific literacy and admit to knowing no science at all. Nevertheless, my contention is that we should place considerably more emphasis on those elements of the history, philosophy and sociology of science that would enable students to leave school with a robust knowledge about the nature of scientific inquiry and theory building, an understanding of the role and status of scientific knowledge, an ability to understand and to use the language of science, some insight into the sociocultural, economic and political factors that impact the priorities and conduct of science, and some experience of conducting authentic scientific investigations.

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Fostering Higher Levels Of Scientific Literacy: Confronting Potential Barriers To Science Understanding

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The nature of science literacy and the possibility of being scientifically literate are critical debates within the science and science education community (e. g. Hodson, 1993, 1998; Shamos, 1996). Another critical aspect of the science literacy debate is why so few learners choose to or are able to pursue science studies or science careers. It is this aspect of science literacy that interests me. What is it about learning science that is so difficult or challenging that most students choose not to continue taking science beyond the required courses and most adults feel uncomfortable participating in science-related debates, even those that impact their communities? Part of the answer is addressed by Derek Hodson elsewhere in this issue B the understanding of science portrayed in schools does not reflect the nature of science as it is practiced or as it influences decision making. Nor do the science experiences provided in schools prepare graduates to participate as informed citizens. Another part of the answer, and the focus of this article, is that there are potential barriers which can make science confusing and even nonsensical to students.

Research over the last forty years reveals four potential barriers to learners developing successful science understandings B prior experiences and beliefs, language, a learner's preferred way(s) of meaning making, and culture. In this article, I consider two questions B in what ways can each of these four potential barriers inhibit learners' understandings and what are the implications of not addressing these potential barriers?

Prior Experiences as a Potential Barrier

Before children enter school, they construct descriptions of the world around them that may be different from the descriptions scientists use. Using interviews and observing children solving problems, researchers from a number of countries are interested in the kinds of explanations children develop about their world (Driver, 1985, 1994; Harlen, 1992, 1996; Pfundt & Duit, 1991). One thing seems clear; even young children are likely to hold on to their own explanations about the world despite what they are told in school. Unless students are faced with experiences that challenge their conceptions, they are unlikely to change their models of how things work or accept alternative explanations/descriptions as useful or important (Suping, 2003).

For example, what is a bounce? Young children are likely to say a bounce is what happens when something hits the floor or wall and doesn't break. With a number of more years of schooling, the preservice teachers in my "Introduction to Teaching Science" course describe a bounce as an object changing direction when it hits another object and that pieces of broken objects can bounce. When pushed, they say that even if it is only millimetres the object must leave the floor or wall to be considered a bounce. Both of these explanations are different from the current scientific definition of bounce.

Within the science community, a bounce is described in terms of a collision. A collision occurs when any two surfaces come into contact; collisions are either elastic or inelastic. Why do scientists find it easier to think of the contact of one object with another as a kind of collision? Most likely, because they explored more kinds of objects contacting one another than one person would encounter in their own environment. For scientists, the definition of bounce used by children to get around the house and stay out of trouble when throwing the ball is just not adequate. DiSessa (1983) calls these childhood concepts developed prior to formal instruction phenomenological primitives. These explanations are embedded in the learners' models of the world before they are introduced to scientists' explanations. One outcome of these differences in explanations is that science appears to be "unnatural." When we teach science as the way the world works, science descriptions carry a sense of truth. What happens to the learners' own explanations of the world? If the science descriptions are in conflict with explanations held by the student, by other people in the student's life, or by people within the student's culture, we may create conflict within the student. Especially, if we treat the science description as the truth, require that in school you will give the scientist's answer and, as a result, discredit other explanations.

Language as a Potential Barrier

There are a number of ways language can make understanding science more difficult, such as alternative meanings of words, students' lack of appropriate vocabulary, the specialized vocabulary used by scientists, and English as a second language. A second outcome, for children who cling to their own explanations, may be a feeling of disenfranchisement. Students may begin to separate school explanations and home explanations. Or, students may begin to believe they are unable to learn science--it is just too difficult to figure out. Still others may reject the science explanation as all too unpalatable and accept their own or their community's explanation instead.

Learners may develop an understanding of the meaning of certain words that is different than the scientists' meaning for these words. People outside the science community and scientists themselves give these same words other meanings and/or use them in other contexts, resulting in slight nuances to the original meaning. These alternative meanings can make understanding and/or accepting the scientist's use of the word or term difficult. For example, the concepts living and nonliving are commonly introduced in the primary grades. The meaning of the terms living and nonliving are confounded by the meaning of the terms alive and dead. Interviews with primary-aged children reveal that many of them consider cars, batteries, and fire as living and not unreasonably so. In everyday language we describe those and other nonliving objects as being alive, e.g. a live wire or the fire "came to life" when we added wood, or as having died, e.g. the car or battery died. Learners also have trouble accepting that wood for the fireplace, bones that their dogs chew, and leather gloves are categorized by scientists as living.

Community is another concept often introduced in elementary school. Scientists define a community as the interaction of living organisms within a bounded system. A community could vary in size from a drop of water to a log or pond or entire forest depending where the boundaries are established. Within the general culture, communities are determined by groups of residents who have some common identity.

Communities in this sense focus on the activities, needs and care of human beings. A scientist on the other hand treats the human being as one species among many, with a specific habitat (address) and niche (job/function) within the community.

A final example is the concept force. We talk about force as one aspect of a field of influence surrounding objects. That is, a force field is a complex of pushes and pulls. However, the everyday use of the term force includes such phrases as, "I was forced to go to bed without my dinner", "Someone forced their way into the house", "My Mom works on the police force," and in the movies, "May the force be with you." Young learners must grapple with a range of meanings for most terms. How do they decide which is the "right" meaning or which meaning is "right" in which situation? These distinctions may be some of the most challenging aspects of learning science there are and contribute to children's beliefs that science is unnatural.

There is a gap between our ability as learners to observe and the language available to communicate our observations and thoughts; between what I call knowledge and information. Exploring the properties of objects is common throughout students' science learning. Some of these properties are colour, smell, shape, size, weight, distance, texture, taste, sound, flexibility, chemical reactivity, and pattern. Students may find it difficult to be "successful" observers in each of these areas if they lack the vocabulary to capture and share their observations. For example, students may know there are differences in sounds or colour, but lack vocabulary to differentiate particular colours or sounds. How many smells are we able to describe only as "stink"; how large is our stink vocabulary? It seems this gap is even more problematic when learners are unable to articulate ideas which they "feel" they know but are unable to defend their choice of solution or explain how they decided on an answer beyond a shoulder shrug or "I don't know." Consequently, I believe students who say, "I know, I just don't know how to explain it."

When asked to develop a list of words that describe various properties, preservice teachers can list fifty or more in each category. The English language is rich in synonyms to capture nuance. If we want to close the gap between what even young learners are able to observe and think we must provide them with the sensory vocabulary to share their ideas and understandings. In addition, scientists use words that are not used in everyday language. One study indicates that over 750 new science related terms are introduced from kindergarten to grade six (Scruggs & Mastropieri, 1993). In addition, some young learners require more time than others to develop reading and writing skills. If they are expected to understand that the meaning of words can change in different contexts, the task of reading and writing can be that much more difficult.

Science language can be even more challenging for ESL learners, especially if science words have different meanings within the school or community. When students are learning the school language as a second or third language, the student's intellectual, social, and physical capabilities may be masked. Research indicates that language can interfere with students' test results and interactions between students and their teachers (Mastropieri & Scruggs, 1991).

Culture as a Potential Barrier

Culture is the milieu in which a person lives; there are multiple cultures in our lives which we either participate in or observe. A learner may move from home to community to school to religious or social group to sports group in the course of a day. Some of these cultural encounters mesh seamlessly with our expectations. We are comfortable there and even like being there. Other cultural encounters are different and don't meet our expectations B we are less comfortable or may feel alienated. Science is an enterprise B it is something a group of people do and as such, there is a culture of science. What happens when learners are introduced to/encounter the culture of science in schools?

Most of us teach in increasingly multicultural classrooms. Young learners often come to school with different explanations of the same phenomena that scientists are interested in describing. Whether from family, religious or other cultural origins, these explanations may make accepting the science descriptions problematic. As with models of the world, young learners construct from their own experiences. These cultural models may be considered "natural" while the science explanations are considered "unnatural" or "counter intuitive." Another consequence of differing explanations is that young learners could be "caught" between their culture and their teacher. Having to choose between explanations valued in school and those valued by their parents and/or members of their community can cause stress and perhaps rejection of one view or the other.

The culture of science itself is poorly represented in the experience of many young people. The problem is not just insufficient science in the school curriculum, but that science and technology are presented in the schools from a knowledge-based perspective, typically divorced from social, political, and ethical considerations and debate. Such problems are most acute in relatively rural, economically-undeveloped areas such as Atlantic Canada, where the lack of technical and scientific infrastructure outside the schools gives students little exposure to science and technological culture through avenues other than the standard school curriculum. The dominant cultural group (science versus other knowledge or dominant versus minority groups) does not always value and/or understand other cultural groups. Young students may come from local traditions that may be different than those of their teacher or schools. For example, the way the children interact in school and interact with their family and community may be different in terms of what knowledge, measures of success, or behaviour are valued.

Neglect of science-as-culture can lead to a clash of culturally-based, local knowledge with scientific knowledge and the culture it represents. The well-documented failure of communication between fishers and federal fisheries scientists that contributed to the collapse of the Newfoundland cod stocks in the early 1990s is a vivid example of this dangerous problem. Finlayson (1994) documents how federal scientists charged with managing fish stocks often ignored the information and insights of local resource users, while resource users in turn mistrusted scientists and lacked sufficient understanding of their methods and aims to enter into a dialogue. The result was an environmental and human tragedy rooted in a clash of cultures.

If students are to be prepared for a technological world, and if the school science reform is to positively impact all students, then teachers, researchers, and

policy-makers have to recognize the culture of science and how it is reflected in the schools. A well-documented consequence of not dealing with the culture of science and technology is that student interest in science and mathematics typically fades after the early grades. Fewer students opt for post-secondary concentrations, and attitudes and opinions about science shared by students and parents are shaped more by popular culture, mass media, and entertainment than by formal learning in science classrooms (Osbourne, 2003; Peacock, 2000; Schibeci & Lee, 2003; Solomon, 1996).

Preferred Ways of Learning as a Potential Barrier

Educators believe we all have preferred ways of making sense of the world. The challenge is finding a way to describe these different ways of making meaning; more challenging is finding ways to teach that first address and later expand each student's ability to learn in different ways. Different models have been developed to describe these preferences. Learning styles and multiple intelligences are examples of current models. Learning styles models suggest people prefer to understand the world by relying on one or two of their senses predominately. These preferences are referred to as learning modalities or in some cases, learning styles. The four modalities most often recognized are visual, auditory, tactile, and kinesthetic. One study suggests attending to students' learning styles results in improved achievement scores and behaviour (Klavas, 1994). In that study, where over half the students preferred tactile or kinesthetic modalities, students were presented concepts first in their preferred learning styles, next in their second for practice, and finally reviewed the ideas verbally. According to another learning styles researcher, science needs to be taught as more than a subject and a method. Some learners' styles connect with the world less through logic than with aesthetics and feelings, through affective avenues, personal commitment, and acting (Samples, 1994).

Howard Gardner (1993; 1995) proposes another model which he calls multiple intelligences. Gardner defines intelligence as abilities to solve problems recognized as valuable within a culture. He identifies eight intelligences – linguistic, logical-mathematic, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic – as a starting point in the discussion and argues that there may be other intelligences or even subintelligences. In posing his theory of multiple intelligences, Gardner argues that "school should be to develop intelligences and to help people reach vocational and avocational goals that are appropriate to their particular spectrum of intelligences" (p.9). He contends that linguistic and logical-mathematical intelligences are most valued in schools today and that learners whose strengths are not in those areas often find school an unsuccessful experience.

Even when the spectrum of intelligences is identified, young learners can face difficulties in having their particular strengths and interests recognized. Although there is growing evidence that broadening our notions of intelligence and using an activity-based as well as language-based assessment instruments provides us with better information about young learners, Gardner argues the work in this area must be considered promising but not conclusive. Most instruction, especially in middle and high school, favours visual and auditory learning styles and linguistic, logical, and mathematics intelligences over others. Moreover, school science portrays the processes used by the science community as visual/auditory and logical/linguistic when we know imagination and creativity are also necessary.

While educators acknowledge we all learn differently, it is important to note that there is less agreement about which of the models/theories best accounts for that difference (Miller, 2001; Oneil, 1990; Stellwagen, 2001). As educators, we need to sort through the literature for ourselves and decide which models provide the best insight to address the needs of our students.

In Conclusion

Until we begin grade by grade, unit by unit, experience by experience to consider the possibility of potential barriers to learners understanding scientists' ideas and ways of working, we will continue the present pattern of most students having negative science experiences and feeling disenfranchised. Students will continue to choose not to study science when given the choice and not to pursue science careers. Most high school students will become adults who are uncomfortable discussing science and who feel incompetent to challenge the science ideas and research that impact their lives.

There is considerable research describing students' alternative conceptions of scientists' explanations and definitions. Science education leads the research in this area with researchers in social studies and other disciplines beginning to build on their research. What we need is to apply the research locally. Each of us as teachers needs to look critically at the science curriculum for concepts, language, and experiences that could act as potential barriers for our students understanding science. Once these potential barriers are identified, we need to make talking about them with students -- that is, confronting the discrepancies between our everyday beliefs and explanations with scientists' explanations B part of the content of our curriculum.

The consequence may be that we need to reduce the number of science concepts we want students to learn initially and provide them time and experiences that allow them to grapple with these differences. If learners acknowledge that scientists think and work differently than others and explore ways in which scientists think and work, we will have more students who are more comfortable with and want to participate in the culture of science.

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Understanding and Addressing Evolutions in "Scientific Literacy" Using Web-based Tools

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What does it mean to know (about) science? This question is at the core of the concept of "Scientific Literacy", and this concept is under considerable discussion amongst both professional communities (scientists, science educators, politicians) and the general public. Although there is a general consensus that scientific literacy is important, both for ones' own life as well as for effective participation in the democratic process, there is much less consensus as to exactly what science literacy is. Over the past two decades the concept of "science literacy" has undergone some considerable changes as we have come both to better understand student learning and to gain new insights into the actual laboratory and field practices of scientists. To adapt to these changes in what we perceive "science literacy" to be, modified classroom approaches need to be considered. This paper first provides an overview of the concept of literacy about "science" and how perspectives on it are changing, and then introduces a web-based tool for use by high school science students that is designed to help them develop these new literacies.

"Science" as a discipline and a field of information can be characterized in three ways (following Hodson, 1998). Firstly, one can view science as a body of knowledge claims...the "facts" about a subject such as those found in textbooks and curriculum documents. These knowledge claims are supported by data collected by the scientists which are summarized and constructed into patterns from which arguments are constructed about what the patterns are, what they represent, and why they are significant (see Latour, 1987). Scientists present these findings at conferences where they are submitted to critique by their peers, often revise their interpretations based on that feedback, submit the findings to journals where they are further critiqued, revised and, if published, form the foundation for the claims found in textbooks. The ways in which these knowledge claims emerge and how they are influenced by the investigatory practices of the different disciplines, the social and professional interactions, the personalities of the individuals involved, the traditions in the discipline together represent both the local and broad contexts in which the studies and claims came to be and can generally be called the "Nature of Science", the second possible characterization. Finally, the third way in which science can be characterized is as a field of practice and that knowing "science" means to be able to engage oneself in practices which are reasonable analogues of the types of investigatory and data generation practices which scientists themselves engage in.

Understanding about the last two characterizations has grown considerably in the last three decades, most particularly through the efforts of sociologists of science who study scientists conducting their day-to-day work in their laboratories, field settings, at conferences, and so on. These sociologists of science report that how scientists actually engage in their work often little resemble the practices of 'how science is done' that is reflected in their scientific publications and presentations (Bowen & Roth, 2002; Latour, 1997; Latour & Woolgar, 1986; Pickering, 1995) not a particularly surprising finding given that text usually underdetermines action (although there's a bit more to it than that in the sociology of science findings). Nor, for that matter, does their work much resemble what students learn about in school settings.

What has been learned in the last 20 years through ethnographic studies of science research settings is that science is full of much more creativity, personality conflict, argumentation and disagreement, and "by the seat of the pants" approaches than was previously documented (see Bagioli, 1999 for a collection of articles supporting this). Not only that, but that floundering with initial approaches, trying multiple methods with ongoing failure (reporting only the successes in journals), personal dislikes and enmities, post-hoc creation of hypotheses and so on are not uncommon practice in the conduct of research (Collins & Pinch, 1998a, 1998b; Bowen & Roth, 2002; Roth & Bowen, 1991, 2001; Latour & Woolgar, 1986; Pickering, 1995; Rabinow, 1996, Knorr-Cetina, 1999). This is a very different science than the clean and ordered "objective" science we teach in textbooks, sounding very "messy" at times and much less ordered and organized in actual practice. Effectively, journal articles sanitize science research and usually present science research as "clean" and often non-problematic in practice and outcome; not the rough and tumble "science-in-the-making" from which the claims actually emerged (although the intended recipient audience, other scientists in the discipline, probably understand the ambiguities, intricacies and subjectivities present in the practices so for them this sanitization is less problematic; it is the non-target audience using those articles that often do not bring an interpretive framework that allows a contextualized interpretation). Apart from that, as a field matures practices become more standardized as issues of method are resolved, but such is not the case at the beginning as new areas of research and methods are refined and developed.

For a considerable period of time, school science was based on developing students' literacy in only one facet of science, that of the science "content" (Chinn & Malhotra, 2002; Claxton, 1991; Desautels et al, 2002). Often, classes were (and, often still are; Lemke, 1990; Tobin, 1990) based on memorizing and lectures reinforced by prescriptive science activities where students are provided step by step instructions and, often, told what outcomes to expect. One can see that a problem emerges from this. School science curriculum is based on a foundation of the existent science claims, but does little to engage the students in the practices from which those claims emerged. At best, students are engaged in mere confirmatory activities alone (also known as "cookbook" labs). In essence, we often expect students to more or less quickly absorb information and practices that represent the mature aspects of the field, but not themselves experience any of the processes through which those understandings of phenomena developed. The reason this is a problem is because what we are finding in science education research is that effective learning of the concepts requires having the students engage in the practices themselves as experienced by the scientists. Or at least reasonable analogues of them (Bowen, 2005; Crawford et al, 1999; Crawford, Kelly, Brown, 1999; Roth & Lee, 2002; Lee & Roth, 2002).

This perspective represents a considerable revolution in science curriculum and definitions of science literacy, because a more current definition of science literacy is one which involves educating students in all three characteristics of science (as defined above) (Bencze et al, 2003; Bencze & Elshof, 2004; Hodson, 1999, 2003). Since the 1990's an approach to science teaching called authentic science inquiry (see Roth, 1995) has been promoted in both research literature and in faculties of education. This was in response to research that suggested that students understanding of science concepts and practices was inextricably intertwined with their understanding of, and experience with, scientific practicesCmost especially

those with considerable similarity to those reported by sociologists studying the work of scientists. As originally defined, "authentic" science problems in classrooms are ill-defined, contain uncertainties and ambiguities with respect to methodology and potential outcomes, are driven by the learner's current knowledge, involve participation in a community which negotiates both practices and meaning of the data, and involves students working on (related but) different problems where they can draw on each others' experiences and insights (Roth, 1995).

In actual classroom practice over the years, these "authentic" science investigations have involved fusions of science and technology (such as designing and building robot arms and bridges) (Bencze, 2001; Bencze & Lemelin, 2004; Lemelin & Bencze, 2001), investigating forest and stream ecosystems (Roth & Bowen, 1993), creating and testing different soaps by manipulating the oils used, engaging students in archaeological activities (Barbara Crawford, pers. comm.), and conducting watershed systems analysis to advise local municipalities on housing development impacts (Lee & Roth, 2002). Some high school science programs have shifted over to being entirely based on "authentic" investigations through series of problem-based learning activities. However, these are "ideal" authentic inquiry environments and do not represent the norm. Much of the enactment of inquiry in science classrooms involved having students develop their own methods to prove a science concept or address a question provided by the teacher and, often, students were still addressing the same question across the entirety of the classroom.

Research conducted in these different settings as students engaged in varying types of independent inquiry investigations provided insights into what led to improved student understanding of both scientific concepts/facts as well as practices and the nature of science. From that research came insights into what aspects of actual science practices needed to be incorporated into the design of classroom activities to further improve student understanding of concepts and science itself and thus meet the new standard of science literacy as defined above.

Extended Immersion: In conducting science activities scientists immerse themselves in a collection of related problems for a considerable period of time. Most classrooms start and finish student science activities in just a single period. Research into student learning in different science inquiry settings supports students being engaged in long-term activities where they have the opportunity to both engage in extended reflection on their activity as well as have the opportunity to revise their methodological approaches as they go along. A considerable advantage of such an approach is that, just like in real science, students have the opportunity to ask more, and more complex, questions as they gain increased familiarity with the concepts and use of tools in the topic area. It is from such an immersion that truly authentic inquiry investigations emerge driven by student interest.

"Do-Ability" in science: Students are frequently instructed that they "must repeat your treatments five times", or some other such absolutist statement. However, the practice of science seems to have two boundaries on what are considered acceptable practices and replication. Firstly, accepted methodological practices are usually those which are do-able in the context the scientist is working in. Standards often shift as the context of investigation shifts. The idea that there is a single agreed upon method for investigation seems to have emerged from tightly controlled physics laboratory investigations, but poorly reflect much of the initial

(science-in-the-making) investigatory work done in most of the sciences. The degree of acceptable replication is also a shifting standard, although it is related to the degree of confidence in the outcome. In many field sciences even infrequent activities by a few individual organisms are reported in the literature. In those contexts, scientists "hedge" their claims more, but are still able to publish their findings. In laboratory contexts, however, higher standards for control and replication are held to be necessary to draw claims. However, the standard of evidence varies widely across disciplines and is generally that which is considered acceptable to others working in the area as opposed to being some arbitrarily set standard. Thus, it is members of the community which negotiate acceptability, and engaging students in such a setting is found to improve their understanding both of the nature of science and the interpretation of scientific claims.

Appropriating and Adapting Tools: In the classroom, much of science investigation is dependent on standardized approaches. Air tracks, frictionless cars, reagent kits, dissecting fetal pigs all represent an attempt to standardize student learning within prescribed activities intended to confirm concepts presented in textbooks. Yet, these teaching practices contradict the current understandings of how to develop science literacy in students. In science, it is common, particularly when investigating new areas, to appropriate new materials as one develops methodologies to answer emergent questions. Students participating in science learning environments where they are expected to develop their own methodologies, often by adapting available equipment to address their questions, gain both an increased understanding of science practices as well as increased competency at addressing problems outside of the classroom. Engaging students in inquiry activities empowers them as it implicitly teaches students that they can both identify problems and develop strategies to address them using resources available to them (not provided to them by someone else).

Extended Community: Science communities are characterized by a membership that is heterogeneous with respect to distribution, experience and age. Classroom activities are usually confined to only those students in a particular room at a particular time. Research suggests that enhanced student learning and improved scientific literacy occur when students have the chance to interact with others, other than just their immediate classroom, around and about the projects that they are working on. This is particularly true when it is peers that act as arbiters of acceptable practices and tool use, much as is the case in science itself.

Informal Communications: Scientists frequently gather and communicate with each other in both formal and informal sessions, and some research suggests that it is in the informal interactions that considerable insight into acceptable practices (such as the negotiations around acceptable analysis techniques, data collection methodologies, and replication occur). If students in a classroom all participate in doing the same investigation they have much less to talk about than if they are working on a variety of different (but related) activities. By structuring classes so that students have both formal and informal times to discuss their project work with each other, they are implicitly having modeled to them the social environment that scientists engage in to conduct their work. Again, this develops students' understanding of the actual practices of science itself.

Some research also suggests that enacting authentic science@, including the practices above, is insufficient to maximally develop students understanding of the Nature of Science (Lederman et al., 2001). This research suggests that their classes must include explicit instruction about NOS as part of the curriculum. By developing classrooms in which students can both enact authentic practices followed by reading case studies of scientists work with an emphasis on the perspectives on NOS that they themselves engaged in, students will develop a nuanced understanding of science practices and science claims and, hence, an enhanced science literacy.

As the reader may gather, there are some issues with attempting to create science classrooms that involve opportunities for extended communication within heterogeneous student groups where their science inquiry work is presented to and critiqued by a broad community of both students and adults a central one of which is the difficulty of achieving these in a school setting. This is where current web-based technologies offer advantages for achieving more complex scientific literacy, especially in those areas of the characteristics not normally addressed in classrooms discussed earlier. Although software tools exist for collaborative group project work, such tools are usually only locally available, expensive, and intended for use by adults in professional projects. Internet tools that have existed are, again, commercial (i.e., cost money) and oriented towards adult-level projects.

However, a current initiative to provide high-school students (Grade 7 to 12) with web-based tools to conduct and publish collaborative science projects is available in Atlantic Canada (and the rest of Canada). "The Canadian Electronic Journal of High School Science & Technology Projects" (<http://www.thejournal.ca>) was designed to allow students to (i) submit their school science projects for on-line publication (either reviewed or un-reviewed) for use by other students, and (ii) collaborate with other students on inquiry science projects through a collection of on-line collaborative tools designed for science projects.

The provided tools and site design of "The Journal" was modeled on the different types of activities that sociology of science studies reported that scientists do as part of conducting their research. Overall, the tools are intended to provide students the opportunity to develop, conduct, analyze and present entire projects and from that should emerge students who engage in long term, extended immersion projects. Through discussion in their extended and distributed community of learners (Lave & Wenger, 1991) students have the opportunity to creatively develop new tools and approaches to inquiry activities.

The publishing/reviewing environment, where reviewing (using formative feedback) will be done by student teachers as part of their science teacher education program, helps science students present and defend their ideas in a public sphere in a fashion paralleling the experiences of scientists with their publications. Unlike in most of schooling where the knowledge generation efforts of students reach a limited audience (often only the teacher), in this web environment student reports can be subject to continued critique and discussion by their peers (much like the knowledge generated by scientists) and can contribute to new science inquiry work done by other students at later dates.

To help students conduct the science inquiry projects, a collection of on-line collaboration tools are provided. These on-line tools (available through a web browser) include:

- a collaborative writing tool so that notes, project reports, etc. can be produced (with embedded tables and images)
- a collaborative spreadsheet tool so that data from research projects can be organized and (simply) analyzed by members of a research group
- a graphing tool so that research results can be graphed and discussed
- a drawing tool for preparing illustrations of equipment
- a task lists manager
- a personal calendar/scheduler so that project work can be coordinated
- discussion forums tools so that structured commentary can be obtained
- chat tools that allow synchronous communication as data entry & writing are occurring.
- simple data generating tools (reaction timers, stop watches, unit converters)
- a blogging tool with commenting feature
- a simple polling/questioning tool
- an internal "e-mail" tool
- and many others.

These tools represent analogues of the communication networks used by scientists to discuss their work in progress and their final knowledge claims. The tools are designed to encourage students to form collaborative project groups both within and across schools (and provinces) so that they can negotiate appropriate project methodologies, discuss analysis and presentation of data in different forms, and, finally, negotiate conclusions and implications of their studies. Reports collaboratively written using the writing tool can then be submitted to the journal for review and publication (as can documents produced outside of the project area).

Apart from the advantages for developing enhanced science literacy within a school, this web site offers the opportunity for students to participate in conducting science projects with students in other parts of Canada in ways previously not possible. Other on-line collaboration tools exist, but science disciplines often construct knowledge claims based on data representable in tables and graphs and being able to collaboratively share these is a necessary part of collaborating in science inquiry. Through this site, students can share not just text, but also data which they can collaboratively analyze and discuss in "real time" using the chat and messaging tools. This extended community of practitioners better provides students the opportunity to not just improve their understandings of the practices of science, but to actually engage in activities which are more analogous to those used by scientists themselves so that an enhanced science literacy (as defined at the beginning by Hodson, 1999) develops. Thus, for students, science shifts from being just about "knowledge", to being also about shared and negotiated practices and social connections. The Journal site is hosted by a Canadian university and administered by researchers and graduate students who work in science education (unsurprisingly, some research is being conducted with and about the site). Teachers and their students can use the site without charge.

This article represents a summary of ideas emerging both from my own work and from that of my friends and colleagues: J. Lawrence Bencze, Wolff-Michael Roth, Derek Hodson, Norman Lederman, Fouad Abd-El-Khalick, Heidi Carlone and Barbara Crawford. Teachers interested in an introduction to the sociology of science literature should consider first reading Collins & Pinch, 1998a which is a quite accessible introduction.

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Scientific Literacy To Avoid A 'Progress Trap'

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In his 2004 Massey lectures Ronald Wright suggested that "our faith in progress has ramified and hardened into an ideology" (Wright, 2004, p. 4). In effect we have raised the idea of progress to the status of cultural 'myth'. Wright states that myth is an arrangement of the past, whether real or imagined, in patterns that reinforce a culture's deepest values and aspirations. Myths are so fraught with meaning that we live and die by them. They are maps by which cultures navigate through time (Wright, 2004, p. 4).

In drawing upon the historical record Wright identified how numerous cultures across the planet from Easter Island to the Sumerians of Iraq and the Maya of Mexico have destroyed their 'natural capital', the ecosystems which ultimately supported their civilization. As Wright states: "Progress has an internal logic that can lead beyond reason to catastrophe. A seductive trail of successes may end in a trap" (Wright, 2004, p. 5). In a similar vein, "Collapse: How Societies Choose to Fail or Succeed" by Jared Diamond (2005) maps out the history of collapsed civilizations and the reasons for their ultimate decline and downfall. Humans like to believe in linear predictable changes to their way of life and economy. We cling to this belief despite the fact that human history tells us that enormous changes due to technological development, social upheaval and environmental collapse have often been the driving forces which determine the wellbeing and survival of societies. Diamond identifies a number of common interrelated and interdependent factors which can lead to societal collapse:

[H]uman societies and smaller groups may make disastrous decisions for a whole sequence of reasons: failure to anticipate a problem, failure to perceive it once it has arisen, failure to attempt to solve it once it has been perceived, and failure to succeed in attempts to solve it (Diamond, 2005, p. 438).

This paper will explore these factors in turn while considering the nature of the critical scientific literacy necessary to help young people create a society which avoids these systemic societal failures and the "progress traps" which ensue. The question whether current conceptualizations of science education are adequate to this task is one worth considering given the enormous implications. The unfortunate reality is that examples of societal failures in terms of our unsustainable use of both natural and nonrenewable resources are becoming more and more frequent. From the collapse of the cod fishery to the problem of global climate change, our collective ability to resolve complex socioscientific problems has proven sorely inadequate. Canadians have a right to ask why, if our established approaches to science education and scientific literacy are adequate, Canada manages to rank so low in terms of environmental performance when compared to other industrialized countries. In a recent study Canada ranked 28th out of the 30 countries in the Organization for Economic Cooperation and Development (OECD) on twenty nine environmental indicators (Sustainable Planning Research Group, 2005). For example, the Simon Fraser report indicates how inefficient we are in terms of energy and water consumption; our per capita consumption of energy is almost double the OECD

average and other northern countries, like Norway and Sweden, have per capita energy consumption rates at least 25% lower than Canada.

In fairness, Canadian's scientific and ecological literacy, or lack thereof, is only part of the problem. Nonetheless, the effectiveness of traditional forms of science and technological education cannot escape scrutiny.

If young people become both aware of and active in shaping public science and technology policy, they may yet help halt the widespread ecosystem destruction and biodiversity collapse we witness today, and in doing so improve the quality of life for everyone. This cannot be done in the isolation of science classrooms alone; an active scientific literacy must also connect in deep and systemic ways with cultural, ecological, geographical and mathematical literacies if this is to become a reality (Sadler, 2004; Hurd, 2002; Kolsto, 2001).

We live in what has been called the "Anthropocene", a geologic epoch in which humankind has emerged as the "potentially intelligent" globally dominant species, capable of virtually reshaping the face of the planet and its ecosystems through both intention and accident (Schellnhuber et al., 2004, p. 1). This immense responsibility is unprecedented in human history; we have collectively become 'planetary engineers' in the sense that our ability or inability to manage our relationship with the Earth ecosystems will have profound consequences for all living things. The UN predicts that world population will rise by 40% from the current 6.5 billion to 9.1 billion by 2050 (BBC, 2005) and this fact alone will put an unprecedented strain on the ability of natural systems to meet human demands. Global energy consumption is growing at approximately two percent per year and is projected to double by 2035 and triple by 2055 (Friedmann & Homer-Dixon, 2004). In large developed countries upwards of 85% of this energy is derived from fossil fuels which when burned generate carbon dioxide and contribute to climate change. The health of global ecosystems over the last thirty years has been tracked by the World Wildlife Fund using a composite measure called the 'living planet index' (LPI). The LPI is the average of three separate indices measuring changes in abundance of 555 terrestrial species, 323 freshwater species, and 267 marine species around the world. The trend lines for the LPI over the last thirty years are distressing:

While the LPI fell by some 40 per cent between 1970 and 2000, the terrestrial index fell by about 30 per cent, the freshwater index by about 50 per cent, and the marine index by around 30 per cent over the same period. These declines can be compared with the global Ecological Footprint, which grew by 70 per cent, and with the growth in the world human population of 65 per cent, from 1970 to 2000 (WWF, 2004, p. 2).

The Living Planet Report is blunt:

In 2001, humanity Ecological Footprint was 2.5 times larger than in 1961, and exceeded the Earth biological capacity by about 20 per cent. This overshoot depletes the Earth natural capital, and is therefore possible only for a limited period of time (WWF, 2004, p. 1).

What is becoming increasingly clear is that our expanding collective ecological footprint and the trends identified will in one way or another force us to change our

behaviours, and the choices we make will determine whether we continue to have a liveable planet for all. We now turn to explore how the factors identified by Diamond which lead to societal collapse connect to science education and scientific literacy.

1. The Failure to Anticipate Emerging Problems

Diamond argues that society's failure to anticipate a problem before it arrives may be due in part to a lack of experience with the nature of the problem itself in that we are simply not sensitized to its seriousness. Many of the most serious problems threatening human health and the planet fall into this category. Most of these problems, from climate change to the loss of biodiversity or the outbreak of emergent diseases, are complex and interdisciplinary and span considerable periods of time. The connections and issues linking the concepts of sustainability with science and technology are inherently complex and interdisciplinary in nature, and most of the problems in this area tend not to be amenable to simple techno-fixes. Often, when our collective infatuation with technological fixes and simplistic solutions is applied to complex problems, the result is not a 'solution' in any sustainable sense of the word, but in a more intractable problem (Hughes, 2004).

How well does science prepare young people to anticipate local, national, and global problems? What changes or trends involving science today can young people identify as being beneficial and/or detrimental to the quality of life on the planet? In this area, science education can involve students in exploring future science scenarios and precautionary thinking. The 1992 Earth Summit Declaration in part states:

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

A critical scientific literacy helps young people develop a multi-contextual understanding of the precautionary principle, both its pros and cons, and a commitment to ask the difficult questions of those who make claims about the imperatives and inevitabilities concerning emerging scientific and technological developments. The precautionary principle in essence steps in front of the deterministic discourse of hype and certainty that often surrounds science and technology in the popular media. In considering the revolutionary nature of robotics, genetic engineering and nanotechnology, Bill Joy, founder of Sun Microsystems (one of the most successful info-tech companies ever created) comments:

Perhaps it is always hard to see the bigger impact while you are in the vortex of a change. Failing to understand the consequences of our inventions while we are in the rapture of discovery and innovation seems to be a common fault of scientists and technologists; we have long been driven by the overarching desire to know that is the nature of science's quest, not stopping to notice that the progress to newer and more powerful technologies can take on a life of its own. This is the first moment in the history of our planet when any species, by its own

voluntary actions, has become a danger to itself - as well as to vast numbers of others (Joy, 2000, p. 10).

Critical examination of the notion of progress and the cognitive disconnect between corporate public relations, media spin, economic dogma and ecological realities is not part of an instrumental form of scientific literacy. Not all discourses surrounding the interface between science and value-laden public issues are rational, scientific or even representative of the scientific consensus. One study found that forty percent or more of the news content of a typical U.S. newspaper originated with public relations, press releases, story memos, or suggestions (Rampton et al., 2001, p. 22). In light of corporate media concentration and the influence of the public relations industry in massaging the public discourse of scientific and technological issues involving business and industry, students need critical literacy skills more than ever.

Our democratic system requires people to participate in public science and technology policy creation, as well as in learning opportunities involving role plays, debates and participatory forums wherein students develop skills in complex decision making processes involving scientific tools and data. Such participation is essential to fostering active citizenship. Roth and Desautel (2002) argue that instead of school science as scientist, science participation in public affairs related to science should be more prominent. They also suggest that when students are forced to learn what knowledge counts without being able to interrogate it, they are literally disabled in terms of developing the competence for questioning of any form of knowledge (Roth & Desautels, 2002, p. 13). The traditional school science emphasis on universality and a decontextualized understanding of the nature of scientific practice contribute to an overall failure in situating school science as knowledge in action as a vehicle to connect students' everyday experiences with their science lessons (Jenkins, 2002, p. 27).

2. Failure to Perceive Emerging Problems

The second factor, a failure to perceive a problem after it has arrived, may result from the fact that some problems are imperceptible in terms of our day to day experience. Some issues are simply drowned out in a sea of pop culture noise dominated by celebrity and the performance of money markets. For example, the increasing concentration of persistent organic pollutants, heavy metals, greenhouse gases and the slow but steady erosion of soils and ecosystem viability are not phenomena generally perceptible to our senses. In addition, they occur on timescales long enough to escape our immediate attention. We find it very difficult to perceive slow trends characterized by gradual up and down fluctuations. As Diamond explains, we do not notice that each successive year is on average slightly worse than the preceding one because our baseline standard for what constitutes normalcy shifts gradually and imperceptibly (Diamond, 2005, p. 435). The creeping normalcy which accommodates the slow erosion of environmental quality and viability is abetted in part by our technologies:

Civilization is revving itself into a pathologically short attention span. What with accelerating technology and the next-quarter perspective that goes with electronically accelerated market economies and the next-election perspective that goes with the spread of democracy, we have a

situation where steady but gradual environmental degradation escapes our notice. Preoccupied with breaking news, we risk falling victim to slow problems (Brand, 2005, p. 109).

The 2004 U.S. Science and Engineering Indicators report indicates that most adults pick up information about science and technology (S&T) primarily from watching television, and two thirds of Americans do not understand the scientific process itself (National Science Board, 2004). Furthermore, the study found that few science-related news stories attract much public interest and that the number of people who watch television news or read a newspaper has been declining for a decade. It warns that this does not bode well for news about S&T, which must compete with a host of other topics for the attention of the American public (National Science Board, 2004, p. 7-3). It is sobering to consider that:

most of us no longer have any idea where to find the line between fact and fantasy, between what is scientifically plausible and what is scientific nonsense. In this hyper-technological age, where so many things, perhaps even our survival, depend upon subtle decisions by a scientifically informed citizenry, that ignorance is deeply alarming (Homer-Dixon, 2001, p. 34).

An effective scientific literacy must help students discern the trivial from the significant and the ideological sponsored junk science from the real thing.

3. Rational Bad Behaviour

At any given moment, there is a sort of all pervading orthodoxy, a general tacit agreement not to discuss large and uncomfortable facts. - George Orwell

The third factor identified by Diamond in societal failure is a result of people advancing their own interests by behaviour harmful to other people and the environment. This rational bad behaviour employs correct reasoning in the short or immediate term even though the result of this process may be damaging to the wider public and the environment. There are many examples of so-called perverse subsidies wherein government economic subsidies support practices and/or products which lead to undesirable consequences for individuals, the environment and society as a whole. In Canada, a variety of industries receive subsidies including the:

- Fossil fuel industry \$5.6 billion annually
- Mining industry \$600 million annually
- Nuclear industry \$156.5 million (in 2000 alone)
- Transportation \$600 million to \$2 billion (1995-2000) (Boyd, 2004, p. 320)

Extensive energy subsidies in Canada and the U.S. mean that citizens of both countries have the lowest energy prices of any G8 country. Both Canadian and U.S. federal governments and their energy industries have worked to undermine international efforts to reduce energy subsidies (Boyd, 2004). Evidence of their effectiveness in maintaining energy subsidies is clearly demonstrated by the proliferation of large gas guzzling SUVs on our highways and the profligate use of energy in all facets of North American lifestyles. This disconnect is evident in the media hype surrounding the much touted 2005 Car of the Year, a large Canadian

built 5.7 liter V8 which attains a paltry 7.22 km/liter (17 mpg). With the planet facing the prospect of runaway climate change, due in no small part to carbon dioxide emissions from the transportation sector, a car this fuel-inefficient is more reminiscent of the 1950 rather than the environmental realities of the 21st century. There is much for young people to consider regarding scientific literacy and values concerning the decision making processes of corporations manufacturing and people purchasing this type of vehicle. The Ford Model T, produced between 1908 and 1927 achieved a fuel efficiency of 25 miles a gallon, however in 2004, the average fuel economy of the Ford fleet (cars and light trucks such as SUVs) is only 23 miles a gallon (Reguly, 2005).

The sport utility vehicle (SUV) phenomenon of the past ten years is one of the reasons why the rate of oil consumption (and greenhouse gas generation) has surged in North America. In the U.S., one in four vehicles sold is an SUV. A Statistics Canada study reports that since 1999, SUV production in Canada has increased dramatically, and in the first nine months of last year alone Canada produced just over 350,000 SUVs, nearly double the 190,000 SUVs Canadians purchased (Magnusson, 2005; Beauchesne, 2005). The short-term benefit from the manufacture of gas-guzzling vehicles in turn increases the demand for oil, which also benefits some provinces more than others. The impacts of this economic cycle on the climate are initially being felt most significantly by the people and ecosystems of the Canadian arctic, communities not involved in the decision making processes which are changing their lives. It is important for students to understand how science, social justice and economics often collide in the construction of public policy. Even apparent disengagement from the issues and tensions swirling between science, power, ethics and political engagement are not without consequence, as Orlie (1997) explains:

Systemic power relations are sustained and elaborated by the daily, routine behavior of individuals. The individual alone cannot make entire peoples disappear, but individuals who imagine they are without power, and who are thoughtless of their power effects, participate in such disappearance (p. 3-4).

Science education has a responsibility to help young people develop balanced scientific perspectives concerning the issues of the day and the significant issues they will face in the future. It also has a responsibility to encourage students to ask uncomfortable questions, questions which touch on politics, social justice, worldviews and long held beliefs. Through explicitly refusing to endorse a deferential or a passive attitude toward power in all forms, both corporate and governmental, science education can genuinely claim to be emancipatory in scope. Often the presence of "large and uncomfortable" scientific facts meets stiff resistance from politicians, business and industry leaders, and citizens who do not want to confront issues which challenge orthodoxy, vested interests and entrenched comfortable worldviews. The failure to solve perceived problems often occurs because maintenance of the status quo benefits some people. Developing a critical scientific literacy requires that students grapple with sci-tech issues that are not only complex but raise uncomfortable questions, including those that challenge dominant economic interests and worldviews. This includes consideration of whether current conceptions of science literacy help young people appreciate how disconnected the messages of corporate public relations, media spin, and neo-liberal economic dogma can be from environmental science realities.

Science education has a positive role to play in helping students develop their own personal frameworks for ethical living by exploring the tensions between individual action and participation in public science politics:

[G]ood and harm are done simultaneously and in ways that perpetuate power relations that precede new activities one of the tragic consequences of ethics is that living ethically entails acting politically, and the conditions of political action cannot be supplied by the individual alone. But neither can the conditions of politics be created without individual action (Orlie, 1997, p.3-4).

Scientific literacy also has social justice dimensions. Milner (2001) developed the concept of civic literacy as a framework measure for comparing societies capacity for informed political participation (p.3). He argues that high civic-literacy societies, such as the Scandinavian ones, adopt more egalitarian policies reflecting a fuller range of interests in society because they encourage political participation from a broader segment of society. He contrasts these high civic-literacy societies with low civic literacy ones, like the U.S., where a lack of civic competence contributes to larger differences between the upper and the middle classes with the economically disadvantaged. Milner is unequivocal: democratic societies that more equally distribute intellectual resources- i.e. high civic literacy societies- also more equally distribute material resources (Milner, 2001, p.29). He also poses a critical question which connects civic, political and scientific literacy:

how can we avoid mirroring a globalized world economy, with its minority of winners and a majority of losers, losers not so much due to economic deprivation, but to their inability to take informed action to make their society better for themselves and others? (Milner, 2001, p. 30)

Toward this end, science education has an important role in providing young Canadians with opportunities to practice active informed citizenship with respect to science and technology issues, and with opportunities to see how their participation in community decision making indeed makes a difference

4. Disastrous Values

Diamond asserts that the crux of success or failure as a society is to know which core values to hold on to, and which ones to discard and replace with new values when times change (Diamond, 2005, p.433). He also acknowledges that it is painfully difficult to decide whether to abandon some of one's core values when they seem to be becoming incompatible with survival (p.430). For Diamond, some of the irrational motives for failure to solve perceived problems include:

- Internal clashes between the short and long-term motives of the same individual.
- Crowd psychology and group think
- Psychological denial on an individual and group level (Diamond, 2005, p.434)

Science education has a role to play in helping students understand the moral and ethical implications of a continually expanding material economy. For example, the reification of economic growth and Gross Domestic product (GDP) as the primary (often sole) indicator of our collective success as a society has distorted our perspectives concerning the right of other species to coexist on this planet. The \$500 billion (US) spent on global advertising to drive the flywheel of consumption and consumerism has fostered and abetted our collective state of denial concerning the seriousness of the ecological crisis humanity has created.

Science education needs to provide multiple interdisciplinary opportunities for students to critically reflect on their worldviews and values. This involves breaking down the disciplinary silos which often exist in secondary schools to create, for example, science and art, science and business, and science and geography learning projects. It is through these types of interdisciplinary perspectives that issues related to sustainable consumption and production systems, advertising, consumerism, ecological footprints and sustainable development, can be examined in the depth required.

5. Unsuccessful Solutions

According to Diamond, even if we have anticipated, perceived and/or tried to solve a problem, our efforts may fail because the problem may be beyond our present capacities to solve; a solution may exist but be prohibitively expensive, or our efforts may be too little and too late (Diamond, 2005, p.436). Climate change may be the exemplar here: enormously complex, wrought with many levels of uncertainty, the issue challenges established ways of thinking, living, economic orthodoxy and vested interests which see no profit in change.

Some research indicates that younger Canadians are less likely to be participants in both elections and in political parties than did previous generations at that age (O'Neill 2001). Further, O'Neill warns us that Canadians should not be complacent concerning this level of political disengagement because it is unlikely to be reversed with age. An empowered form of science literacy would help young people understand the realpolitik involved in science and technology public policy. School science which fails to move beyond science as/for experts and cook book labs effectively fails the broader public interest in fostering the development of critically literate citizens. Science education has the potential to re-engage students with science policy and any number of controversial issues including genetically modified organisms, cloning, nanotechnology, and the weaponization of space. One thing is certain - the decisions and policies surrounding any of these controversial issues will be of a higher quality and more broadly balanced and defensible if more informed and critically scientifically literate people are involved in crafting them.

Conclusions

The proper functioning of our democratic political system depends on the collective decision making power of an informed populace. This entails having the ability to bring critical thinking skills to bear on contemporary STSE issues, and to embrace and work with complexity to appreciate the value of multistakeholder dialogues and to arrive at compromised nuanced yet rational decisions. In considering the state of scientific literacy today, we need to reflect on how well we

prepare young people to grapple with the macroscopic issues identified by Diamond and Wright. Science education has a responsibility to help students understand the reasons why we have so much difficulty as a society in addressing the chronic and serious implications of sustainability. As educators, we are not in the despair business but this does not mean we do not have a duty to help inform students about the necessity for fundamental change.

This includes consideration of the scientific thinking skills which will allow students to discern junk science from the genuine thing, and media literacy skills to help them develop the ability to use media to create, share, organize and discuss scientific information in ways that make it actionable and useful in their lives. Although these are undoubtedly enormously complex questions and undertakings, they are inescapable if we are genuinely interested in helping young people deal with the complex, contentious, and multi-faceted messy socioscientific problems and opportunities of tomorrow.

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Scientific Literacy, STS and Assessment: Lessons from TIMSS

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Scientific literacy has been a significant emphasis in many of the recent science curriculum documents in North America (American Association for the Advancement of Science, 1993; National Research Council, 1996; Council of Ministers of Education, Canada [CMEC], 1997). Evolving definitions of scientific literacy (DeBoer, 2000) show important structural differences. Instead of defining scientific literacy as merely ability to recall scientific facts (termed “functional scientific literacy” by Bybee, 1997), some have moved to examine the influence of science on personally relevant issues (Kolstø, 2001; Roth, 2003). This is consistent with a curriculum emphasis known as Science/Technology/Society (“STS,” Roberts, 1982) that focuses upon the social, political, and economic dimensions of science (Hughes, 2000). In this paper, we argue that assessments should embrace STS to support this broad definition of scientific literacy. We provide a specific example of an STS assessment item and discuss some issues encountered in its development and interpretation when used in the 1995 Third International Mathematics and Science Study (TIMSS).

Recent moves towards performance assessment have opened new possibilities for assessing some of the “process skills” in science education (albeit some 30 years after they began to appear in curricula). However, in the last 20 years, more goals for developing a truly scientifically literate population have been added to science curricula. These focus not on science knowledge alone, nor even on science process skills, but on the application of scientific knowledge to real issues in society—issues that frequently include technology. Inclusion of STS in science curricula presents new challenges, especially in terms of designing effective and appropriate STS assessments. Orpwood (2001) argues little progress can be made towards implementing an STS emphasis in science curricula unless and until valid assessment tools are developed.

This paper examines one of the science items used in TIMSS that was designed to measure STS achievement. We use this example to raise questions about what STS education should comprise, what we want our students to achieve in the area of STS, and what sorts of STS assessment are needed in the future.

TIMSS in Brief

TIMSS is a large-scale international assessment of achievement in mathematics and science. It was first administered in 1995, but has since moved to a four-year cycle (1999, 2003, and 2007). The TIMSS tests were developed for use with three student populations:

- Population 1: 8 and 9 year-olds
- Population 2: 12 and 13 year-olds (mandatory for all participants)
- Population 3: final year of high school (mathematic and science literacy, advanced mathematics and advanced physics, three distinct tests)

Over 40 countries chose to participate in population 2. Some, such as Canada, provided sub-samples at the provincial level, which enabled provinces to examine their students' achievement.

The frameworks for describing the mathematics and science curriculum used in TIMSS were developed at the beginning of the study (Robitaille, Schmidt, Raizen, McKnight, Britton, & Nicol, 1993). Based upon curriculum statements from participating countries, the TIMSS framework was used to prepare and describe the test blueprints (Schmidt, McKnight, Valverde, Houang, & Wiley, 1997). Many possible items were submitted at the beginning of TIMSS; more were written specifically for the study. Selections of these were compiled and field-tested in most of the 45 participating countries. At the same time, national coordinators were invited to review the items for concurrence with their own curricula and for general suitability. Following the field trials, the TIMSS mathematics and science coordinators prepared final versions of the TIMSS tests, which were reviewed by a committee of subject matter specialists and by the TIMSS national coordinators. The final selection process took into account both the psychometric properties of the items based on the field tests and the results of the item reviews.

STS in TIMSS

While STS appeared as a component in the TIMSS curriculum framework, it was not emphasized. When the test blueprint (based on the analysis of national curricula) was finalized, STS was subsumed into a category called "the nature of science" which itself constituted such a small aspect of the overall test that it was reported initially in combination with "environmental issues." This illustrates that one barrier to visibility of STS was that many national curricula paid it scant attention and many national coordinators regarded some STS items as inappropriate. In an international study like TIMSS, it is difficult to insist that items of significance to a small number of countries – in this case, mostly the English-speaking countries – should be retained, when a majority of other countries do not support their use. Many items that could be regarded as STS items are culturally or nationally specific. Issues such as methods of energy production, effects of radiation, protection of wildlife, or methods for combating pollution are difficult to write in such a way that students from a wide variety of countries find them equally meaningful, let alone equally difficult. Even when "good" questions are prepared, it is hard to find international consensus on "good" answers. These are required if the scoring scheme is to be reliable.

What is an STS Item?

It is helpful to try and characterize a variety of items that might be considered “STS items.” To do this, we use a framework developed by Glen Aikenhead (1994; Keeves & Aikenhead, 1995) to describe a variety of STS curricula and the corresponding degree to which STS features in assessment. Aikenhead’s framework has already proven useful in analyzing various science curricula (see Table 1).

	Name of Category	Description of Category	Emphasis in Student Assessment	Examples
1	Motivation by sts content	Standard school science is taught, together with mention of sts content to make lessons more interesting	Students are not assessed on sts content	A Second Course in Mechanics. UK: McKenzie
2	Casual infusion of sts content	Standard school science is taught, together with a short study of sts content attached to the science topic. The sts content does not follow cohesive themes	Students are assessed mostly on pure science content and only superficially on sts content	SATIS. UK: Association of Science Education Values in School Science. USA: Brinckerhoff Consumer Science. USA: Burgess
3	Purposeful infusion of sts content	Standard school science is taught, together with a series of short studies of sts content integrated into science topics in order to explore systematically the sts content. The content forms cohesive themes	Students are assessed to some degree on their understanding of the sts content	Science and Social Issues. USA: Welch Science and Societal Issues. USA: Iowa State University Science, Technology and Society USA: New York State Education
4	Single discipline through sts content	Sts content serves as an organizer for the science content and its sequence. The science content is selected from one science discipline	Students are assessed on their understanding of the sts content but not to the same degree as on the pure science content	Project Physics. USA, Holt, Rinehart and Winston Light Sources. The Netherlands: PLON Science and Society Teaching Units: Canada: OISE
5	Science through sts content	Sts content serves as an organizer of science content and its sequence. The science content is multidisciplinary	Students are assessed on their understanding of sts content but not as extensively as they are on the pure science content	Logical Reasoning in Science and Technology. Canada: Wiley Modular sts. USA: Wausau, WI The Dutch Environmental Project. The

	Name of Category	Description of Category	Emphasis in Student Assessment	Examples
				Netherlands: NME-VO, University of Utrecht
6	Science along with sts content	Sts content is the focus of instruction. Relevant science content enriches the learning	Students are assessed equally on the sts and pure science content	Society, Environment and Energy Development Studies (SEEDS). USA: SRA Science and Technology 11. Canada: BC Ministry of Education
7	Infusion of science into sts content	Sts content is the focus of the instruction. Relevant science content is mentioned but not systematically	Students are assessed primarily on the sts content and only partially on the pure science content	Science in a Social Context (SISCON). UK: Association for Science Education & Society Australia: Jacananda Press Modular Courses in Technology. UK: Schools Council
8	Pure sts content	A major technology or societal issue is studied. Science content is mentioned but only to indicate an existing link to science	The students are not assessed on the pure science content to any appreciable degree	Science and Society. UK: Association for Science Education Innovations: The Social Consequences of Science and Technology. USA: BSCS Values and Biology: USA: Welch

Table 1. Range of Integration of STS and Science Content (Keeves and Aikenhead, 1995)

For example, Jasper (1998) used this framework to analyze what Roberts (1998) described as the “curriculum policy images” held by Alberta teachers – their interpretations of STS in a mandated provincial curriculum . Aikenhead’s framework, useful in analysis of curriculum materials and policy documents, might also be useful for comparing assessments. It could be applied to an examination, the range of assessments used by a teacher in the course of teaching, or a collection of assessment items. For example, selected TIMSS science literacy items (Retrieved from <http://TIMSS.bc.edu/TIMSS1995i/TIMSSPDF/CitemMSL.pdf>) are categorized by the authors into Aikenhead’s levels—see Table 2 below.

TIMSS Item	Aikenhead Level	Rationale
A1. Nuclear energy can be generated by fission or fusion. Fusion is not currently being used in reactors as an energy source. Why is this? <ul style="list-style-type: none"> • The scientific principles on which fusion is based are not yet known. • The technological processes for using fusion safely are not developed. • The necessary raw materials are not readily available. 	3	The STS topic – generation of nuclear energy- is the focus of the assessment.
A7. Some high-heeled shoes are claimed to damage floors. The base diameter of these very high heels is about 0.5 cm and of ordinary heels about 3 cm. Briefly explain why the very high heels may cause damage to floors.	1	The topic being assessed is a "purely" scientific one – the difference between force and pressure – though the item is presented in an sts context

Table 2: Categorization of Selected TIMSS Items Using the Aikenhead Framework

If such a profile were to be constructed for the overall TIMSS item pool, we predict that over 95% of the items would fall into level 1 of the framework (or even level 0 – if this were added for items with no STS aspects). The frustrations of some TIMSS critics such as Fensham (1998), who remarked that he found many of the items to be "boring," may perhaps be explained by a lack of STS content.

A recent international assessment – the Organization for Economic Co-operation and Development (OECD) sponsored Programme for International Student Assessment (PISA) – examined this issue. Its focus is "literacy," interpreted as students' ability to cope in real-life situations. The PISA item pool is not publicly available but, based on the program's assessment framework (OECD, 1999), PISA should have a distinctly higher STS emphasis compared to TIMSS.

We turn now from general considerations of STS assessment to a specific account of one TIMSS item we call the "Bridge Question."

The Case of the Bridge Question

The "Bridge Question" 1. was used for TIMSS Population 2 and the Population 3 Mathematics and Science Literacy study. Our analysis here begins with a discussion of the structure of the question's STS content and moves on to a description of the TIMSS coding scheme together with comparative data from different jurisdictions including Ontario and Newfoundland.

It takes 10 painters 2 years to paint a steel bridge from one end to the other. The paint that is used lasts about 2 years, so when the painters have finished painting at one end of the bridge, they go back to the other end and start painting again.

- Why MUST steel bridges be painted?
- A new paint that lasts 4 years has been developed and costs the same as the old paint. Describe 2 consequences of using the new paint.

Figure 1. The Bridge Question

The two parts of this question differ in their classification on Aikenhead's schema. Part (a) is level 1 or 2: "why must steel bridges be painted?" We classified part (b) as level 7 or 8: "consequences of using the new paint." We begin our discussion with consideration of part (a). However, since the STS content of part (b) is much greater, we shall give it more attention.

Part (a) Why paint steel bridges?

The TIMSS coding scheme for part (a) is shown in Figure 2. Coding schemes for extended response questions were designed to capture both the "correctness" of student responses (represented by the first digit of the scoring code—1 for correct, 7 for incorrect) and the variety of student responses (represented by the second digit, 9 to represent "other").²

Code	Response
Correct Response	
10	Explicitly refers to rusting or corrosion.
19	Other correct.
Incorrect Response	
70	Mentions only aesthetic reasons. <i>Examples: It looks nicer. It is ugly. Cover up the rust so people won't see it.</i>
71	Refers to protecting or improving the bridge for reasons other than code 10 above: <i>Examples: The paint must be renewed. It is a long time since it was painted.</i>
72	Any combination of codes 70, 71.
73	Challenges the information in the question. <i>Example: You don't need to paint steel bridges.</i>
79	Other incorrect.
Nonresponse	
90	Crossed out/erased, illegible, or impossible to interpret.
99	BLANK

Figure 1. Codes for reason to paint

Overall 59%3. of 13 year-olds (Population 2) gave the correct response coded “10” relating to rusting or corrosion. Together with 4% giving other correct responses (code “19”), 63% of students internationally responded correctly. By country, correct responses ranged from 85% (England) to 16% (South Africa). The “incorrect” responses are interesting. In Japan and Korea, 25% of the students mentioned only esthetics, code “70.” Twenty-five percent is much higher than the international average of 5.5% for this response. We cannot explain this, as Korean students performed well on part (b). England, Japan and Korea did not participate in the Population 3 Literacy test.

Part (b) What are the Consequences of Using New Paint?

The TIMSS coding scheme for part (b) of the “Bridge Question” is shown in Figure 3. Coding guidelines are shown as notes following the figure.

Code	Response
Correct Response	
10	Student includes the fact that there is more profit for the painting company or the community. <i>Examples: It is cheaper for the company. Less painters are needed. They can paint more bridges.</i>
11	The painters don't need to paint so often or work so hard. <i>Examples: They can wait two years before starting again. Longer vacations for the workers. They can have another job in the meantime.</i>
12	Mentions increased unemployment or lower salary for the workers.
19	Other correct. <i>Example: Fewer problems for the traffic.</i>
Incorrect Response	
70	The paint will last for a longer time.
76	Merely repeats information in the stem. <i>Examples: It will last for four years. It will cost the same.</i>
79	Other incorrect.
Nonresponse	
90	Crossed out/erased, illegible, or impossible to interpret.
99	BLANK

Notes: Each of the two consequences must be coded separately. The same code can be used twice. However, if the consequences described are essentially the same, the second should be coded as 79.

Example:

- They don't need to go back and start again (code 11).
- They can wait before they start painting again (code 79).
- Correct responses should be plausible in the national context.

Figure 3. Coding for consequences of using new paint

The three specified correct responses represent distinct consequences of using the new paint. Code “10” focuses upon increased profits for companies or communities as a consequence of less frequent painting—an economics-driven view of the problem. Codes “11” and “12” focus upon the impact upon the workers. In code “11,” the effects are couched in terms of improvements in the workers’ lives, a social perspective that is generally seen as positive. Responses classified as code “12” also take account of the workers’ perspective and represent both economic and social viewpoints, but with negative consequences for the workers: lower salaries, more layoffs and unemployment. Code “19” was used for other locally determined “correct” responses, for example that may relate to employment insurance payments. We now move on to a discussion of how students from around the world responded to these questions.

Population 2 (13 year-olds) Key Results 4.

- Internationally, 42% of students were given credit for one reason, and 27% for two reasons.
- The range for one correct response was 4% (South Africa) to 73% (Korea). These countries were also at the extremes for two correct reasons, 3% and 62%.
- Most common correct response internationally was that using new paint would have a positive impact on workers (code “11”) with 32% overall.
- Internationally, a greater percentage (26%) of responses identified profit, code “10,” than negative consequences for the workers, code “12” (6%).
- Only two jurisdictions in the world gave code “12,” negative impacts on workers, most frequently: the Canadian provinces of Newfoundland (30%) and Ontario (19%).
- In two countries, benefits to workers (code “11”) were the most frequent responses: Slovenia (66%) and New Zealand (64%).

Population 3 (End of High School, Science Literacy) Key Results

- Internationally, 64% of students were given credit for one reason, and 45% for two reasons.
- There were two frequent responses. Code “10” was identified in 50% of responses, while code “11” was given in 37%.
- In two countries, Canada and the United States, negative impact (code “12”) was coded more often than profit (code “10”).
- For Canadian students (46%) and for USA students (30%), the most frequent response was code “12”—negative impact.
- Within Canada, 53% of Newfoundland students and 50% of New Brunswick students identified this negative consequence (code “12”).

- Slovenian (65%) and New Zealand (64%) students were the most likely to identify benefits for workers (code “11”).

We now move to a discussion of some distinctly Canadian results for this question.

Discussion

Earlier in this paper we stated that STS content is at the core of part (b) of the “Bridge Question.” The TIMSS coding categories emphasize profit (code “10”), painters working less (code “11”) and unemployment or lower salaries (code “12”). These concerns do not conform to what traditionally has been called science content. However, the impact of a change in technology upon society is very much part of an STS perspective on science content.

Our first discussion theme is the nature of the differences between the responses from Population 2 and Population 3. In general, older students were more successful in answering the “Bridge Question.” However, the emphasis of older students’ responses was also different (see Table 3).

	Population 2	Population 3
Most frequent correct response	Code “11” (32%)	Code “10” (50%)
	Positive impact for workers	More profit
	Code “10” (26%)	Code “11” (37%)
	More profit	Positive impact for workers
Least frequent correct response	Code “12” (6%)	Code “12” (18%)
	Negative impact for workers	Negative impact for workers

Table 3. *Frequency of Correct Responses to Part (b) in Population 2 and Population 3 (aggregate international results)*

Overall, older students gave more correct answers but the figures demonstrate a change in emphasis. Older students appear more likely to consider economic impacts as demonstrated by the increased frequency of responses coded “10” and “12” (e.g. code “10” responses increased from 26% to 50%).

This brings us to our second theme. The economic and social context in which TIMSS was written, and increasing awareness of economic issues among older students, may be partly responsible for responses coded “10” and “12.” Particularly interesting are Canadian responses predicting negative impacts. As Canadians, we have chosen to examine the apparently anomalous results within our country. Of all Population 2 groups around the world, only students in the provinces of Newfoundland and Ontario identified negative consequences for workers more frequently than other impacts of using the new paint. Let us examine these results in the broader economic and social context of the time.

In Newfoundland, for four years prior to TIMSS, the unemployment rate was over 25%. This is attributed to the decline and effective closure of the cod fishery and the subsequent expansion of a crab fishery (see Table 4). Reductions in income and changes in working practices leading to increased unemployment are phenomena overly familiar to all Newfoundlanders and were part of the life experience of the students who participated in TIMSS.

Year	Value of Cod Fishery (\$CAD)	Value of Crab Fishery (\$CAD)	Total Value of Fishery (\$CAD)
1984	\$171 million	\$7 million	\$599 million
1989	\$120 million	\$10 million	\$266 million
1994	\$2 million	\$89 million	\$225 million

Table 4. *Values of Selected Fisheries in Newfoundland (Source: Department of Fisheries and Oceans, Canada).*

Ontario has been Canada's most affluent province. However, during the years immediately preceding TIMSS there were major declines in the manufacturing sector followed by a period of government restraint. According to the Ontario Ministry of Finance, unemployment rates doubled from 5% in 1989 to 10% in 1994, the year before TIMSS, with a large reduction in the number of people employed in manufacturing industries. At the time of the assessment, there was intense public debate about the impact of North American Free Trade upon (un)employment in Ontario and Canada.

We speculate that there were, in both Newfoundland and Ontario, some parallels to the bridge scenario. Students aware of negative consequences for workers associated with the introduction of new technologies might be more likely to give code "12" responses.

Finally, it was surprising to many, including the authors, that results from Ontario and Newfoundland should be anomalous while the vast majority of students in the world believed new technologies would have mainly benign social impacts. Internationally, 87% of all responses were coded "10" or "11." Although some may view such "benign" responses as somewhat naïve, it is interesting that students from English speaking countries (with the exception of New Zealand) were least likely to have responses coded as "10" or "11." These are the same countries where STS has been emphasized in recent years.

Reflections on STS Assessment

Several issues emerged from the results of the TIMSS "Bridge Question," raising further questions for science educators.

What should be the scope of STS in science education? If STS means that students should learn science in a broad social context, we would argue that this broader context should include social, economic, technological, political, and environmental aspects. The TIMSS results suggest, and many STS materials confirm, that STS often refers to the social and environmental impacts of science and

technology—these being most familiar to teachers—while technological and economic impacts are given less emphasis.

What Counts as STS Assessment? Science educators must match STS curricula with appropriate assessment. As performance tasks with hands-on investigations are now used to assess the inquiry skills that are part of science education, so new forms of assessment with tasks and questions drawn from the real world need to be incorporated into STS assessments at classroom, local, national and international levels.

Part of the challenge in developing such assessments is the variety of contexts in which students live and the variations of “right answer” that frequently are apparent in real-world situations. At stake here is not so much the definition of “right answer” but rather how to enable students (and teachers) to consider feasible solutions to real problems. Reliability concerns have caused some psychometricians to feel uncomfortable. More work in this area would be worthwhile.

How do students’ contexts affect their responses? Responses to items like the “Bridge Question” show that students draw on their personal experience and social context. This is appropriate, but presents problems for scoring. In TIMSS, local scoring teams were instructed to use their own judgement concerning what “made sense” in their national context. For example, in a country with provisions for guaranteed employment, consequences for the painters might be very different from one in which there were no such provisions. Such differences need to be taken into account by all involved in test development and use (Bartley, 1995).

Conclusions

What should science educators do next? In these days of rigorous assessment being demanded by policymakers and parents, failure to address the needs of STS assessment will result in the continued marginalization of STS. If we believe that a scientifically literate person is one who not only knows science and knows how to do science but also can relate science to technology and the world outside of school, then to improve science literacy we must include STS in both our instruction and in our assessment. We must convince those with more limited views about what counts as science education that an STS emphasis is indeed important and should be included in all science assessments. We need to develop more examples of STS assessment. And we need to conduct further discussion, research and development in this area.

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NOTES

1. The original version of this question was written for times by one of the authors (AB) and derives from a real-world context. The Forth Bridge in Scotland used to occupy twenty-four painters painting on a continuous twelve-year cycle to keep the entire structure covered with five coats of paint. The vastness of the endeavour was so well known that "painting the Forth Bridge" became a metaphor (in the UK) for an endless task (Petroski, 1995, p. 381).
2. For more information the TIMSS coding system, see Lie, Taylor, and Harmon (1996).
3. Data presented in this paper is taken directly from the appropriate TIMSS reports available at <http://timss.bc.edu/timss1995i/TIMSSPublications.html>. Averages presented here are means of all students responding to a question, or part of a question.
4. In describing the results, we combine the percentages of students citing any given reason as their first or second choice since duplicates were not given credit and no priority between reasons was called for. All TIMSS data are available from the TIMSS International Study Center, Boston College.

5. The Canadian provinces of British Columbia, Alberta, Ontario, New Brunswick (English-speaking schools), and Newfoundland elected to sample at a level to enable provincial-level comparisons.
6. Numbers employed in manufacturing in Ontario: 1989 (1,022,000) — 1994 (901,000). Source: Ontario Ministry of Finance.

Learning In Communities of Practice: The Science Across the Curriculum Project

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Introduction

In this volume, several authors address different aspects of scientific literacy ranging from considerations of the nature of scientific literacy to descriptions of barriers to fostering high levels of scientific literacy. In addition to considering these issues, educators need to be concerned with how K-12 teachers are supported in helping their students develop high levels of scientific literacy. Teachers need opportunities and encouragement to engage in a variety of professional development initiatives (workshops, teacher inquiry, networks, study groups, curriculum development groups, etc.) that will meet their personal and professional learning needs, as well the needs of schools and school districts. One strategy being promoted to foster teacher learning and educational change is the formation of communities practices.

In this article, I describe an action research community of practice, *Science Across the Curriculum*. I use seven design principles proposed by Wenger, McDermott, and Synder (2002) to reflect on how the participants in *Science Across the Curriculum*, a school-university partnership between the Eastern School District and the Faculty of Education, Memorial University, evolved into a community of practice.

Fostering Communities of Practice

The notion of a community of practice is premised on a social theory of learning proposed by Wenger (1998) that views learning as social participation in “the *practices* of a social community and the constructing of *identities* in relation to these communities” (p. 4-5). Communities of practice are “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger et al., 2002, p. 4). Communities of practice are ubiquitous and individuals are often members of many communities of practice. Through thoughtful attention to creating learning environments that value and support learning, these authors believe *communities of practice* can be cultivated.

Table 1 provides a brief overview of the design principles that need to be considered when cultivating communities of practice. The authors caution that these principles are not meant to be prescriptive. Rather, they do suggest that the principles may guide the establishment and functioning of communities of practice through attending to the shared domain of the community (its goals and work), the operation of the community (ways of operating and building relationships), and the practices of the community (the development of knowledge and expertise that is available to community members and others affected by the community).

**Table 1. Design principles for cultivating a community of practice
(Wenger et al., 2002)**

Principle	Ideas undergirding each principle
Design for evolution	Communities are dynamic and build on pre-existing networks. Design elements (e.g. weekly meetings, defined activities, web site) need to foster community growth and thus allow the community to evolve. Often, communities reflect on and attend to design elements as community needs change.
Open a dialogue between inside and outside perspectives	Insiders (members of a community) understand the knowledge, beliefs, practices, and challenges that are at the core of a community. However, outsiders from other communities can often support and help insiders develop new perspectives; thus, outsiders may act as change agents.
Invite different levels of participation	People join communities for varying reasons. It is unrealistic to expect all members to contribute to community functioning in the same ways and at the same levels. Often, there is a small core of members who are highly involved in community activities. At the next level, active members participate in the community, but the intensity level may be lower when compared to core members. Others reside at the periphery, and although they are less involved, they still contribute to community functioning.
Develop both public and private space	Although communities have public, regular events, they also need to have opportunities for the cultivation of individual relationships. Informal networking that occurs in private spaces strengthens public events, while public events should offer opportunities and time for fostering of strong individual relationships.

Principle	Ideas undergirding each principle
Focus on value	The value of a community needs to emerge and evolve. This happens over time as group members engage in collaborative problem-solving and the sharing of knowledge. Members need to recognize explicitly, through open discussion, the value afforded to individual members, the group, and/or the organization.
Combine familiarity and excitement	Communities should be safe, comfortable places where members share ideas and offer feedback. Likewise, for members to be engaged and excited about community functioning, they need opportunities to participate in novel events that foster new ways of thinking.
Create rhythm for the community	Each community has a beat or rhythm that is determined by its whole-group and small-group events and activities. If the pace is too slow, the community becomes lethargic. If the pace is too fast, members may become overwhelmed. Striking a balance between these two extremes is needed for a community to thrive.

The Context of the Project

Science Across the Curriculum started in September 2004 and is ongoing*. In the first year of the project, 12 teachers (three primary, two elementary, six junior high, and one high school), two district program specialists, two student research assistants, and I adopted action research as a strategy to foster teacher learning. The district program specialists, research assistants, and I assumed a variety of roles, including facilitating teacher learning about action research and providing group and individual support as teachers conceptualized and implemented action research projects. Teachers engaged in systematic inquiry into practice through cycles of planning, acting, observing, and reflecting. Six whole-group planning meetings were devoted to planning and reflecting, while school-based teams of teachers met on three days throughout the year to plan their individual projects. Teachers designed and implemented plans of action that focussed on a range of topics, including using WebCT™ (a web-based course management system) to support face-to-face science teaching, structuring student-centred learning through guided inquiry, and motivating students in learning science through the adoption of constructivist learning principles.

Science Across the Curriculum has two major foci; fostering teacher learning and generating knowledge about communities of practice, teacher learning, and school-university partnerships. The specific objectives of the overall project are: (1) to support K-12 teachers in developing a better understanding of how to foster inquiry-based science teaching and learning and how to interpret science and technology learning outcomes; (2) to foster teacher confidence in and excitement about teaching science; (3) to document how groups of teacher researchers through face-to-face and on-line learning environments develop into communities of practice; (4) to develop an understanding of the nature of collaborative partnerships and to identify the elements that contribute to the success of collaborative partnerships; and (5) to better inform decision making that impacts policies adopted by the school district with respect to professional development training and curriculum development and implementation.

The research focus of the project draws from the qualitative, ethnographic tradition (Denzin & Lincoln, 2000; Wolcott, 1988) and uses a range of data methods and sources, including participant observation, documents (lesson plans and other teacher-generated materials), electronic journals (generated by all participants), and audio-taped interviews (conducted at the beginning and end of the project). Many elements of the research design were emergent and data collection and analysis occurred very early in the process. In analysing the data, a grounded theory (Strauss & Corbin, 1998) approach was adopted to code raw data, generate categories, and establish broader categories based on emerging themes.

Designing for Success

In designing for success, I reflect on each of the seven design principles as they emerged in our own research community of practice (see Table 1). As one of the facilitators of the group and an experienced facilitator of action research, I share insights garnered in the first year of the project. These design principles are continuing to inform how the action research community of practice is evolving and functioning in the second year of the project.

Design for evolution

A range of action research models and approaches have emerged to reflect the varying purposes of action research, as well as the varying roles of teachers in such research (e.g. Calhoun, 1994; Noffke, 1997; Rearick & Feldman, 1999). In this project, the orientation is mutual-collaborative/practical-deliberative-interpretative (Grundy, 1982; Holter & Schwartz-Barcott, 1993). In other words, all aspects of the project were negotiated among group members. Although I initiated the project, as a group we negotiated agendas, planning meetings, and learning activities. Each school-based team determined the nature of their research question and how they would implement their research projects. There was shared decision-making and ongoing attention was given to how the group was functioning and the needs of the group. Establishing shared ownership of the process was paramount. As one teacher commented, Through teacher networking I was not only putting my ideas and thoughts down on paper, but I was also sharing them and getting regular feedback. This proved to be a wonderful experience for all of us. Over time, the meetings of the action research group allowed the development of more informal professional networking amongst group members.

Open a dialogue between inside and outside perspectives

Although all members of the action research group were K-12 teachers or had been practicing teachers, insiders and outsiders resided within the group. As a group member from an academic setting, I was able to provide funding, time, and energy to help a group of teachers engage in a new approach to teacher development. Ongoing whole-group and small-group discussions and conversations allowed us to share our concerns about our work and our unique perspectives. At an early whole-group meeting, teachers identified several challenges that impact their daily teaching lives, such as a lack of resources, large class sizes, and student diversity.

At the end of the first year, all participants strongly endorsed the approach to action research adopted in the project, while acknowledging the challenges associated with teacher inquiry (e.g. time-consuming, energy-intensive). The project provided a forum to foster adult learning, while supporting the research goals of the project.

Invite different levels of participation

This community of practice, like many communities of practice, engaged members in different ways. Not all members were at the core of the community and members had different roles. While the research assistants and I assumed a myriad of roles ranging from facilitators of the process to providing feedback at all stages of the research, we did not design and implement action research projects. As well, the program specialists provided support to the project in many ways, but did not attend all planning meetings; nor did they provide school-based support. However, their involvement and contribution to the project in terms of connecting to broader district initiatives and events, assisting with the coordination of the project, and being involved in some of the planning activities were invaluable and necessary. Different levels of participation enhanced the functioning of the community.

Develop both public and private space

A range of events and activities contributed to creating opportunities to foster both group rapport and the growth of individual relationships. Regular meetings of the group occurred on a monthly basis, supported by online e-mail communication between meetings. On several occasions, school-based teams would meet at their schools to plan, reflect, and analyze data as they implemented their projects. The research assistants and I attended some of these meetings, offering different forms of support based on the needs of each school-based team. All teachers reported that they grew professionally as a result of these diverse experiences. One teacher aptly described the results of having both public and private spaces for learning: "As I reflect, I know I have grown professionally from this experience. Working closely with my school colleagues and colleagues from other schools has also been a very necessary part of this process. There is gratification in knowing that others who work with you everyday can share in your growth as a teacher."

Focus on value

Initially, the value of our community of practice was not evident to all members. Rather than trying to determine [its] expected value in advance, communities need to create events, activities, and relationships that help their potential emerge and enable them to discover new ways to harvest it (Wenger, McDermott, & Synder, 2002, Section 5, para. 2). Indeed, the value of the project was emergent, and as a facilitator of the project, I encouraged group members to reflect on the value of all learning activities. For example, in an early whole-group planning session, I asked teachers to consider eight wonderings (possible areas from which research questions may emerge) proposed by Dana and Yendol-Silva (2003). These wonderings (helping an individual child, improving and enriching the curriculum, developing content knowledge, experimenting with teaching approaches and techniques, exploring the relationship between personal beliefs and classroom practice, examining how personal and professional identities intersect, advocating social justice, and exploring the relationship between teaching and the learning context) were derived from the authors' examination of over 100 teacher inquiry projects. The teachers found that examining these wonderings in the context of their own teaching proved to be invaluable in helping them identify research foci.

From a broader perspective, our ongoing planning meetings provided opportunities for the community to re-evaluate its goals and to share ongoing insights, thus contributing to a more explicit focus on the value of community activities and events. As a facilitator of action research, in conjunction with the research assistants and district program specialists, we engaged in second-order inquiry (Elliot, 1991), analyzing and reflecting on how our own actions were influencing the project.

Combine familiarity and excitement

Communities of practice should be places where members can share ideas and elicit feedback in a comfortable, supportive atmosphere. Our regular planning meetings allowed this comfort to emerge, while our activities related to developing and implementing action research projects were new for most members. Each stage of the action research process required different types of activities and learning. Thus, in the first year, novelty and considerable excitement were generated. The overall experience offered teachers the opportunity to consider their own learning and the learning of their students from new perspectives. This is reflected in several comments made by group members:

I feel that having the opportunity to focus on action research, and utilizing a particular teaching practice has provided me with the chance to grow as a teacher. This does not happen as often as we would like.

Science teaching was never my favourite. I always thought there should be more inquiry in my students' learning. During this project, I enjoyed seeing the engagement of students and the way they all looked forward to science classes.

Yes, I am now more aware of how inquiry works in my science class. Working through the process will enable me to have more success with

it again. Therefore, I have a better understanding of the inquiry process and how my students learn.

Create rhythm for the community

This was a challenge throughout the first year of the project. At times, as the facilitator, I felt I was not as connected to some members of the community as I would have liked. This stemmed from facilitating a large action research project. In the past, most of the groups I facilitated ranged in size from four to six and I had far more interaction with each member on a school-based level, when compared to current community members. Ensuring that all members are engaged, yet not overwhelmed, is part of engaging in second-order inquiry, as mentioned previously. Group members acknowledged the demanding nature of action research, and it was not surprising when three people left the group within the first two months. Originally, we started with 15 members. Overall, the pace for the group varied, being slower at the beginning and picking up momentum during the implementation phase of the teachers' projects. The rhythm of any community should be determined by community members through explicit evaluation of their activities, while attending to group and individual needs.

Future Directions

In planning for and assessing community needs in the second year of *Science Across the Curriculum*, a range of issues is being considered. The community is welcoming nine new action researchers, and two new research assistants. As well, many members of the action research community are not in the immediate university vicinity; thus, the group is relying on asynchronous and synchronous forms of online communication as well as face-to-face meetings. For example, in the first year, all planning meetings were face-to-face. In the second year, face-to-face meetings are still occurring; however, *Illuminate Live™*, a web-based collaboration software which includes two-way audio, a whiteboard, and other tools, is being used to support real-time communication and collaboration. For most group members, the use of these web-based tools is new.

We are using the design principles to guide the functioning of the *Science Across the Curriculum* community of practice in its second year. Although communities of practice should evolve naturally, design principles can be instrumental in "energizing participation" (Wenger et al., 2002). These design principles provide a practical, useful guide for those who initiate or facilitate professional development communities of practice.

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**Action research on the use of WebCT with a late French Immersion
Science class: a teacher's perspective**

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Web Course Tools (WebCT) is an online course management system that is used by many universities, colleges and schools to deliver courses completely online. WebCT can also be used to supplement learning in traditional, face-to-face classrooms.

Between 2001 and 2004, I had developed some online content for WebCT (notes, web links) to supplement my Grade 9 late French immersion science class, and I had used some of the WebCT tools (discussion forum, email) in a limited way with my students. During the academic year of 2004-2005, I wanted to use the methods of action research to engage in a more formal evaluation of the potential for the use of WebCT to supplement traditional classroom teaching and learning. I joined the Science Across the Curriculum project, an action research partnership between the Faculty of Education at Memorial University of Newfoundland and the Eastern School District of Newfoundland and Labrador.

Although my Grade 9 students are in their third year of French immersion, they have a limited vocabulary and grammar and they find the prescribed textbook difficult to understand. This can constrain their understanding as well as their ability to express concepts, questions and wonderings about science. I have also noticed that students find it difficult to listen to oral explanations while they are engaged in note taking.

My hope was that using WebCT during the Chemistry unit would help students gain a better understanding of the concepts. I anticipated that if students printed the notes in advance, more class time could be spent discussing and 'doing', rather than copying notes from the board. Students could use the Calendar tool to link to the day's work even if they had to miss class for any number of reasons, and would therefore have an easier time catching up. I hoped that students would use the online discussion forum outside of school time to post questions or comments about the topics in class, homework, projects, or review.

Background

WebCT

Web Course Tools (WebCT) is an online course management application. WebCT provides the tools for an integrated environment in four main areas: course organization (calendar, student management, grades), communications (bulletin board, e-mail, chat), content (online notes, internet links, assignment information) and assessment/exercises (quizzes, self-tests).

Many universities and colleges are using WebCT to deliver courses completely online, or to supplement face-to-face classrooms. In Newfoundland, WebCT is being used as a platform for some Distance Education courses in high

schools, allowing students in rural areas a greater variety of course selection, or allowing for independent study (see <http://www.cdli.ca/>)

Morss (1999) studied student perspectives on web-based learning using WebCT in the university classroom. He found that the use of WebCT as a supplement to classroom activities did not seem to place any unwarranted burden on the students and helped at least some of the students focus their attention on the subject and learn more quickly, but was not favoured to immediately replace either text or conventional textbooks as the preferred method of instruction.

While there is a growing body of research about WebCT and similar course management systems, this research is still in its infancy. Just five years ago, Mitchell and Kerr (2000) noted that, "little has been written about student perceptions of Internet-based Web course management; and even less has been said regarding the integration of Internet-based and traditional instructional systems" (p.249). Most studies to date have focused on the post-secondary level, but there are few studies of the use of WebCT at high school and almost no studies of its use at the junior high level.

Theoretical framework: Three types of interaction

The theoretical framework of this study is based on Moore's (1989) three types of interactions that occur in the teaching and learning exchange: 1) learner-content; 2) learner-instructor; and 3) learner-learner. Learner-content interaction refers to the interaction between the learner and the subject of study, such as a student reading notes, browsing a website or trying an online demonstration. Learner-instructor interaction is interaction between student and expert, or student and teacher. In addition to providing students with instruction about content, teachers can give support, encouragement and feedback to the learner. Learner-learner interaction occurs when students interact with each other, in pairs or in groups, with or without the presence of an instructor. Moore's assertion was that a commitment to all three types of interaction is necessary for successful distance learning. Moore's typology has since been extended and adapted by subsequent researchers in the fields of distance and Web-based learning (see Woods & Baker, 2004; Hillman, Willis & Gunawardena, 1994). This study uses Moore's three types of interactions as a framework to evaluate the use of WebCT in a Grade 9 LFI science class.

Context

School context

Our Junior High school has approximately 525 students in Grades 7-9. It is located in an urban area, and has a mix of students from different socio-economic backgrounds. There are six classes at each grade level: two classes of Late French Immersion and four classes of regular (English) programming.

The school's computer lab is equipped with 24 computers with Internet capability. There is also an LCD projector connected to one of the computers which can be used for demonstrations. Each classroom has at least one networked computer on the teacher's desk, and two Internet drops in each room. The school

has a laptop computer and another LCD projector on a cart that can be signed out for classroom use.

My role

I am the only person teaching LFI Science at my school, so I teach the same students over the course of the three years of their attendance. I consider this to be an advantage because I get to know the students quite well and we have common references from one year to another with respect to the curriculum delivery and the learning experiences we have shared.

In my science classes, I aim for a good mix of the theoretical and the practical. In general, students engage in activities and hands-on experiments first, and then discuss theory afterwards. I integrate technology into the curriculum whenever I can, using websites, online demonstrations, activities and slide shows to help convey the curriculum.

My students

This study was implemented using two Grade 9 Late French Immersion Science classes, with a total of 45 students. In general, these students are above average academically, compared to the school population as a whole. This is supported by their performance on tests and exams, with a typical median of 78%-82%. All of the students are following the prescribed curriculum program, with no identified learning difficulties.

These students are also involved in a range of extra-curricular activities, and this can lead to missed classes. Our school bands and choirs are pullout programs during the school day. Many students participate in sports trips, music festivals, drama performances or a myriad of other activities which may cause them to be absent, in addition to the typical absences due to illness or outside appointments.

I first decided to use WebCT with my Grade class with these two considerations in mind - academically capable students, who sometimes have to miss class. I wanted to find a way of helping students keep up with the curriculum, catch up if they missed classes, and even move ahead and engage in enrichment if they displayed the desire.

These students are quite comfortable with the use of computers, both in school and at home. Every one of the 45 students in the Grade 9 LFI classes had an Internet-capable computer at home. In the pre-implementation survey, 100% of the students reported using a computer for school work outside of school time at least 1 day a week, and 51% said that they used it at least 5 days a week. Many students communicate electronically with their classmates outside of school time as well; in the same survey, 76% responded that this communication occurred at least 5 days a week, and 60% stated that it occurred every day.

▼ **Menu du cours**

- Page d'accueil
- Calendrier
- Notes
- Discussions
- Travaux/Devoirs
- Courriel
- Liens
- Syllabus
- Journal
- Présentations

Page d'accueil

Sciences 9e année

Bienvenue au cours de sciences 9e année!!!

Calendrier

Notes

Discussions

Courriel

Liens

Syllabus

Journal

Présentations

Figure 1: Students' WebCT course welcome page

Methods

Students had access to all course notes on WebCT, along with links to outside web sites to supplement the curriculum, for the duration of the chemistry unit from early November, 2004, to late January, 2005. A course calendar linked students to each day's work and assignments. Students were encouraged to use the asynchronous discussion forum to post and/or read questions and comments about the chemistry unit. An internal email system allowed the students to email each other or me. Although students occasionally went to the school computer lab for a class, the vast majority of their use of WebCT was outside of school time, using their home computers.

WebCT monWebCT Reprendre le cours Plan du cours Vérification du navigateur Fermeture de session Aide

▼ **Menu du cours** Page d'accueil > **Discussions**

Page d'accueil
Calendrier
Notes
Discussions
Travaux/Devoirs
Courriel
Liens
Syllabus
Journal
Présentations

Forum

Rédiger un message | Rechercher | Paramètres du thème

Cliquer sur le nom d'un thème pour afficher les messages qu'il contient.

Sujet	Non lu	Total	Statut
Introductions	0	51	public, Fermé
Module 2: Comprendre la chimie	0	51	public, Fermé
Projet de sciences	0	6	public, Fermé
Sciences Plus! Questions, idées, articles...	1	3	public, Fermé
Café	0	15	public, Fermé
Tous	1	126	---

Figure 2: Discussion forum topics

A variety of data collection methods and sources were used to provide triangulation. Qualitative data included: three anonymous questionnaires (pre-, mid- and post-implementation) with Likert-type rating questions as well as open-ended questions; a teacher research journal; post-study student interviews (each 10-15 minutes in duration); and transcript analysis of discussion forum posts. Quantitative data included statistical information retained by WebCT, such as the number of pages visited by students as well as the number of discussion messages read and posted. Data analysis coincided with data collection, including reading and re-reading data to identify emerging themes.

Question 13
During the chemistry unit, how frequently did you use WebCT's discussion forum outside of school time (reading or posting)?

a. Every day
 b. 5-6 days a week
 c. 3-4 days a week
 d. 1-2 days a week
 e. Less than once a week

Save answer

Question 14
During the chemistry unit, for what purposes did you use the WebCT discussion forum, outside of class time? Please list.

Equation:

Save answer

Question 15
During the chemistry unit, how frequently did you use WebCT's discussion forum to read messages, outside of school time?

a. Every day
 b. 5-6 days a week
 c. 3-4 days a week
 d. 1-2 days a week
 e. Less than once a week

Save answer

Question 16
During the chemistry unit, how frequently did you use WebCT's discussion forum to post messages, outside of school time?

Figure 3: Section of the WebCT Student Survey

Results/Analysis

Students' overall reaction to WebCT was positive. Through the surveys, interviews and classroom observations, students reported that they enjoyed using WebCT and found it helpful during the chemistry unit. Over 94% of students reported that they used WebCT at home (outside of school time) at least once a week to access content (notes and links). Students also stated that they used the Calendar tool to keep organized, and the discussion forum to post or read questions about the unit. All students interviewed recommended that WebCT should continue to be used in future years.

Learner-content interaction

Through the interviews, surveys and observations, students reported that having the notes available online was helpful to them. Students liked the ability to preview and review notes, and several students mentioned in the interviews that they felt that they stayed more organized through the unit.

As many researchers have noted, placing notes online is not enough to encourage active learning by students (see Woodman, Milankovic-Atkinson, Sadler & Murphy, 2001; Palloff & Pratt, 2000). However, students stated with the notes in hand, they could pay more attention in class because they could refer to their notes rather than struggling to copy from the board and listen at the same time. Students also reported that the links to outside web sites helped them solidify and extend their understanding of the concepts in chemistry.

Learner-instructor interaction

The use of the discussion forum and email tools helped to foster learner-teacher interactions. Students knew that they could ask a question about their science course and they would likely get a response even outside of regular school hours. I felt better connected to my students. Some of the questions posed through the discussion forum allowed me to clarify concepts or misconceptions, and they gave me a better sense of how the students understood the course material.

Learner-learner interaction

The primary vehicle for learner-learner interaction with WebCT was the discussion forum. Luca (2000) describes the use of the online forum as “a learning environment where participants could share knowledge, discuss ideas and contribute to each other’s understandings of important issues” (p.151). Students reported that the benefits of the discussion forum included helping/receiving help from other students, reviewing with classmates for tests and projects, and asking questions.

While learner-learner interactions were strengthened by the use of the discussion forum during the chemistry unit, they did not reach Luca’s ideal. Relatively few students (14 of 45) posted messages, and many of the messages were for purposes such as checking due dates and homework. Even the messages related to the chemistry unit tended to ask for clarification rather than elaboration or critical thinking. Given that the use of the discussion forum was unstructured and not required, the relatively low level of interaction on the forum was not surprising and is anticipated by relevant reports in the literature (Kanuka & Anderson, 1998).

My changing role

Dabbagh and Schmitt (1998) state that courses that have been designed for the traditional classroom environment and later transformed to an online delivery can provide learners with instructional and learning opportunities that are not possible without the use of technology. However, the shift to online learning poses many challenges to instructors and their institutions (Palloff & Pratt, 2000). One of these challenges is to deal with the changing role of the instructor. Educators must re-

examine their role, not only in terms of course delivery but also in design and development of the online environment.

The use of WebCT with my Grade 9 science course has been rewarding, but very time-consuming. During the first year I used the program, I focussed on putting notes online, but it became clear to me that placing notes online was not enough to encourage active learning by students, a view that is supported by many researchers (see Woodman, Milankovic-Atkinson, Sadler & Murphy, 2001, and Palloff & Pratt, 2000).

Over the past two years, I have refined the notes, added links to external websites, added multimedia content, linked the notes to the course calendar, and added in the discussion forum. I plan to continue exploring other WebCT tools, such as the quiz/survey tool and the 'My Presentations' area.

In addition to the benefits perceived by students, as a teacher I believe that I have benefited from the use of WebCT as well. The process of putting the chemistry unit online has made me explore new ways of delivering the curriculum. I am integrating more online activities, demonstrations and alternate examples and explanations into my classroom teaching. Through the use of email and the discussion forum, I feel like I am more connected with my students and so I can assist them more easily if they are encountering difficulty. The use of WebCT has been time-consuming in terms of developing the content, searching for additional resources, and monitoring and responding to emails and discussion forum posts, but I have found it professionally enriching and rewarding.

I have found the action research process to be a valuable approach. I plan to continue to explore how best to use online technologies such as WebCT to complement classroom teaching and learning.

Conclusions/Significance of the study

The purpose of this action research study was to investigate the use of WebCT in a junior high late French immersion science class. WebCT supported student learning in the two classes studied, strengthening learner-content, learner-instructor and learner-learner interactions. Students enjoyed using WebCT and recommended that its use be continued with the Grade 9 science class. As a teacher, I also reaped the benefits of using WebCT, finding new ways to deliver the curriculum and interact with my students.

The findings in this study report on the experiences of two Grade 9 late French immersion science classes in one school. Students were above-average academically and there were no students with identified learning difficulties in the class. All 45 students had access to the Internet from a home computer and could access WebCT outside of school hours. It could certainly be argued that these two classes are not typical. In many other classroom contexts, access to technology and a greater diversity of learner needs would have to be addressed before WebCT could be used.

This study contributes to research into the use of course management systems such as WebCT as a supplement to classroom teaching. A gap in current research is addressed through the focus on the junior high level.

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Using Vermicomposting To Increase Environmental Awareness In Primary School: An Action Research Project

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In this project, we undertook a group-based action research approach to develop a vermicomposting module to promote environmental awareness. This activity was supported through funding from Memorial University of Newfoundland. Support in the forms of space, materials, time, and expertise also came from our school and district levels.

Our environmental unit addressed two global educational objectives: to enable students to experience "deep" learning, and to facilitate the development of transferable skills. It has long been recognized that traditional teaching techniques often fail to encourage "deep" learning of subject content. "Deep" learning is one that goes beyond short-term, rote memorization, and enables assimilation of new knowledge in a way that allows re-application to novel situations (Entwhistle, 1988). Strategies that help learners develop transferable skills in areas such as thinking and learning, self-management, communication, group work and information management, are intended to prepare students for work outside of the academic contexts in which they were initially learned.

We decided to use principles from both The Project Approach (Katz & Chard, 1991) and Constructivist Learning (Duffy & Jonassen, 1992). For much of the module, students were engaged in teacher-supported, group-based collaborative projects which utilized compost bins in the classroom. A range of individually-based learning activities further complemented our project. A major issue for us, as action researchers, was to reach an understanding of the nature and level of support required by students to gain the most from their learning activities. A key question associated with our project was: What is the necessary balance between externally imposed structure and control and the students' freedom to be self-directed?

Research Questions

Our action research project was conducted simultaneously across Kindergarten, grade one, and grade three classes. A desired goal was to determine if vermicomposting and recycling activities would translate into greater levels of environmental awareness amongst the students involved. This environmental wondering arose from observations and discussions amongst the teachers as to the "real" understanding of the recycling initiative associated with our "Green School." We felt that our students would benefit greatly by engaging in experiences that could potentially broaden their knowledge and awareness of caring for our environment. These children had no prior involvement with composting at school, and initially expressed very little knowledge of what composting entailed. Through thoughtful analysis, we identified several science outcomes that were within the scope of our project. These outcomes were related to hands-on learning, animal care, soil exploration, plant growth and changes, life cycles, habitats, environmental awareness

and stewardship, observations, diversity of living things, safety, and critical thinking. Aside from formal learning opportunities, many experiences emerged based on children's preconceived ideas and group management of compost bins. These latter experiences provided very exciting results, which were mostly discovered through ongoing, informal observations by the teachers. Sub-questions that emerged throughout the action research project were:

- How can we increase the students' desire to eat nutritious snacks during school?
- How do we best support children's group management skills as they care for their worm bin?
- How can we support the model of a Caring Classroom Community of Learners as we prepare to work cooperatively to nurture our worms?
- How do we create a hands-on approach to scientific learning, particularly concerning vermicomposting?

Relevant Research Literature

A variety of methodologies were incorporated into our action research project and implemented throughout our research. One methodology was the Project Approach (Katz & Chard, 1991) which involves students completing projects that reflect an in-depth study of a particular topic. It aims to change knowledge and skills, as well as emotional, moral and aesthetic sensibilities, by encouraging students to pose wonderings, pursue questions, and make better sense of their experiences in context to the world around them. Children approached the vermicomposting project as emergent learners who, in theory, negotiated and selected the experiences they wished to explore. We believe this approach to be more advantageous than having students simply follow a preplanned curriculum. Philosophies of constructivist learning (Bruner, 1960) were also instrumental to our research by providing three insights into instruction. First, instruction must be concerned with the experiences and contexts that make the student willing and able to learn. Second, instruction must be structured so that students can easily grasp the intended concepts. Third, instruction should be designed to facilitate extrapolation in order to go beyond intended learning objectives. Our third research methodology was problem-based learning. According to White (1996), problem-based learning is introduced using complex, real world problems. The problem we posed in relation to our project was as follows: As a "Green School," we need to raise our students' awareness of environmental issues in our school and community. We incorporated a problem-based learning approach and attempted to solve the problem through activities related to vermicomposting. The Context This section highlights teachers' experiences and reflections associated with the vermicomposting project in their respective classrooms.

Carol Ann: Kindergarten

I am presently in my tenth year of teaching. Although I began my teaching career at the high school level, I now find myself at the primary level, where I have been teaching Kindergarten for the past six years. My teaching background is French as a second language. Our school offers a dual track system, with both French and English. I have been the Kindergarten French Immersion teacher at Bishop Feild for three years.

Ecole Bishop Feild Elementary School in St. John's is part of the newly formed Eastern School District in Newfoundland and Labrador.

My class consists of 27 children: 12 males and 15 females. English is the first language of 26 children, with one Polish-speaking student. Most of the children turned age 5 by December. One boy turned 6 by December. Six children turned 5 in late November/early December, and one turned 5 on the 28th of December. The students vary in maturity and readiness for school. There are children who struggle in my class and children who are advanced.

Bishop Feild serves the needs of children from a variety of distinct socioeconomic classes. My role within this context is to use the French language as a vehicle to introduce the children to the beginnings of school life. My goals are for the children to respect one another, to participate to the best of their ability, and to have fun while immersed in the French language.

Norma: Grade One

I teach Grade One at an inner city school. In addition to offering a well-balanced curriculum, I am particularly interested in teaching good habits that students can bring to their home. It is important for me to project a Ado-good feeling in the classroom, with a hope that this feeling can be passed on to their homes, sparking a positive home life. I believe that environmental awareness is one of those Ado-good projects that can easily be carried over to the home. With regards to this project, my goal was to teach the concept effectively enough so that it would invoke a change at home.

Once composting was identified as the focus area, we began to research composting, as well as some teaching strategies I wanted to use. Local composting experts were contacted to assist us in acquiring the appropriate materials. With these concerns satisfied, the class completed a pre-survey to assess current knowledge and views on the subject. Each week I used a different approach/activity to teach composting and environmental awareness to my class. Along with my teaching, I used a variety of data sources to support my research (video, interviews, written work, and surveys - see appendix). Online journal reflection took place at the end of each week, which allowed for revision and modification of activities and data collection methods. When student projects had finished, the final survey was given and interviews were arranged with targeted students (see appendix). Finally, data analysis began and I was able to identify the main themes I wanted to convey.

I have learned to use a more project-oriented approach in my science classroom. When the science is teacher-directed, students are not inquiring, or using higher level thinking, and are therefore not as engaged. Even six- and seven-year-olds can become "thinkers" when directed by their teacher. Another valuable lesson was the importance of pre-assessing students. Prior to this project, I was unaware of the importance of gauging students' backgrounds and prior knowledge when introducing a new topic. This technique helped me to allot the appropriate amount of time for the different

aspects of my project. This is a strategy I will use, not only in science classes, but in all subject areas.

I have found this action research experience to be a very positive one. The research question kept me focused, and, under the umbrella of research, I felt secure to try new and different things. With financial assistance, I was able to try something new with my students. Even after ten years of teaching, I felt this project provided an excellent opportunity to reflect on my teaching practice.

This project has accomplished everything that I hoped it would achieve. Not only did it improve my teaching, but it also changed my entire belief system on how science should be taught. I learned a very valuable lesson: science teaching is about the process, not the content. In retrospect, I believe I would have tightened up the time frame of the project to prevent some dips in enthusiasm throughout the project. All in all, it was an extremely positive experience!

Darlene: Grade Three

Teaching science in Grade Three has been a new experience for me. Committing to an action research project has been a major undertaking for me this year. Not only do I have a large class of 33 children with a variety of academic and socioeconomic backgrounds, but I also have limited classroom space. My enthusiasm for learning science in a hands-on, innovative manner, however, has not been compromised by these challenges. Onward we went with our 5000 worms housed in 5 compost bins. As I reflect upon the beginning days of this project, I see myself armed with my research question and a container of rotting apples and bananas as my class took the plunge. At first, the children were very excited about this caretaking, maternal responsibility. Children were grouped and then given total freedom to maintain the physical care of these worms. Fortunately, I had a few conscientious students who were eager to make their worm bin the happiest. I was surprised by the number of children who were squeamish about handling the worms and the rotting food, but I quickly discovered which individuals were willing to do the "dirty work".

The project took off with great enthusiasm. Each group developed its own schedule, responsibilities and roles. Roles within each group included feeders, sprayers, recorders and food preparers, to name a few. In the early weeks, the groups kept the momentum and the responsibilities were met. I used this time to get myself accustomed to the expectations of the project, review the literature surrounding my teaching approaches, and learn as much as I could about "Red Wigglers". Time had passed and our worms were quite Acreature-sufficient, requiring very little care from myself or the children. Then, Criterion Reference Tests (CRT), Heritage Projects, Midterm Reports, and, of course, Easter Break came upon us and seemed to take up much of the project time. Under these circumstances, the motivation and enthusiasm for composting was flat for all of us. Through consultation with my colleagues, I got myself back on track. I pondered over my research question to help me refocus. I also worked closely with the grade one teacher to build momentum once again through the "Buddy Writing/Sharing the Pen" experiences with our classes. It was evident, as I reviewed the videotape, that the eagerness to

acquire more information about the project was beginning to re-emerge. I recall that during one of my morning classroom meetings, a class discussion concerning the next steps in the project took place. I shared with the students my original research question and we began a very enthusiastic brainstorming session on how we could achieve this goal. Through this group discussion and my "best facilitation" practices, the children moved towards a more achievable means of gathering research that could best reflect their learning. We decided we could spend more time reading our books, looking at the worms, and using the Internet to help us learn more about vermicomposting. I put together a Research Map booklet to give structure to the sub-headings within this topic. We worked diligently for one week to gather and record our research data (See appendix: Research Map). The final step involved taking this completed map and putting in the final stages of presentation. Children eagerly prepared posters at home using the information gathered in the classroom. We proudly displayed these in and around our classroom, and then videotaped most of the children presenting their posters to the various primary classrooms - a very proud moment for many of them.

Study Design

The research methods used to collect data were very similar in each classroom and consisted of informal observations, video recordings, digital photos of engagement, pre- and post-surveys, activity booklets, collaborative story writing, research map, poster presentations, and sculpture/art. These data collection methods were chosen for each classroom to provide consistency when analyzing our results. We felt that it would be most beneficial if we could conclude our research by making some generalized conclusions about our project as a whole.

Working with young children permits us the luxury of teaching science through a cross-curricular model, which utilizes many domains of learning at once. This was evident when students in grades one and three worked closely to write stories using the share the pen model. It was through this model that we were given an opportunity to observe and assess science learning through a formalized writing experience. Through the informal observation process, we were able to witness that children were now seeing themselves not only as science explorers, but also as recorders of data who shared the responsibility of representing their knowledge in a higher form. In this context, the teacher's role became that of facilitator. In this role, it is essential for teachers to provide opportunities for children to gain understandings of their physical world so that they develop the necessary science process skills.

Several common threads were discovered across the grades. One very significant theme was student engagement. Throughout the research process, we noticed that children's motivation dipped due to the length of the project. However, once teachers rekindled their interest in the project, the students responded similarly. For example, in kindergarten, the introduction of a clay art project recaptured students' interest in the worms and composting. In grade one, we re-introduced the beginning survey and called it a "middle survey". Students completed it and we went over our beginning survey to see how much more they knew. The grade ones were very excited to see how much they had learned and wanted to learn more. In grade three, we introduced a research map, which provided the students with an opportunity to closely examine the compost bins, collect their own data, and perform further

research related to the worms via the Internet and library. The grade three students later used this data to create a worm poster, which further renewed their interest in worms. As a result of these initiatives, student engagement increased and the classrooms were squirming with excitement! As action researchers, we cannot make claims about student involvement without supporting our claims with valid and reliable data. Triangulation is a commonly employed research technique to help support knowledge claims (Toope & Hammett, 2004). Three reliable and valid sources used in our project include student surveys, artifacts (student booklets), and video recording/observations.

Outcomes and Conclusions

Kindergarten

Various data were collected and analyzed throughout the action research project. I found that discussing the data with my colleagues helped me to learn from the project. The pre- and post-surveys demonstrated that the children's general knowledge of worms increased. Results of twenty-four completed surveys were tallied and all but two showed dramatic improvement. A second data source was our Worm Booklet (see appendix). Approximately every second day children were asked to complete a page or two from the booklet. Activities were cross-curricular. During our worm observation days, children were encouraged to draw what they had seen in the compost bin in their booklets. So much interest could be seen on the children's faces! Their enthusiasm could not be mistaken!

Many art outcomes were subsequently achieved when children were involved in activities based on their knowledge of worms and composting. Their delightful creations decorated our bulletin boards and hallways throughout the project. The children used modeling clay to form worms. The worms were measured, thus meeting math outcomes. Tempera paint was used for a Worm Mural. A local artist, a parent of one Kindergarten child, introduced the boys and girls to working with clay. Each child created a clay worm pin that was fired in a kiln at a local craft shop.

Grade One

Survey results (Table 1) indicate that the children were engaged by the worm-composting project and applied their environmental knowledge in their everyday lives. I was pleased with these results because they demonstrated that my students were engaged in the project and had transferred their knowledge to their homes.

General knowledge surveys, video data, and booklets were not as specific as the multiple choice surveys, which prompted me to re-examine the data. I made jot notes on the level of knowledge of each student, as well as the level excitement in their writing/reading. All students improved in knowledge content, voice, and excitement.

Questions	Pre-Survey (%)	Post-Survey (%)
How many of you have heard of composting?	16	100
How many of you compost at home?	5	22
How many of you recycle at home?	33	55
How many of you have been to a recycling depot?	0	11

Table 1. Student Responses to Questions from Pre and Post-Surveys

Question

These findings were encouraging, as they reaffirmed my beliefs that my students were engaged and learning. Data from the students' written output continued to support my claims of increased engagement and environmental awareness. Another very interesting theme that emerged from the data was that students began to treat their worms as pets, and spent a lot of their free writing time humanizing their worms, rather than speaking of their environmental effectiveness.

Grade Three

Collecting data was an interesting experience. As teachers, we require children to produce written work in many curriculum areas. The means of collecting data for specific science research was focused and deliberate, and included surveys, buddy writing, research booklets, and poster presentations. Some data were captured on video or digital photos. Upon examination of my data, I discovered that the surveys were most interesting (see appendix). Categories were created for the questions to determine the change in knowledge, habits, and attitudes, which can be seen in Tables 2 and 3.

Question/Statement	Pre-Survey (%)	Post-Survey (%)
I understand what composting is.	78	92
I know what happens to the food in the compost bucket.	78	84
When I sort my recess waste, I know what goes into the compost bucket.	85	85
Can nutrients in food be recycled?	44	92
*Soil is made out of natural (organic) material and sand.	62	57

Table 2. Student responses to Knowledge Questions from Pre- and Post-Survey
* Two were invalid.

The Research Map process was most enlightening since it provided observational evidence from each child. For one week, the classroom was turned into a research lab, where children worked collaboratively in centres to explore and gather

data for themselves. The research booklet (see appendix) provided children with a guideline to follow as they compiled their work. Once booklets were completed, children were expected to prepare a poster with the help of their parents, identifying what they had learned from the vermicomposting experience. Poster presentations were given to various primary classrooms, as well as to our resource teachers from MUN Botanical Gardens. They were also videotaped. A copy of the poster rubric is included in the appendix.

Buddy writing between the grade one and the grade three classes provided a means of data collection. Children were partnered for three weeks (once per week) to develop a story about worms and/or composting. Their excitement was contagious. This data, documented in a book, and captured on video as well as digital photos, solidified our views on student engagement. Not only were they writing, but we could hear their exchanges of knowledge about worms, composting, and environmental awareness during the recordings. Our experiences with interactive writing led us to concur with McCarrier, Pinnell and Fountas (2000), who characterized interactive writing as a dynamic literacy event. And what an event it was!

Question/Statement	Pre-Survey (%)	Post-Survey (%)
*Have you ever composted?	51	48
Composting is one way to recycle.	85	92
**I compost at home.	51	19

Table 3. Student Responses to Attitude and Habit Questions from Pre- and Post-Survey

* Two were invalid

** I was expecting to see an increase in composting at home. Through informal discussions with students, I discovered that they mistakenly interpreted this question as recycling for the pre-survey, but interpreted it correctly as composting for the post-survey.

Implications and Recommendations

Through conducting research in our own classrooms, all three of us have enhanced our personal and professional knowledge and practice. Not only did we become comfortable with action research, but we also found it to be a valuable teaching tool for individual teachers. We have collectively found this project to be a valuable experience and we will continue to engage in activities and strategies developed through this action research project.

Carol Ann: Kindergarten

I have always believed that a teacher should not spend a great deal of time telling children about science. Instead, children should be provided with hands-on experiences in order to derive their own understandings of science. As well, I have rarely encountered a Kindergarten child who did not show a great deal of interest in and affection for animals, especially bugs and insects. Part of my professional growth plan involved enhancing my teaching practice of science,

and I felt that providing a space in our classroom for 2000 red wigglers would get the children excited and involved.

My subject knowledge increased with time as I read various articles on composting, spoke with experts, and viewed composting sites on the Internet. I found it necessary to become more familiar with the learning outcomes for science. Instead of reviewing outcomes two or three times a year, I found it necessary to regularly evaluate them as the project unfolded.

I used a method of collecting information from the children that I had never thought of using in Kindergarten before. The boys and girls were asked to complete a Yes/No survey, which used pictures instead of words. I modeled how to complete the questionnaire; yet several children encountered difficulty with it. However, the second time we completed the survey, it was a great deal easier. I was able to evaluate their knowledge in an effective manner, and in a way that I have never used before. I would definitely consider using pre- and post-surveys again with Kindergarten children. It truly was a powerful learning experience.

Having completed only one project, I hope to continue with action research and I know that there is a lot more to learn about the topic. I do not feel confident enough to undertake an action research project individually, and being part of a research team was essential for me. Action research gave me the opportunity to plan a project of my choosing. I was able to read more on a topic that interested me, interact with external resource people, adhere to a timeline, collect and analyze data, engage my students, and meet or exceed science outcomes.

Norma: Grade One

Summarizing and reflecting upon my experiences in the weekly on-line journal forum was a beneficial aspect of our project. This exercise helped me to better understand and monitor the developments that unfolded in my teaching, as well as student learning, as the project progressed. For instance, I found that I referenced the curriculum outcomes much more than I would normally have, which served to increase my comfort level. Another valuable learning that was previously unrealized was the importance of assessing students' backgrounds and prior knowledge before the introduction of a new topic. This technique was invaluable in allotting class time for the different aspects of my project, and is something that I can apply to all subject areas. I found reflection to be an enlightening learning experience, and I continue to reflect on a personal level.

My knowledge of multiple teaching strategies and their effects on student engagement was enhanced. The data collected showed varying levels of student engagement in response to the different strategies. I can conclusively say that science is as much about process as it is product. Student learning is powerfully influenced by the instructional approach used, and not as much by the material taught. This realization was huge for me! I have learned the effectiveness of a more project-approach style in teaching science. When the teacher is the primary director, the children are less likely to inquire or use

higher-level thinking and are therefore, not as engaged in the lesson. Students must think and reason, both individually and in groups, in order for scientific knowledge to truly be learned. Once they acquire these skills and develop their own strategies and conclusions, they can transfer these tools to other aspects of the curriculum and their own lives! Even six- and seven-year-olds are capable of becoming "thinkers" when guided by their teacher.

Darlene: Grade Three

The project approach is a very useful methodology in teaching science. Science teaching requires manipulatives and discovery through experimentation. These conditions are sufficiently met by having live creatures in the classroom and learning how to properly care for them. Class dynamics and size need to be monitored more closely since these factors can really impact the progress of the project. In grade three, class size was an issue, which challenged cooperative learning. In grade one and Kindergarten, maturity issues were the major cause of concern. Such issues can negatively impact some of the indirect teaching methodologies. Insight into students It was evident that children were quite content in acquiring knowledge that was transmitted to them directly, instead of them taking the initiative to seek out their own in-depth understanding.

Possible reasons for this include:

1. Access to information beyond the classroom materials was problematic due to technological and scheduling constraints.
2. The timeline was too long to maintain the motivation of students and for them to learn more than was required by the project.
3. CRT examinations, concerts, heritage projects, and Easter break came in the middle of this project directing a great deal of teaching towards Language Arts.
4. A large and very needy classroom, with limited space and resources, inhibited freedom of movement and manipulation.

Our pedagogical content knowledge was strengthened through our vermicomposting research, providing a more vivid image of our curriculum outcomes. We had numerous opportunities to observe, record, and assess children's understanding of science and how they saw themselves as consumers of science processes. Varied instructional strategies were focused on the project approach, whereby children were given more autonomy to take control of their learning. Our role as teacher-facilitators of science was both personally and professionally gratifying. This confirmation reaffirmed our beliefs about how children learn. Hands-on and experiential/discovery methods work best for science. Students that had greater opportunity to explore as independent learners grew more confident in their abilities. Digital forms of assessment were much more informative than we imagined. Classroom observations of interactions and conversations provided great insight into knowledge levels and learning needs.

Conclusions

As classroom teachers, we continually strive towards creating a learning environment that is constructive, engaging, and dynamic. This project will have a long-term effect on our classroom practice for the simple fact that it turned out to be a positive experience for everyone involved. We tried something new and that engaged the children. Through data collection and analysis, we were able to document student learning and engagement. "I think they got something out of it," and "I suppose they learned a bit about worms" were not statements that we needed to make. The "proof" is in the data! Was it a positive learning experience? Absolutely! Conducting action research was a very worthwhile experience. No doubt this project would not have been as successful without the collaborative efforts of my colleagues. Observing action research that takes place in your school opens doors to discussing varied teaching approaches. Moving science to the forefront of teaching was interesting. The opportunity to examine children interacting with living things and question their wondering was very satisfying. Integrating science with other subject areas was easier than we thought. It was definitely an enlightening experience.

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Electronic Messaging and Student Achievement in Second-Year Science Classes

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Introduction

In 1997, *The Atlantic Monthly*, a popular North American magazine, published an article about the Clinton administration's pledge to bring a computer to every student's desk in the U.S. The article stated "in 1922, Thomas Edison predicted that 'the motion picture is destined to revolutionize our educational system and ...in a few years it will supplant largely, if not entirely, the use of textbooks.' Twenty three years later, in 1945, William Levenson, the director of Cleveland public schools' radio station claimed that 'the time may come when a portable radio receiver will be as common in the classroom as is the blackboard.' Forty years after that the noted educational psychologist B.F. Skinner, referring to the first days of his 'teaching machines' in the late 1950's and the early 1960's, wrote, 'I was soon saying that, with the help of teaching machines and programmed instruction, students could learn twice as much in the same time and with the same effort as in a standard classroom.'" (Oppenheimer, 1997, p. 45)

While the motion picture, the radio and the Skinner teaching machine have yet to revolutionize the classroom, computers, or at least the guided use of technology to assist instruction have had a far greater impact on the classroom than any previous technology. This impact is probably greatest in the use of electronic messaging (i.e., electronic mail, asynchronous discussion forums and instant text messaging).

The Study

This particular study is the second phase of an on-going research project into student use of electronic mail, messages sent to an electronic listserver, and posts to a web-based discussion forum in two different courses over a three year (nine semester) period. These two courses, Biology 2040 (Human Biology) which was offered in on-campus lecture, off-campus correspondence and web-based delivery formats and, Biology 2041 (Environmental Science) which was only offered in on-campus lecture and off-campus correspondence formats, were offered a total of twenty-two times during this period.

During the period 1997 to 1999, data on student use of electronic messaging, as defined above, were collected. An analysis of these data included time of day used, level of use, type of communications, and relationship between the use of electronic messaging and the final course grades of the students.

The first phase of this study, prior to 1997, has been summarized in earlier articles. For example, Collins (1995) found that the electronic bulletin board had fostered "student-student interaction and student-professor interaction... of course student-professor interactions through computer conferencing will never be a total replacement for face to face interactions, but computer conferencing does provide

another channel for such communication." He also stated that "the student responses [from a student questionnaire] seem to suggest that even students who would normally be reluctant to ask questions in class or comment on issues will do so through computer conferencing." (p. 189) Collins (1998) found the electronic bulletin board had fostered both student-student interaction and student-professor interaction. He also found students "noted that the round-the-clock availability of the system allowed them to ask questions, and often receive answers, at any time of day and night rather than just being restricted to class time or contacting the professor." (p. 85) Collins also reported that "one of the students commented that joining in discussions was an incentive to take interest in the course overall, and that this interest also led to better study habits." It was speculated that this comment may indicate "that becoming more actively involved in a peripheral activity such as discussion leads to becoming more involved with the course as a whole and, therefore, to better student learning." (p. 86)

Literature Review

According to Zack (1995) "electronic messaging" (EM) is a broad term that refers to several modes of computer-mediated communication, including electronic mail and electronic bulletin boards (or computer conferencing), in addition to electronic talk or chat, and electronic document exchange. One question that has been of interest to researchers in the field of EM has been whether or not the students' participation in electronic messaging affects students' performance in a course.

In an early study, Slovacek (1989) utilized electronic mail as a means of communication between students and their instructor in graduate-level computer classes within a School of Education. Slovacek found that "there appeared to [be] a positive correlation between students' use of e-mail to augment normal in-class communication with their instructors and final course grades," specifically, Slovacek stated "that each e-mail message initiated by the students was associated with a 1.781 point increase in final course grade on average." (pp. 113-114)

More recently Collins (2000) illustrated that while there was hardly any difference between the final course scores of e-mail users and non-users, there did seem to be a positive relationship between the level of web forum use and final course scores.

One explanation for this difference is in a study of general e-mail practices by Piirto (1998), who found that approximately half of the students surveyed responded "never" or "not often," when asked if they proofread and/or edited their electronic mail. This was compared to 90% of students who responded that they proofread and /or edited their written documents "every time" or "most of the time." (p. 28) According to Piirto, the level of care that university students place into their composing of an electronic mail message was very low. Similarly, Collins and Barbour (2001) speculated that while e-mail messages are often short messages about non-content queries which are 'private' and only for the instructor's eyes, postings to the web forum are 'public' and open to the scrutiny of all class members. Students are more likely to be careful and deliberate about their postings because they are for public consumption.

This is supported by earlier research completed on whether or not writing increased a student's ability to learn a subject. A students' participation in a web forum or other Internet discussion group allows the instructor to provide the student with feedback both on the content of their message and the presentation of that content. Over a decade ago, Chickering and Gamson (1987) put forward the concept that interaction is a key mechanism in enhancing learning. This concept could be applied to this study if one were to include electronic messaging as a form of interaction. However, a second area of research may indicate a greater relationship. There is a growing body of research that indicates that students who write about their subject learn that subject better. Moore (1993) found that "learning improves ... when writing assignments are complemented with instruction about how to use writing as a tool to learn [a subject.]" (p. 217) In an earlier study, Ambron (1987) found in a survey conducted at the end of the course that "student response [was] extremely favourable; ... most mentioned the value of writing in helping them understand [the subject.]" (p. 266)

Electronic Messaging and Student Performance

Since Collins (2000) examined just one individual class (Biology 2040 - Web; Summer 1999) it was decided to expand the analysis to include all the classes for which we had data during the period 1997-1999. The present study, therefore, examined the relationships between final course scores and use of e-mail, the web forum, and total EM. Table 1 and Table 2 show the data for e-mail use and final course scores.

Table 1 - Mean final course grades by e-mail use and by instructional format for Biology 2040

Course	Format	Mean Final Score	
		Users	Non-users
2040	Lecture	77.27 (n=130)	76.25 (n=461)
2040	Correspondence	73.98 (n=59)	75.88 (n=602)
2040	Web	73.84 (n=56)	73.73 (n=59)
2040	Overall	75.69	75.92

Table 2 - Mean final course grades by e-mail use and by instructional format for Biology 2041

Course	Format	Mean Final Score	
		Users	Non-users
2041	Lecture	78.35 (n=61)	76.96 (n=291)
2041	Correspondence	81.91 (n=44)	82.49 (n=394)
2041	Overall	79.84	80.

As the tables show there was no relationship between the mean course scores of e-mail users and non-users, and overall the mean final course scores of the non-users were, in fact, slightly higher than those of the users. This was not unexpected

and confirmed an earlier study (Collins, 2000) that showed no clear relationship between e-mail use and final course scores. In this study, therefore, there does not appear to be a relationship between e-mail use and final course scores as Slovacek had found in his study. (1989)

In the period of the present study (1997-1999) the web forum was only used with three classes all of them Web sections of Biology 2040. Table 3 indicates the mean final course scores for e-mail, web forum and total electronic messaging for just these three Web sections.

Table 3 - Mean final course grades and use of e-mail, web forum and total EM

EM type	Users		Non-users	
	Mean	n	Mean	n
E- mail	73.60	50	73.17	41
Web forum	75.25	40	71.96	51
Total EM	73.80	64	72.41	27

As the table shows there was virtually no difference between the mean final course scores of e-mail users and non-users for these three Web classes, similar to the situation seen above for all the courses and instructional formats. However the web forum users showed much higher mean final course scores than the non-users (difference = 3.29) while the mean final course scores for the total EM users were also higher than the non-users but not to such a great extent (difference = 1.39). These data then tend to suggest that there is a positive relationship between web forum use and mean final course score even though no such relationship was evident for e-mail use. These data are further analyzed in the next four tables which show the relationships between the frequency of use of the various types of EM and final course scores and letter grades.

Table 4 - Levels of use of different types of EM and mean final course scores

Level of use	E-mail	Web forum	Total EM
Very frequent	80.00 (n=1)	85.00 (n=2)	80.00 (n=4)
Frequent	77.50 (n=2)	73.75 (n=4)	71.8 (n=11)
Infrequent	73.29 (n=47)	74.85 (n=34)	73.78 (n=49)
None	73.17 (n=41)	71.96 (n=51)	72.41 (n=27)

While there seemed to be no overall relationship between e-mail use and mean final course scores in the previous table this table shows that there is a relationship between the level of e-mail use and mean final course scores in the three Web classes examined here, although the number of users in the very frequent and frequent categories is too low (n=3) to be statistically significant. There is hardly any difference between the mean final course scores of the low users and non-users.

Although very frequent users of the web forum achieve the highest mean final course scores again the number of students in the category is too small to be statistically significant and while frequent and infrequent users achieve higher mean scores than non-users, the infrequent users achieve a higher mean score than the frequent users. With Total EM the very frequent users once again recorded the

highest mean scores but again the number of students in this category is too low to be statistically significant. While infrequent users achieve higher mean scores than non-users the frequent users recorded lower mean scores than either the infrequent users or the non-users.

Overall then while there is a relationship between levels of e-mail use, and to a lesser extent, web forum use, and final course scores, there does not seem to be such a relationship for total EM use. The next few tables examine the same data but this time the relationship between levels of use of EM and letter grade (A, B, C, D and F) achieved in the course is analyzed.

Table 5 - Frequency of use of e-mail and final letter grades

Level of use	Course grade				
	A	B	C	D	F
Very frequent	1	0	0	0	0
Frequent	1	1	0	0	0
Infrequent	19	20	3	1	4
None	21	8	8	2	2
TOTALS	42	29	11	3	6

The table shows that while all the very frequent and frequent e-mail users gained 'A's or 'B's in the course, none of the students attaining a 'C', 'D', or 'F' was a very frequent user. In fact over one-half of all (42 of 71) those attaining 'A's or 'B's were e-mail users, while over one-half of all the students attaining 'C's, 'D's, and 'F's were non-users. It seems then that students attaining 'A's and 'B's are not only more likely to be users than other students, but they are also more likely to be very frequent or frequent e-mail users.

Table 6 - Frequency of use of the web forum and final letter grades

Level of use	Course grade				
	A	B	C	D	F
Very frequent	2	0	0	0	0
Frequent	1	2	0	0	0
Infrequent	18	10	4	1	2
None	21	17	7	2	4
TOTALS	42	29	11	3	6

Table 6 shows that the relationship between letter grade achieved and the level of web forum use is even clearer than for e-mail use. Only 'A's were very frequent users, and only 'A's and 'B's were frequent users. Only about one-third of 'C's, 'D's and 'F's were infrequent users while two-thirds made no use of the web forum. Students achieving an 'A' in the course were much more likely to be web forum users (21 of 42) than 'B's (12 of 29), who, in turn were more likely to be users than 'C's, 'D's, and 'F's (only 7 of 20).

Table 7 - Frequency of use of EM and final letter grade

Level of use	Course grade				
	A	B	C	D	F
Very frequent	3	1	0	0	0
Frequent	3	3	0	0	1
Infrequent	23	19	6	2	3
None	13	6	5	1	2
TOTALS	42	29	11	3	6

The relationship between letter grade achieved and total EM use is not as clear as that for web forum use, but does show that 'A's and 'B's are much more likely to be very frequent and frequent EM users than are 'C's, 'D's, and 'F's. While only about 27% (19 of the 71) 'A's and 'B's did not use any form of EM, 40% of the 20 'C's, 'D's and 'F's were non-users.

When considering the frequency of use of electronic messaging by students, it is useful to consider Althaus (1996), who speculated that "higher levels of motivation or scholastic achievement may also lead some students to participate in [EM] more than others." (p. 14) This caution that students who would normally perform better are more likely to participate in electronic messaging is something that needs to be explored in a more controlled setting.

Conclusion

While there are no statistically significant findings from the second phase of this research project, there are a number of growing trends which will need to be explored in the next phase. The primary trend which will need to be considered is the positive relationship that appears to exist between those who are very frequent users of the web forum and those students who achieve an 'A' in the course.

This article continues a trend in this body of research which has indicated that there is a relationship between a student's use of EM and their final grade in a course, instructors cannot be too quick to adopt this type of communications in their courses and expect students to thrive. Heeding the caution of Althaus, this conclusion provides encouragement for future research into the relationship. The next phase of this future research could consider more than simply the frequency of electronic messages, but the quality of students' contributions.

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CURRICULUM DEVELOPMENT AND TEACHING STRATEGIES

"Where I Come From..."

Introduction

by

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Faculty of Education**

In our first week of classes during Fall Semester in Education 3312, a course for pre-service teachers of language arts, we engaged in writing poems and publishing them through a literacy practice of 'author's chair'. The poems were entitled, "Where I Come From..." and were written by three cohorts of students in their professional year of study.

One of the objectives accomplished by this activity was an exploration of the personal and imaginative purposes of language in primary/elementary classrooms. Although young children engage in using personal and imaginative language significantly in their everyday life outside of school, the classroom itself has offered little support for their language uses. A study by Pennell (1977) found only 5.5 percent of utterances in classrooms were of a personal or imaginative purpose. As children interact with teachers and peers their self-concept and attitudes toward expressing feelings develop. Kash and Borich (1978) observed that "each event in the educational experience has potential for self-concept change". Consequently, the classroom need to provide a context where children "can be open, accepting, autonomous and explorative" so that they develop positive self-concepts.

Teachers seeking to teach writing must be concerned with students' feelings about themselves, school and writing. They need to communicate their genuine enthusiasm by inviting students to share their "voices". According to D. Graves (1997), "Kids don't write with good voices unless the teacher has one". Writing the poems, "Where I Come From"... was an opportunity for pre-service teachers to express their "voices" to one another in a classroom setting.

A second objective for writing the poem was the hope that sharing our poems would help establish community in our classroom. In using 'author's chair' we celebrated our creative accomplishments, while giving and receiving helpful feedback and response to our poems with our colleagues. Whenever the classroom can be perceived as such a community of writers/learners, students are more likely to persist in taking risks and, will thereby, achieve continuously.

In this class our pre-service teachers, as authors, were invited to visualize the places of their childhood and persons who had influenced them (significant others) to create a poem for sharing with the other students during 'author's chair'. A description of the process we followed in composing and publishing our poems is found in an excellent book, *Reading, Writing and Rising Up: Teaching about Social Justice and the Power of the Written Word* by Linda Christiansen (2000) and is also published in a teachers' newspaper, *Rethinking Schools* (2000). The poems written using the above framework, reflect both the rich diversity and common experiences of students

entering professional year in the study of Primary/Elementary education in our Faculty.

We have transformed the collection of poems into a book, with a cover illustrated by Christa Maher, a student from Section 4 of Education 3312, Language Arts in the Primary/Elementary Grades. The cover was selected for the book of poems, "Where I Come From. . ." by the participation of all students in the three sections of Education 3312 who participated in composing the poems. The poems from this collection are now being published in *The Morning Watch* by permission from our 'teacher authors'. Many positive responses were given to the poetry readings in our classes and we invite our readers to enjoy the collection. You can respond to our anthology or particular poems by contacting us at.

Joan Oldford
Professor
Faculty of Education

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**"WHERE I COME FROM...":
A COLLECTION OF POETRY**

Part I

AUTHORS:

Julie Feehan
Dawn Adey
Melissa Adey
Monique Alexander
Amelia Andrews
Jennifer Andrews
Lesley Andrews
Todd Andrews
Amanda Anthony
Vicki Anthony
Krista Arnold
Amy Baird
Jennifer Baker
Tanya Bartlett
Amanda Bavis
Sheena Best
Jennifer Bishop
Gizelle Blanchard
Jennifer Boland
Pam Boyd
Allayne Bradley
Shonna Bragg
Joseph Brown
Carla Budgell
M. Dawn Bursey
Rebecca Butt
Frances Byrne
Michelle Caines
Elizabeth Campbell
J. Carey
Shelley Chaulk
Tiffany Clarke
Amanda Clinch
Melissa Clowe

Where I Come From...

By Julie Feehan

I come from toys and sharing a yellow room
I come from a small cul-de-sac with lots of kids and close families.

I come from Mary Elizabeth and William Edward, lovers and hard workers.
I come from "Buz, Moon Face, Jenny Ling and Bobert", loveable nicknames.

I come from chicken, mashed potatoes and gravey, dressing, salt eat and carrots
every Sunday in Mammy's small living room.
I come from doing lots of homework and long hours of study because anything less
was unacceptable.

I come from summers on a sunny Florida beach and a salty ocean.

I come from home where I want to stay.

Where I Come From...

By Dawn Adey

I come from an old house
With creaky steps and an ancient soul.

I come from dandelions and pine cones,
And trees as high as the sky.

I come from Juanita;
Courageous fighter, mother of strength.

I come from giggles and teardrops
And big brother hugs.

I come from homemade bread and molasses,
Made for me by my father.

I come from listening hard and learning the way,
From hours of bedtime stories.

I come from a big rock in an open field,
Where my imagination ran free.

I come from my home,
A place my heart will cherish forever.

Where I Come From...

By Melissa Adey

I come from a yellow house on a tall hill
fenced by great, giant, waving maple trees

I come from mud pies baked by the sun's rays,
decorated with green leaves, brown pine cones, and flaming red dog berries

I come from lilac perfume and Old Spice mixed with peppermint;
visits from Nanny and Grampy

I come from marshmallows roasts in the backyard,
golden brown marshmallows, drizzled with chocolate, and rolled in coconut

I come from hide-n-go-seek, king of the castle,
I declare war, spotlight, and red rover

I come from many rooms, places and people, each one holding a different memory,
some waiting to create a memory

Where I Come From...

By Monique Alexander

I come from my family, generations of love,
where I'm Daddy's girl, Mommy's angel and Big Sis in one.

I come from Cabbage Patch Dolls and the Babysitter's Club,
the smell of Mom's baking and the treasures of Dad's hockey bag.

I come from green grass, tall houses, and baby blue skies,
where a world outside the door awaits my discovery.

I come from the whirlwind of "Go ask your Mom" and "Go ask your Dad", constantly
being sucked into the frustration of indecisiveness.

I come from raisin bread, coconut squares and homemade Sunday dinners, family
card games, Christmas sing-a-longs and bedtime stories.

I come from photo albums on a dusty shelf
and diary pages hiding my inner-most secrets.

I come from a past filled with memories,
a present filled with adventure
and a future filled with hope.

Where I Come From...
By Amelia Andrews

I come from a small community on the South west coast,
Where the hills surround its people like a blanket.

I come from a house that faces the ocean,
And from a home that holds all that is dear to me.

I come from Lewis and Doris, hardworking and always supportive.

I come from snowy Christmas Eve nights.
And family gatherings throughout the 12 days of Christmas.

I come from a bridge where I can watch the clothes flicker in the
wind and watch my dogs play in the yard.

I come from a place where everyone knows my name,
And a place that I hold close to my heart.

Where I Come From...
By Jennifer Andrews

I come from a quiet street, that leads to a busy highway,
in the small community of South River

I come from a modest white house, which sits on top of a hill,
surrounded by beautiful trees and shimmering flowers during the summer time

I come from a home which both my sister and I are very proud of
because of our parents morals and respect

I come from a family where both guidance and encouragement have
helped me to blossom and make the right decisions

I come from a mother whose many long hours and sacrifices have
given me the best of opportunities to enrich my thinking
and prepare me to become a responsible adult

I come from paper routes, selling Regal and teaching music lessons, all helping me
become a more independent individual

I come from a home that is always greeted once you set foot inside, by a loving five-
pound dog, whose warmth fills the air and puts a smile on your face

I come from church and jigs dinner on Sundays, piano lessons on Mondays,
Girl Guides on Tuesdays, band practice on Wednesdays, choir and ballet practices
on Thursdays, singing lessons on Fridays and finally relaxation on Saturdays,
altogether making me a well-rounded person

I come from being a hard worker, friendly and caring, socializing and lending a hand,
all helping me become a better individual

I come from a room that contains a closet full of boxes of items and photo albums of
my childhood which I hold dear and hope to keep so that one day I will be able to
share a piece of my childhood days with my children

I come from a past which has created me, and at this present time I am working
towards a future that will enable me to be the best that I can be, so that I can one day
provide the support and guidance to my own family that my parents have given me,
while helping mold me from a helpless child to a mature adult

Where I Come From...
By Lesley Andrews

I come from Paradise, 12 Christopher Street,
where I have lived my whole life.

I come from the halt of a cul-de-sac with a swollen rear patch steering into
the deep intensified forest.

I come from a dwelling overflowing with love and laughter without once
missing dogs.

I come from a pedigree of four--Glen, Beverly and having come before me,
a clever brother Colin.

I come from a little maid, as Nan would say, with monkey-like maneuvers
causing furniture to be fastened.

I come from the nicknames Izzy Izzy bee, Smurf and Lester for which the
logic is unknown.

I come from early bedtimes as light beamed in through my window and the
sounds of children playing also made their way.

I come from Daddy's little girl where I would perch on his knee following
every supper hour.

I come from a world spilling with multitudes of memories, hopes and dreams.

Where I Come From...
By Todd Andrews

I come from St. John's, Newfoundland, most easterly place in Canada.
I come from many hills and tons of wind.

I come from sleeping on bunk beds with ugly yellow curtains in the window.
I come from piano lessons and playing on the ping pong table.

I come from a big, long driveway surrounded by flowers.
I come from a basketball net and a swing in the back.

I come from mom saying, "Likewise, I'm sure".
I come from dad saying, "If you have nothing nice to say,
then don't say anything at all".

I come from french fries and touts with molasses.
I come from cooked Sunday dinner and fresh baked bread.

I come from family trips and photos of everything.
I come from memory books and family trees.
I come from family gatherings and time with my friends.
I come from hard work and love and compassion.

Where I Come From...
By Amanda Anthony

I come from dolls, shells, and rocks, all gathered on special occasions.

I come from a town of fog and smog where sunny days brighten
the tanks and stacks.

I come from Arthur's cod-filled trap skiff and William's lighthouse.

I come from my grandparents' homes of love to now a spooked feeling of death.

I come from "always look for the good in people, not the bad."

I come from macaroni and cheese, homemade bread and touts
all topped with partridgeberry jam.

I come from strong work ethics embedded in me by Linda and Paul.

I come from a bedroom of great memories written in my cherished diaries.

I come from the kitchen table discussing family history while
sipping on Tetley Tea.

Where I Come From...
By Vicki Anthony

I come from a family: a mom, a dad, and a brother.
I live on a street like no other.

I come from a place that is near the ocean.
When I think about it I feel lots of emotion.

I come from an Island called Newfoundland,
where I would often play in the sand.

I come from a place that I often like to visit,
where I love to sit and talk; I really miss it.

I come from a home where my friends always matter.
But, I love most of all, is it's the place where my family gathers.

I come from a place where I can run free,
and above all else, I can be me.

I come from a tiny town, not far from here,
which I hold in my heart very dear.

Where I Come From...
By Krista Arnold

I come from a garden of laughter and a house filled with dreams

I come from dancing water and a blanket of pine

I come from Jason and Kerry, pranksters and protectors

I come from an excited sweet child and a world of holy monkeys

I come from mac and cheese and salt fish and brewis
I come from higher education and a dedicated family life

I come from cabin golf and red-eyed smiles left on the tracks

I come from singing and guitars and chasing tikes who
have just stolen my scissors.

Where I Come From...
By Amy Baird

I come from long summer days in the meadow

I come from the feel of my horse's soft nose on my hand

I come from the sweet notes of a guitar

I come from the pages in a book

I come from ink, paint, clay, and film
I come from rainy days imagining the future
I come from moments spent with friends
I come from the smell of Christmas trees and turkey dinners
I come from grief, sadness, joy and love
I come from the artistic lyrics of life

Where I Come From...
By Jennifer Baker

I come from a split level, in the Hub of the Bay,
with a side stream, and ocean view.
I come from jumping streams, swimming in brooks,
to watching the crashing waves.
I come from a morning in church,
to berry picking in the afternoon.
I come from cooked Sunday dinners,
with partridgeberry cheesecake, or rubbarb pie
I come from big family gatherings,
with profound family closeness.
I come from a care for others,
and with a confidence in oneself
I come from love.

Where I Come From...
By Tanya Bartlett

I come from a place of beach rocks and ocean waves,
Where the salt of the sea, stings your nose.
I come from a tree-filled yard,
Where the hill extends from the veranda to the trickling brook.
I come from Susan and Dave, two wonderful parents,
Who created a home of love, patience, and trust.

I come from a house of laughter, smiles, and tears,
Where the four of us have lived for the past 22 years.

I come from homemade bread, fish, and jigs dinner,
Where the great smells hold in the kitchen for hours.

I come from precious memories held by a little purple box,
Where my past, present, and future are kept safe.

I come from a great circle of friends,
Who have always been there when times are great or when times get rough.

I come from a great past and look forward to a wonderful future,
Where I am at the front of a classroom looking down on smiling faces.

Where I Come From...
By Amanda Bavis

I come from a street found off the main road,
Where all the houses are built in a row.

I come from a place where toys were often plenty,
Of course, my favorite was the stuffed bear I called Teddy.

I come from parents, who always gave me lots of support and love,
And the one I have to thank for this is the Almighty above.

I come from a home of cooked meals, such as chicken and roast,
As a child, I remember It was my mother who read to me the most.

I come from a desire to be an educator to help children learn and understand,
I want to know what it feels like to be needed and always in demand.

Where I Come From...
By Sheena Best

I come from a hilltop that slopes to meet the seagulls.

I come from a sunny veranda draped in black-eyed susies.

I come from chattering supper tables and giggling bunk beds.

I come from crackling fireplaces and blankets on powerless winter nights.

I come from corn-beef sandwiches after church and hot chocolate after sliding.

I come from backyard birthday tag and dusty swing sets that never grew old.

I come from "the rock" and "the pond", where grown-ups never wandered.
I come from never-ending drives out west, the land of cliffs and autumn colors.
I come from Ella-Jean and Wayne, supportive singers and loving arms.
I come from a place that I'll never quite leave, from memories and dreams.

Where I Come From...
By Jennifer Bishop

I come from a community that sits beside the sea,
smelling the ocean as it blows past me.

I come from mom and dad,
knitter and carpenter.

I come from big family get-togethers
and small family trips.

I come from tall trees and pink flowers,
because this is my garden.

I come from Cavendish,
a place of love and laughter.

Where I Come From...
By Gizelle Blanchard

I come from a town located in the West,
And from a field where blueberries grow the best.

I come from a house that is up in a cove,
And from the smell of a wood-burning stove.

I come from a family enriched with love,
And from friends, who gather to sing and have fun.

I come from a tradition of Christmas moose pie,
And from unpredictable storms that prove
weathermen do lie.

I come from a place I hold close to my heart,
And from a sandy white beach I hate to depart.

Where I Come From...
By Jennifer Boland

I come from music and memories
held by these four walls

I come from a picket fence
with holes in the lawn where our swings used to be

I come from a family who held me tight
and are reluctant to let me go

I come from "I love you anyway,
even when it wasn't so easy to say
I come from gingerbread men,
that baked and burned each and every Christmas

I come from trying and failing
with the promise of doing better next time

I come from books filled with pictures
and friends filled with memories, who won't let me forget

I come from a place that gave me the best it could
to carry me wherever it is that I want to go

Where I Come From...
By Pam Boyd

I come from musical guitar strings
and sweet-sounding harmony.

I come from a garden of vegetables
and beautiful birch trees.

I come from a salty sea breeze
and a rocky seashore.

I come from Adelia and John, loving
grandparents, faithful believers in God.

I come from a home where honesty
is always the best policy.

I come from pea soup, toutons
and fresh homemade bread.

I come from sleepy Sunday evenings,
a day of rest.

I come from a studious work ethic,
always do your best.

I come from my hiding spot, a huge
red rock, that now looks so small.

I come from a place that makes me smile
from the inside out.

Where I Come From...
By Allayne Bradley

I come from a black-and-white house
that radiates with color inside.

I come from bonding with brothers,
in a sandbox filled with Tonka trucks.

I come from a huge back yard,
that doubled as a skating rink in winter.

I come from the smell of my mother's cooking,
floating upstairs into my room.

I come from Allan and Joy,
teachers of following your dreams.

I come from piano and voice lessons,
and a family fan club at sporting events.

I come from discipline and work ethics,
which have gotten me this far, so far.

I come from opportunities to grow,
and aspirations for success.

I come from the family around me,
no matter the distance, I'll always be home.

Where I Come From...
By Shonna Bragg

I come from a home that smells of sweet homemade treats and lots of laughter.
Of friendly welcomes as you walk through the door.

I come from a house that over looks the ocean,
where the smell of salt water is breathtaking.
A house that has a front yard that connects to my grandparents.

I come from the Bragg family, Jerome and Viola,
welder and fish plant worker, and loving parents.

I come from the smell of homemade bread and bakeapple jam.
Where front yard fires and weiner roasts are common.

I come from high family morals and values,
that have shaped me into a family oriented person.

I come from high educational expectations and family support,
which has helped me get where I am today.

I come from strong Newfoundland roots and accents.
Where talking fast and using slang is not noticed.

I come from a loving family, with one sister, Angie,
where memories are kept throughout our cozy home in Port-aux-Basques.

Where I Come From...

By Joseph Brown

I come from a city nestled in a tree-clad valley surrounded by
mountains capped in snow.

I come from dreary mornings where mists seep down steep hills,
enrobing the quiet streets in glittering dew.

I come from a quaint home encircled by majestic trees that gazes out
over the sheltered bay, filled with bustling cargo ships.

I come from loving parents born when there was just a
Newfoundland, not a union with Canada.

I come from a loving family that supports me in all of my endeavors,
no matter the cost.

I come from an island without many opportunities, but with people
that have great hearts and strive to make the best of what they have.

Where I Come From...

By Carla Budgell

I come from a winding street that leads to the rugged seashore.

I come from a small community bearing dories,
lobster pots and sea gulls.

I come from blueberry bushes and cherry trees.

I come from fresh-baked bread and jigs dinner.

I come from Bessie and Perry, caregivers and protectors.

I come from strong family ties and solid moral beliefs.

I come from Saturday evening strolls and special Sunday dinners.

I come from secret childhood diaries and cherished family photo albums.

Where I Come From...

By M. Dawn Bursey

I come from a small Newfoundland town near the bay,
where snow can fall in June and moose graze on the lawn.

I come from a house on Newtown Road,
with twenty kids playing cats and dogs in the yard.

I come from a fun family singing "oh, say can you see" at the table,
while mom pleads "can't we just have a normal meal".

I come from a crazy dad and a strong mom,
who taught me to love life and laugh along the way.

I come from Danielle and DeAnne,
Who will grow up but always be little to me.

I come from homemade bread and molasses,
and summers at the cabin with Nan and Pop.

I come from love, heartache, wonderful memories, and hard lessons,
which make me who I am today.

Where I Come From...

By Rebecca Butt

I come from a place out looking the sea,
surrounded by family who all care for me.

I come from a house, old with great tales,
it is a place I can go when all else fails.

I come from a town covered with trees,
where I go to relax and do what I please.

I come from a neighborhood where all families gather,
when we are safe and warm, nothing else matters.

I come from a community where the flowers still bloom,
where the stars burn bright right next to the moon.

I come from the place where my parents were born,
everytime I leave, a piece of my heart is torn.

Where I Come From...

By Frances Byrne

I come from city sound
Cars driving, dogs barking, children playing loud

In my garden there are trees
Weeds, flowers, leaves blowing in the breeze

Two parents stand by me keep me strong
Guide me down this road so long

Swells of family splash around me
Along with this island so does the sea

One small person in this big world
Yet to be seen and yet to be heard

Where I Come From...

By Michelle Caines

I come from a beautiful, fast growing city called Mt. Pearl.
with a split-level house on a busy main street,
with cars rushing by ever so fast.

I have a big back yard where we all used to play,
but we are grown now so it's for the neighbor's dog to play.

I come from a two-parent home that is built strong.
with a younger sister that is a friend and my backbone.
I collect my cherish memories within a secret box which is
decorated by the artist: ME.
I have a group of friends which have been there since grade
school and, as time passes by, we grow even closer.

I am heading towards a few long years of school and, when
this is finished, I will have my degree for teaching.
Although, I grew up in this fast growing city, I have no idea
where the rest of life is taking me.....

Where I Come From...
By Elizabeth Campbell

I come from a town, where the oceans are deep,
the harbor surrounds the memories I keep.

I come from a house furnished with love
and the warmth could be felt by all those who came.

I come from a garden of flowers and herbs
my mom's specialty, or so I've heard.

I come from respect, love and admiration
those are the lessons I have been taking.

I come from an album full of yesterday
I laugh at those pictures and sometimes I pray.

I come from the memories of all those who are dear,
they made the town a home for so many years.

Where I Come From...
By J. Carey

I come from a home filled up with toys,
And with oven-fresh cookies for the streets' girls and boys.

I come from a home where everyone would come to play,
With so little traffic we played there all day.

I come from a home where everyone always cared,
Even though I am adopted, they will always be there.

I come from a home where my mom would always cook,
Pizza, Hamburgers, Kraft Dinner: she never used a cookbook.

I come from a home where I was told to do my best in school,
My parents always helped me so I would not be thought a fool.

I come from a home with memories all around,
From books, rooms, and toys, even the ground.

I come from a home that I will soon have to leave,
With my family behind me, I know I will achieve.

Where I Come From...
By Shelley Chaulk

I come from a fishing town living by the sea

I come from the view of the mountain, yet down in the valley

I come from Mona & Alex Park, photographer and entrepreneur

I come from a cutting area of birch and balsam fir

I come from a room filled with barbies and bears

A place when leaving brings me to tears

I come from eating jiggs dinner, my mom's speciality
With raspberry grunt for dessert and a cup of tetley tea

I come from attending church and Sunday school,
Where obeying the Bible was the golden rule

I come from a wonderful place I love to call 'home'
and by reflecting back, it helped me write this poem

Where I Come From...
By Tiffany Clarke

I come from the comfort of a blanket that accompanies the
strength and power of the written word.

I come from perfectly manicured lawns that blur into the magic
of lush forests and serenity.

I come from the love and concern of Grandmothers constant,
"You'll catch a cold like that."

I come from the sweet smells of traditional Newfie cuisines of the land and sea.

I come from the encouragement that all I can do is my best, and never to sell myself short because I have many opportunities to shine.

I come from behind a chair where imagination was everything and reality meant nothing.

I come from a past of love, a present that is constantly shaping me, and a future that is unknown but optimistic.

Where I Come From...
By Amanda Clinch

I come from hand-plastered stucco ceilings with circles and patterns in mind.

I come from a backyard with a small canal which leads to Georgian Bay.

I come from Sharon Keats and Frank Clinch, two people who prove opposites attract.

I come from kid sister and "nothing is too good for my little girl."

I come from pasta dishes and turkey dinners.

I come from extravagant parties on special occasions and "do well in school so you can be anything that you want to be."

I come from photo albums and keep-sake boxes.

I come from Toronto and headed to wherever my head and my heart take me.

Where I Come From...
By Melissa Clowe

I come from a very historic community along the Irish Loop, surrounded by warm and friendly people.

I come from a backyard where a pond lies with the sound of quacking ducks and croaking frogs in summer.

I come from Derrick and Margaret, both extremely influential and admirable beings in my life.

I come from a home full of security and love where 'be careful' and 'take care' is frequently heard.

I come from a tradition of Jiggs Dinner in the pot each Sunday,
followed by a cup of tea and blueberry pudding.

I come from a community filled with tourists during summer,
coming to see the Archaeological dig and historical sites.

I come from neighbours who recall my younger years of me
falling off my bike, learning to skate, and to catch a ball.

I come from a loving family who want nothing more than to
see me succeed and be contented in life.

I come from a wonderful place that I will see
forever as my "home."

**"WHERE I COME FROM...":
A COLLECTION OF POETRY**

**Joan Olford
Part II**

AUTHORS:

Amanda Coles
Crystal Coles
Gloria Compton
Pete Constantine
Jennifer Conway
Denine Corbett
Wendy Corbett
Kim Coughlan
Dolena Croucher
Kelly Crummey
Stacey Cutler
Lisa Dalley
Danielle Davis
Melissa Dawe
Myra Dawson
Crystal Day
Wendy Dunphy
Dorcas Eason
Mary Easton
Diana Elliott
Jennifer Ezekiel
Elizabeth Fagan
Angela Feltham
Elaina Fennell
Dwana Fifield
Valerie Fifield
Cindy Finlay
Renée Fitzgerald
Susan Freake
JoAnn French
Angalee George
Melissa Gilbert
April Gill
Tina Pike

Where I Come From...
By Amanda Coles

I come from an island in the middle of the
North Atlantic, the cool wind blows.

I come from a place where the ocean
meets the sky and the snow piles high.

I come from a family that is a treasure and
the most ones dear to you will always be near to you.

I come from warm smiles and swirls of encouragement
that you will receive when you visit the sea.

Where I Come From...
By Crystal Coles

I come from a house with storm doors, picket fences
and shutters at the windows.

I come from a home watched over by a porcelain dog named Butch,
and family portraits lining the wall.

I come from a street that was once quiet and serene,
where fun loving children were safe at play.

I come from a neighborhood, where children soon became sparse,
and honking horns and squealing tires were the new norm.

I come from hardworking Mom's and Dad's, frisky cats with delightful names,
and a brother who loved to annoy me.

I come from the smell of fresh-baked bread, fried cod breeches,
and my Ma's homemade partridgeberry tart.

I come from a pine chest filled with memories, from marriages,
births, and Christmases past.

I come from qualities like loyalty, honesty, and humour,
part and parcel of my large, loving family.

I come from a place that will always be home to me.

Where I Come From...
By Gloria Compton

I come from strong family ties.
I come from a small home with six siblings.
I come from shared birthday parties and beds and heavy homemade quilts.

I come from summers, where saltwater reaches the taste buds,
and seagulls soar overhead.
I come from winters where snow numbs the wrist and snowballs
form on frozen knitted mittens.

I come from the smell of waxed floors, molasses on warm homemade bread,
and every kind of soup imaginable.

I come from parents who taught responsibility, appreciation
and the value of education and hard work.
I come from a mother who repeatedly said,
"Just wait until your father comes home!"

I come from old photos of children playing
Stored in albums and cupboards for safe keeping.

I come from being protected to being a protector.
I come from being a mom myself- of sleepless nights,
endless worries, and countless joys.

I come from fulfilling childhood dreams in becoming a teacher.
I come from hope that I will make a difference in children's lives.

Where I Come From...
By Pete Constantine

I come from a school at the top of my street,
I'm named after both grandfather's, whose names were Pete.

I come from a family of 4 boys and 1 girl,
for 23 years I've lived in Mount Pearl.

I come from a love of all types of sports,
all the year round, I can be found wearing shorts.

I come from a say camp filled with many tykes,
I prefer to drive in my car, than ride on my bike.

I come from a hike deep into the woods,
my backpack's heavy, but the fishing is good.

I come from a circle of a few close friends,
for them I always find time to spend.

I come from Quebec, where I went for 3 weeks,
living across the Island because airfares are not cheap

I come from a summer filled with lots of fun,
salmonfest, cabins, and lying in the sun.

Where I Come From...
By Jennifer Conway

I come from Conception Harbour along the Conception Bay Highway.

I come from a white split-level house on a hill overlooking the town.

I come from a house that always smelled of bread baking, cookies or muffins.

I come from Anne and Bernard who have now gone their separate ways.

I come from a house with only one brother named Matthew.

I come from many summer days of playing in around the pond.

I come from long summer nights of playing spotlight with cousins.

I come from fun annual family BBQ's filled with BBQ caplin, steaks,
hotdogs and Aunt Agnes' great macaroni salad.

I come from a house that continues to grow with fond memories
of where I come from.

Where I Come From...
By Denine Corbett

I come from a home with a cobby to play in
and mom's jewelry box to explore.

I come from a flower garden and wild rose bush facing the ocean.

I come from a meadow, blueberry patch and a view of Holy Cross Mountain.

I come from Cherry and Gary, loving mom and dad.

I come from my big sis, Cheryl, and little brother Colin, my protectors.

I come from birthday parties at the family restaurant, C&G.

I come from playing "go fish" with poppy, hopscotch
and skipping in the front yard.

I come from cracked up meat and potatoes,
homemade hash browns and tweedies.

I come from being taught the importance of family
And following your heart.

Where I Come From...

By Wendy Corbett

I come from a town
where no one is a stranger.

I come from a two story house
and a playground back yard.

I come from piano lessons
and dance classes

I come from home made bread
and cooked Sunday dinners.

I come from a family of four,
where dogs are always welcomed.

I come from a home filled with love.

Where I Come From...

By Kim Coughlan

I come from a small neighborhood in the east-end of town and I lived in a
two-story, gray house and, when I looked through my bedroom window, I could see
the playground.

I come from a place that was known as the Kool-Aid house, where all of my
friends would meet to play 'ghost in the graveyard' and 'spotlight'.

I come from playing with Cabbage Patch dolls and Raggedy Anne to
studying at Memorial for a degree in Education.

I come from wanting a beautiful dollhouse in my backyard on Meighen
street to buying a house on Sparrow Drive in Conception Bay South.

I come from having BBQ steaks and Nan's Sunday dinner
to eating a lot of kraft dinner.

I come from a loving home where the smell of dark fruitcakes filled the air
that always reminds me that Christmas is near.

Where I Come From...
By Dolena Croucher

I come from a town that lovingly grasps the water's edge
and a home where you can feel the kissing of the ocean's spray.

I come from fog of mystic charm to the one place I call home,
where the nights are filled with stars of glorious glitter that brighten the dark sky.

I come from the hills that possess nature's own beauty,
filled with the love and laughter of childhood memories.

I come from a family of hard workers who support me in every way possible,
and from them I gather strength and determination
to pave my own way in the world.

I come from Wayne and Elaine, the two most important people to me,
it is because of them and where I come from that I am proud of who I am,
and what I have become.

I come from a family of eternal love and happiness and a little town I call home,
where I come from is who I am and because of this
I am proud to be the person they have guided me to be.

Where I Come From...
By Kelly Crummey

I come from a place I call my own
It's a special place I call my home.

I come from a place where childhood memories last
A place where I grew up very fast.

I come from a place from "out around the bay,"
A phrase I hear everyone say.

I come from a place called Carbonear
It's not very far from here.

I come from a place where young life was fun
But now in university my adult life has just begun.

Now I am on my own
And I do not live in my home.

Where I Come From...

By Stacey Cutler

I come from the crisp cold Atlantic at my face and deep woods at my back.

I come from the crackling of firewood, of "I love you's" and "Be careful's".

I come from a mother's tender touch and a father's protective guidance.

I come from homemade stews, lobster boil-ups and salt fish.

I come from freshly baked bread, bitter partridgeberry tarts and bake apple jam.

I come from hopes of equality and a respect for diversity.

I come from memories of good times with family and friends.

I come from my home, my safe harbour.

Where I Come From...

By Lisa Dalley

I come from many places-steep stairways, real peanut plants,
beaded curtains, exotic wall murals and a downstairs bar with
Christmas lights in beer bottles that enticed Twinkles and Tabby to play.

I come from a street where a long driveway sneaks up a hill
and behind a fenced yard, a magnificent fallen tree- 'Obstacle course'
we used to call it but on the weekends,
the ocean was where my heart was.

I come from an admirable, loving pair, "Captain Ross" and "First Mate Linda", along
with 2 grandmas and 2 grandpas who used to bake
us cookies and give us gum.

I come from a family affectionately tagged "The Dalley-Ho's" and other
personal labels such as "little trout", "big sis", and "There's my number 1!"

I come from a childhood of kraft dinner, peanut butter and jam,
weiners with ketchup on crackers baked with cheese,
and ice cream after cooked dinners.

I come from voices that enjoy life, never taking it for granted and
who remind me- "You can do it!", "don't forget your manners",
and "always try your best," as you will succeed.

I come from 23 photo albums standing at attention on the shelf;
I smell the sweet sea-side waves, the great outdoors
and realize how lucky I am.

I come from small towns and even bigger cities where I admire my roots, appreciate my surroundings, and am thankful for all these wonderful childhood years.

Where I Come From...
By Danielle Davis

Where I come from...
The vast universe has been perfectly crafted,
working in harmony for the continuation of life.

Where I come from...
The globe is more than just a spinning entity,
but a beautiful land where a variety of creatures coexist.

Where I come from...
The country is a melting pot of different nationalities,
where freedom, peace and love are the ultimate goal.

Where I come from...
My family are close to one another,
where communication, morals and Godly belief are a core value.

Where I come from...
My creator has crafted each person with care,
where every child is named, and every hair is numbered.

Where I come from...
Our maker is more than just an inventor,
but is a father, a savior and a friend.

Where I Come From...
By Melissa Dawe

I come from a road filled with friends and family,
and it is older than me.

I come from a house that has always been my home,
and will always be my home.

I come from the family that has two parents and a brother,
and their names are Bruce, Marie and Mark.

I come from a family that is thicker than molasses,
and tougher than nails.

I come from vegetable soup and homegrown veggies,
and family drives to Gander.

I come from a place surrounded by family and friends,
and roads and gardens where I played as a child.
I come from the town of Conception Bay South,
I live in a place called Kelligrews,
and I live on a little road called Forest Road.

Where I Come From...
By Myra Dawson

I come from the cold, icy waters, but a warm, fiery hearth
I come from a small, quiet village, but where friends know your true worth
I come from a home modest and quaint, but welcomes everyone short and tall
I come from a family small yet big, but where the love
and laughter can't be measured at all.

Where I Come From...
By Crystal Day

I come from a luscious green valley
Enclosed by snow-covered mountains
Made of marble
I come from a Bay adorned with many Islands
I come from a wooded lane
Bound by love and support
I come from Linda and Pat,
A musician and a scholar
I come from endless sunny blue skies
And swimming in the Brook
I come from homemade bread
And secret spaghetti sauce
I come from the memories that reside
In the trunk in Mom's closet
And in each other
I come from relatives and friends,
Sisters and bunk beds
I come from a loving home,
Myself,
As I look to the future.

Where I Come From...
By Wendy Dunphy

A small fishing village
Close to the sea
That is where my parents
Decided to raise me

My dad worked really hard
Trying to catch fishes
My mom stayed at home
Doing laundry and dishes.

The school was small
With just one classroom
However, the boys and girls
Had their own bathrooms.

We have just one church
We are all Sally Ann's
I use to go sometimes
Along with my Nan

There is only one store
Where we buy our food
The people are all friendly
No one is rude

The population is declining
People have moved away
The place I just told you about
Is Monkstown, Placentia Bay.

Where I Come From...
By Dorcas Eason

I come from a place of scenic beauty,
where endless forest, winding trails and babbling brooks
are at every turn.

I come from great adventures,
as new ground is discovered through child curiosity.

I come from the smell of fresh homemade bread,
and a summer vegetable garden.

I come from wrestling matches and bike rides,
fishing trips ended early as I had "fallen" into the pond.

I come from a place where fond memories replace loved ones,
and new love blossoms at a birth.

I come from a loving Mom and Dad,
who have sacrificed to give me all they have.

I come from a place that has shaped who I am,
in becoming me.

Where I Come From...

By Mary Easton

I come from.... A Family of Four.
A family that has very deep roots,
And believes that we only need each other.
We stick together through everything,
And know there is always someone else to count on.

I come from... A Community.
A community that is located in woods and rough,
Which only helps to add to its' character.
A place that is low in population,
Which is why everyone knows me and I belong.

I come from... A Province.
A province that is surrounded with water,
That allows all the goodness to be kept in.
An area that is considered the poorest,
But still ranks the most charitable.

I come from... A Country.
A country that is large in not only land mass,
But also in the heart of its' people.
A land where everyone is free and peaceful,
Which is why people all over the world would like to be me.

Where I Come From...

By Diana Elliott

I come from a village next to the sea,
a place that is home and special to me.

I come from an old farmhouse perched on a hill,
with descendants of generations living there still.

I come from my parents, James and Christie,
whose love is engraved in our old oak tree.

I come from garden vegetables and blueberry pie,
and strawberry fields that go as far as the eye.

I come from a playhouse with a homemade swing
that holds childhood memories - such marvellous things.

I come from old stories and quilts sewn by hand,
and no matter how far away, I'll always love this land.

Where I Come From...
By Jennifer Ezekiel

I come from knit mittens drying on heaters in the wintertime.

I come from softball bats, bikes and basement swings.

I come from a mountain with a cave to hide away in and read.

I come from frequently travelled paths linking each home.

I come from a meadow, site of water fights and wild goose chases.

I come from Ronald Michael, a quiet, gentle blessing, and Sylvia Marie, a
Goddess of strength and courage.

I come from Nan's blueberries and milk sprinkled with sugar.

I come from Mom's failed attempts to make apple pie.

I come from Skivereen, a primitive wonderland just beyond the train tracks.

I come from Hicksus Hill, where oftentimes the stars had to escort each
child home.

Where I Come From...
By Elizabeth Fagan

I come from a community by the side of the sea and from people whom
love life as a result of its presence.

I come from bonfires on the beach and prickles and capelin slipping
through eager hands.

I come from bunny trails leading to blueberry patches and filling
tummies instead of buckets with berries.

I come from summers with dry wells and swimming until fingers are wrinkled.

I come from woods of tall trees for climbing and secret cabins decorated
with pussy willows.

I come from family drives on Sunday afternoons and ice cream from the parlor.

I come from turkey dinners at Christmas and feeding dogs under tables
when no one watches.

I come from hauling wood for nanny and sipping tea with
homemade bread.

I come from falling asleep to the sound of the river and bedtime stories
from people who love me.

Where I Come From...
By Angela Feltham

I come from rugged rocks, jagged cliffs,
and spongy wet bog sprinkled with pitcher plants.

I come from rolling blue-black waves
brushing rhythmically against a rocky shore.

I come from babbling brooks and sloping hills
blanketed in spruce and fir and juniper.

I come from clothes softly dancing in a fresh, crisp breeze
underneath sunshine and blue sky.

I come from laughter, enveloped in grand parents, a brother,
and aunts and uncles and cousins galore.

I come from the soothing aroma of baked bread made from scratch
wafting through the kitchen door.

I come from tea buns and boiled beans,
and cooked dinner on Sundays.

I come from rocking chairs and potted house plants,
and from storybooks, songs and lullabies.

I come from great grandmother Bessie, with twinkling eyes,
angelic smile, and comfort for all.

I come from Wayne, my guardian angel up above,
and from Kevin, giving, supporting and strong.

I come from Gloria,
synonymous with understanding, encouragement, and love.

Where I Come From...
By Elaina Fennell

I come from a place in Bonavista Bay.
I come from a place where I played all day.
I come from a place called Plate Cove West.
I come from a place that I think is best.
I come from a great, colourful, bright, happy home.
I come from the huge forests where I did roam.
I come from a huge bathroom with two big sinks.
I come from a garden that was visited by lynx.
I come from a big back yard, that was great for playing catch.
I come from a hill where I used to go outdoors and enjoy to sketch.
I come from smells of fresh moose and onions in the pot.
I come from a place where rabbits, fish and moose were caught.
I come from most precious words "You can be whatever you want to be."
I come from millions of sunsets that every evening I would see.
I come from saying "luvs ya, see ya da mar marning!"
I come from mom, mending socks and darning.
I come from memories made in big snow tunnels,
and on the porch outside our living room window.
I come from a place that hurts me to see dwindle.

Where I Come From...
By Dwana Ffield

I come from a place of fair rugged beauty,
of trees, flowers and of ocean shores.
I come from a house beneath a tall mountain,
beside a large field where wild grass grows.

I come from a family that consists of five people,
my mom, my dad, two sisters and me.

I come from a place - population 5000,
where people are friendly and as kind as can be.

I come from a place called Bonavista,
it's a wonderful place - it's home to me.

Where I Come From...
By Valerie Fifield

I come from a long line of caring.
Of unconditional giving, friendly smiles,
And never laughter.

I come from pea soup on Saturdays,
Church on Sundays, ice skating on ponds,
And swimming in brooks.

I come from ocean spray and seagull squeals,
Crisp summer mornings, Glorious autumn evenings,
And frosty winter nights.

I come from snow angels and ice forts,
Mud pies and cowboys and Indians,
Water balloon wars and spotlight.

I come from the strength of God,
Support of family and,
Determination of self.

Where I Come From...
By Cindy Finlay

I come from Sutton's Lane and a family of six.

I come from foggy days and salty sea air.

I come from two loyal pet dogs, Skippy and Patches.

I come from Nan's and Granda's house with peppermint knobs and
Bread in the oven, 120's and Ladies Long.

I come from Mom's trifle and Mrs. Theresa's raisin buns.

I come from turkey dinner with the D's, cooked in the Finlay pot.

I come from bakeapple pickling on sweet-smelling marshes.
I come from mud pies, books, Barbies and Tonka trucks.
I come from picnics in the woods and playing office on the rocks.
I come from basketball in the backyard and sliding in the lane.
I come from laughter, smiles and tears, but mostly...
I come from love.

Where I Come From...
By Renée Fitzgerald

I come from a community of eight hundred large
where I live in the lane from my cousin, Rod and his wife, Marge.
I come from a place where people go back for retirement;
they can experience peace, quiet, and enjoyment.
I come from a place where there is a pharmacy, doctor, and pub.
There were two churches,
one which is now a restaurant that serves good grub.
There is also a marina where many boats dock.
It is a great place to go for a walk around the block.
This little community is called Musgravetown.
Stop in our beautiful place and have a look around.

Where I Come From...
By Susan Freake

I come from a hilltop that faces the bay,
and from a house with windows overlooking rooftops.
I come from a street with three churches on it,
and the sound of bells, on Sundays, the Sabbath.
I come from Wayne and Linda,
workers and parents, devoted and caring.
I come from these parents, who still call me their baby,
and one brother, one sister, whom I admire more each day.

I come from a dog that is small and black,
I brought her home without permission; my parents
didn't like that!

I come from a childhood that I will cherish forever.
and I will always remember, 'Where I Come From.'

Where I Come From...
By JoAnn French

I come from Carbonear called the 'hub of the bay',
and from a town where the same friendly people pass by everyday.

I come from a street with close friends all around,
and with memories of meeting at crossroads playground.

I come from a house smelling of fresh bread,
I always had some before being tucked away in bed.

I come from a place next to my grandparents' home,
down the road to feed the ducks we often would roam.

I come from a place where I would swing from my favourite tree,
when my parents couldn't find me, that's where my friends and I would be.

I come from a place where I remember at night,
catching lots of millers and playing 'spotlight'.

I come from a place where blueberries we'd pick,
my friends and I would eat them until we got sick.

I come from a place not too far away,
a place that is called the 'hub of the bay'.

Where I Come From...
By Melissa Gilbert

From the green grass and the blue sea
To the rocky beach and the smell of the salty air,
This is my community

From games of tag and hide-and-go-seek
To skating on the pond and swimming in the Deep Hole,
This is my childhood

From bright colourful flowers and the green shrubs
To the white barn with red trim and the wild animals that grace us
from time to time,
This is my back yard

From the barbeques and the meals outside
To the sun tanning and the games of volleyball,
This is my front yard

From the smell of home-baked bread and the taste of cooked dinner
To the smell of sawdust and the heat of a fire wood furnace,
This is my home

From my mother who loves to garden and my father who is a real sports man
To my sisters Angela, a listener, Tasha, a confidant and Holly, a compromiser,
This is my family

Where I Come From...
By April Gill

I come from a street leads into another
and a house that watches the sea.

I come from home cooked meals and cookies
made from scratch.

I come from line dried clothes and "Dirty Fridays".

I come from Eugene and Lorraine,
parents, laborers and role models.

I come from rainy days of the piano
and sunny days high up in the apple tree.

I come from a place I call home,
where memories are tucked into every corner.

Where I Come From...
By Tina Pike

I come from a place that was once surrounded by trees,
and a house that was enveloped in love.

I come from Helen Griffiths and Leonard Pike,
two of the most special people you will ever meet.
I come from one sister, three brothers, who I loved then,
but treasure more and more each day.

I come from homemade quilts, and my dog Dougie,
who usually slept at the foot of my bed.

I come from cabbage patch dolls, holly hobby furniture,
and wallpaper littered with the smurfs- especially papa smurf and smurfette.

I come from ballet lessons, which I despised,
and singing lessons, which I loved.

I come from peanut butter and jelly sandwiches,
and lemon meringue pies on special occasions.

I come from pictures that are littered in old photo albums-
tucked away, that hold the memories of a childhood I will always cherish
and one that I will never forget!

**"WHERE I COME FROM...":
A COLLECTION OF POETRY
Part III**

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Cindy O'Brien
Nadine O'Rielly
Ashley Pardy
Cindy Parsons
Janice Parsons
Amy Power

Where I Come From...
By Amanda Lyver

I come from the winds and the roaring sea.

I come from the tranquil shore, and the salty
breeze that fills the midnight air.

I come from the shady brooks and the old pine trees,
that stand so strong and tall.

I come from Catherine and Eric,
two lovers who shared one dream.

I come from the smell of baked bread and molasses
buns that linger in my house.

I come from the old oak trunk,
that holds my memories so near.

I come from a place that I call home.

Where I Come From...
By Krista MacDonald

I come from Allan and Bernice
I come from windows covered with salt spray.
I come from birch tree castles and acorn feasts.

I come from old family portraits.
I come from sea side picnics of peanut butter sandwiches.
I come from apple trees and wild roses.

I come from twisting roads and little bridges.
I come from dark nights lighted by many stars.
I come from molasses buns and tea.

I come from the land of my little ponies.
I come from wild strawberries and milk.
I come from fern and daisy bouquets.

I come from eating supper on the stairs.
I come from embroidery lessons of nursery rhymes.
I come from building camps in the woods.

I come from Little House on the Prairie.
I come from homemade ice cream chilled in snow.
I come from road trips to far off places.

Where I Come From...
By Misty MacDonald

I come from a town
Built by the United States Military

I come from a house
Surrounded by love and protection

I come from a yard
Where my dogs like to run and play

I come from Robert and Diane MacDonald,
Who emphasize education and ambition

I come from a sister,
A role-model and motivator

I come from Sunday afternoon car rides
I come from Lobster, Steak and Turkey dinners
I come from feather pillows, and hand woven quilts
I come from sunflowers, suns, moons and dolls
I come from a lot of love and guidance

But Most Of All...

I come from dreams
Turned into realities with help
from my family and friends.

Where I Come From...
By Darren MacWhirter

I came from Saturday cartoons and Mork and Mindy
Street hockey and hide-and-go-seek
Sledding at the hill on School nights
Sunday morning hockey practice and boiled eggs and bacon
A skating rink in the back yard and a shed full of hockey puck marks
A family of seven who watched eight is enough and related
A secure home life where no body screamed
A childhood full of fond memories
A Dad who was my hockey coach and friend
A mom who gave me everything I ever wanted
Brothers and sisters who were very funny
A good family who always keeps in touch.

Where I Come From...
By Carrie Maher

I come from a place where the air's fresh and clean,
And where nightly millions of stars can be seen.

I come from friendship, kindness and smiles,
And green grass and mountains that go on for miles.

I come from a place that is quiet and calm,
When the sun is so beautiful as it rises at dawn.

I come from a town where no one is a stranger,
Where you can walk late at night without any danger.

I come from a family with a sister and brother,
Who are all very close and protect one another.

I come from Sunday dinners and homemade bread,
And home-knit blankets to put on your bed.

I come from swimming holes, rivers and streams,
And scenery and views only seen in dreams.

I come from winters of snow angels and sliding,
And snowballs thrown from forts where children were hiding.

I come from Barbies, Rainbow Brite and L.A Gear,
And easy-bake ovens, popples, crimped hair.

I come from a place where togetherness is known,
A place called Placentia that I'm proud to call 'home.'

Where I Come From...
By Christa Maher

I come from a house that sits above the city.

I come from maple trees that hide my bedroom window.

I come from playing "Pippy Long Stocking" in my recroom.

I come from the cheerful question "how did it go today?"

I come from comical grandparents who always tell the truth.

I come from crowded Sunday dinners of turkey and roast beef.

I come from the aroma of blueberry cake during September months.

I come from parents who taught me the value of hard work
to gain rewards.

I come from happy memories written on our camper walls.

I come from weekends away from home filled with
hiking, swimming and fishing.

I come from the view that children are our future.

I come from a dream of being a memorable teacher.

Where I Come From...

By Kara Manning

I come from a long road filled with classmates and an
awesome pond for skidooing and Friday night bonfires.

I come from a house built with my dad's two hands, filled
with childhood memories that will never be forgotten.

I come from a huge backyard with a forest that often
became a virtual getaway from everyday life.

I come from The Smurfs, Knight Rider, and Fraggle Rock.
And when Saturday morning television used to be fun.

I come from pot roast and homemade bread,
and from weekly family visits that cease to exist
now except on special occasions.

I come from Dan and Alana, Cupid's mismatch,
who divorced when I was 6.

I come from Torbay, have spent the majority of my life in
St. John's and I now live in Paradise.
Where do I come from? I come from home.

Where I Come From...

By Melissa McCarthy

I come from a back porch swing with
the wind blowing up from the valley

I come from the mountains with the
rippling water of the pond down below

I come from a place where everyone
is family and there is little crime

I come from hills and valleys where
you can pick berries as colourful as a rainbow

I come from a place where the sea
is like an endless garden surrounding me

I come from Joann, Jolene and Melissa
and from parties Friday nights

I come from a place where we have
turkey dinner on Sunday and
open one present Christmas eve

I come from back home in Upper Island Cove.
Who knows where I'll end up??

Where I Come From...
By April McDonald

I come from an island in the sea
with no cars, just boats and ATV's.

I come from a tiny fishing town
with Cod jigging, Mussel dragging and scoffs on the beach.

I come from a house by the pond
with a dory to play in while catching stickle backs and frogs.

I come from endless hours of dolls on the deck
with jump rope and tag on the dirt road out back.

I come from playing cards on Sunday
with laughter, family dinners and get togethers.

I come from wood stoves in winter
with bon fires, wiener roasts and sliding on the roads.

I come from baked bread and fried fish
with Blueberry cheesecake and homemade soup.

I come from a special place of love,
It's a home to me.

Where I Come From...
By Carol Mencións

I come from a house
facing Signal Hill.
Its hills, its trees, its noon day gun.

I come from street hockey played in the evening light
and flashlights, playing spotlight,
on hot summer nights

I come from Teresa and Phil.
Five children, a dog, and two cats.
A stay-at-home Mom, a nine-to-five Dad.

Where I Come From...
By Amanda Mercer

I come from a seaside town filled with friendly people.

I come from a home filled with love and laughter.

I come from a little red brick house on a quiet street.

I come from a very close family.

I come from Pea Soup on Saturdays.

I come from visits to Nova Scotia beaches with my grandparents.

I come from tap shoes, ballet slippers, and piano lessons.

Where I Come From...
By Krystle Mercer

I come from the community of Shearstown,
On the Island of Newfoundland.
Farming is what we are known for
As well as the Shearstown Brass Band.

I come from summers spent troutng
With my family around the bay.
And winters spent playing in the snow
That lasted 'til the month of May.

I come from farmers and fisherman,
Carpenters, teachers as well.

Who taught me about my history,
Through the stories that they tell.

I come from a family who loves me,
Supports and encourages me too,
And always ensures that I try my best
In everything that I do.

Where I Come From...
By Holly Miller

I come from an acre trees and soil
Used for hiding and playing and growing.

I come from early weekday mornings
With the smell of bacon and burnt toast.

I come from paper dolls in fancy paper dresses
Ready for opera on Sunday afternoons.

I come from peanut butter and banana sandwiches
And stolen handfuls candy corn.

I come from a world of imagination;
Games played with April and Rainbow-Brite.

I come from the ocean; Always remembering
crashing waves and salty wind on my face.

Where I Come From...
By Amanda Milley

I come from a house with yellow shag carpet
Still comforting to the touch

I come from a street with smeared chalk etches
Memories of laughter bound within its dust

I come from sprays of salt water
Carried by a strong wind on a sunny afternoon

I come from Eric and Linda
Educators, inspirators and loving parents

I come from an artistic kaleidoscope
Charged by expression of emotion, expression of thought

I come from chocolate cheesecake and Hersey's kisses
Food for the mind and soul

I come from "Merry Christmases", and "happy birthdays"
Filled with the spirit of family and friends

I come from fresh cut grass on a hazy summer evening
When laziness runs from my head to the tips of my toes

Where I Come From...
By Amber Milley

I come from a road that leads to a beach
And from a home with cats in every window

I come from a place where the number of stars
That shine on the lake are the same as in the sky

I come from voice lessons and piano playing
And my brother and I filling every crevice with our music

I come from weekends of BBQs and the smell of campfires

I come from Emily and Roy, apart but both are always there;
My mother my best friend

I come from nature where every woodland dweller is my dearest friend,
Every tree is my elder

I come from the Ivory Tower in the land of Fantasia,
Both my brother, Atreyu, and I, the Child-like Empress

Where I Come From...
By Jennifer Molloy

I come from a harbor where fishing is known,
and from a house surrounded by trees that have grown.
I come from a garden where flowers do bloom,
and the smell of fresh cut grass, of lilacs.

I come from Tom and Mary,
educators and caregivers, friends to all.

Where I Come From...

By Krista Molloy

I come from a community by the sea.

I come from fisherman and farmers.
From hardwork and perseverance.

I come from dewy sunny mornings and cold foggy nights.

I come from bakeapple jam and cooked Sunday dinner.

I come from Albert and Elizabeth.

I come from close friends and family, from commitment and
loyalty, laughter and tears.

Where I Come From...

By Tyson Molloy

Where I come from is such a wonderful place,
everywhere you turn, there is always a friendly face.

With mountains so high and trees so tall,

I hope I can return there again this fall.

The boats, they are a plenty,

and tons of fish to catch,

each time I think about it,

I realize that this place is my match.

To listen to the ocean roar is like music to my ears,

hopefully, I will be living there in upcoming years.

Living a lifestyle by the sea is what life is all about to me,
where I come from is where I want to be.

Where I Come From...

By Kelli Moores

I come from a family of five, me being the baby

I come from Violet and David , 'bay girl' and 'townie'

I come from Friday night treats of Venice Pizzeria

I come from evenings of soccer and nights of spotlight

I come from 14 Brett Place, the cul-de-sac with no end

I come from trips around the bay for summer vacation

I come from Scottish and Irish descent
I come from pan-fried cod with carrots and potatoes
I come from sharing a hot pink room with my sister
I come from weekends of bonfires at the cabin
I come from an annual street celebration of barbeque and
Soccer-baseball
I come from Sunday night brownies and Wednesday night piano

Where I Come From...
By Daphne Morgan

I come from a house where bread dough is kneaded
in clanging bowls before sunrise,
and where my drawing desk was placed by a large window.

I come from under maple trees that reach to tickle
clouds with their green fingers,
and where apple trees supply fruit for autumn pies.

I come from Daphne whose hands are rough from
working, playing and loving.

Where I Come From...
By Sylvia Moulard

Where I come from the sandy beach stretches for miles.
From my bedroom window the sound of the waves crashing help me
drift off to sleep.

Where I come from Friendly faces fill the streets.
"Good Day" and "How Do You Do" are greetings you will hear.

Where I come from family and friends are valued and loved.
I come from a home that is filled with sounds of laughter and smells
of homemade goodies.
When I am away, I miss where I come from.

Where I Come From...
By Bridget Murphy

I come from Sarah and James Churchill, hard workers, lovers of life.

I come from a large family, eleven children where
loneliness was foreign term.

I come from a lively house, bustling, chattering, laughing, and activity
abundant. A house filled with voices.

I come from a home of wondrous smells, homemade bread, molasses,
cookies, hearty meals.

I come from a land surrounded by water; an adventurous beach lay
beneath us, a playground of wonder.

I come from meadows smelling of fresh grass, trees, flowers,
and animals grazing leisurely.

I come from the top of a hill, a large white house bottling
my fondest memories of childhood.

I come from a beautiful island, friends, family, heritage,
and culture abundant.

The Goulds
By Leanne Murphy

On the edge of St. John's there is a little place
Where the land is rich and the fields open
Where there is many a farm and many a cow
A place where it's not hard to find a farmer and his plow

It is not a place that's on the edge of the sea
Where fish is at the heart of everyone's glee
The land is our promise the thing we treasure
We look to our green fields and they give us great pleasure

I come from the Goulds I am proud to say
Our crops start to bloom in early or late May
A great time for you to come out our way
Be sure to come and see us on the next sunny day

Where I Come From...
By Sherri Murphy

I come from a street where all the children play,
and from a house with a balcony where you can watch the sunset.

I come from the yard where we planted our first tree,
and friendly neighbours, of dogs and quiet in the city.

I come from Sonya, John, Shirley, old and new,
forever there.

Where I Come From...
By Heidi Nixon

I come from a house on a hill,
That is noisy and bustling with activity, and not just at Christmas.

I come from Robert and Sandra,
An entrepreneur, and a chameleon that changes colors
and roles to suit six children,
And enough pets to open a petting zoo.

I come from supper tables that have so many different
conversations going on at once,
Our guests resemble Linda Blair, in The Exorcist, with their
Bulging eyes and spinning heads.

I come from a world of play, dress-up and make-believe.

I come from television shows that only my family seems to remember.

I come from doing good deeds such as choosing Danny Wood from
NKOTB as my favorite, because I thought no one else would like him
(He kind of resembled a monkey, did he not?).

I come from singing in the shower at the top of my lungs,
Never missing a beat, but rarely hitting a note.

I come from always having to stand in the center of the back row,
Until the phenomenon in grade nine occurred, I shrunk as others grew,
And I became off-centered. . . but still in the back row.

I come from GT snow-racing down the hill in my backyard, only to discover
That brakes actually refers to the fact that your tooth breaks...
when you plow through
The wooden fence at the bottom (it all looks like snow if it's painted white!).

I come from reading in bed by a sliver of light from the hall,
And deserving an Emmy award for pretending to be asleep when
My parents checked in on me.

I come from dreams, goals and an endless imagination...

Where I Come From...
By Katherine Noel

I come from maple trees and apple blossoms.
I come from one hill overlooking another and the view of the ocean.
I come from the sound of children playing and laughter.
I come from Peter and Karen who achieve goals and dreams together.
I come from homemade brownies with hot fudge icing and ice cream on top.
I come from tortières on Christmas Eve and Pepsi.
I come from sing-a-longs and dance recitals.
I come from the smell of wood stoves burning, eucalyptus, and mothballs.
I come from African violets and warm handmade quilts.
I come from tire swings and bunk beds.
I come from teddy bears, warm and fuzzy thoughts, and sweet dreams.

Where I Come From...
By Sheri Nofle

I come from atop a high plateau beside a freshwater lake.
I come from an evergreen forest teeming with Black Spruce and Balsam Fir.
I come from a street on the outskirts of a quiet town.
I come from a house that dances with the love of a happy family.
I come from the chatter and laughter of busy lunch hours.
I come from fairy tales and princesses and playing dress-up with my little sister.
I come from the music of VOCM echoing throughout the kitchen as mom prepares supper.
I come from the shouts and screams of children as they play in their backyards.
I come from Glenda and Rick, providers, protectors, and partners forever.
I come from bacon and eggs for Sunday brunch and turkey late in the evening.

I come from Brownies and Girl Guides and 1ong hours of piano lessons.
I come from many hockey stories and tales of our once prosperous mining town.
I come from mornings of laundry and the smell of clean clothes
as it is hung in the sun to dry.
I come from all of the precious memories and treasures
of a bright and wonderful past.

Where I Come From...
By Becky Norris

I come from a sandy shore beside the ocean.
I come from a house my Great-grandfather, Gideon, built.
I come from Mave and Ran who gave me legs to stand and wings to fly.
I come from shell collections and horse-back riding.
I come from beach parties and garden weddings.
I come from boil-ups at Mussel Shells.
I come from strawberry patches and bakeapple freelee.
I come from the sounds of waves and the smell of the landwash.

Where I Come From...
By Heather Noseworthy

I come from a street that leads to the freeway and a house filled with love
laughter and happiness, overlooking the twisted pavement
I come from sponge rollers and pink dress and high heel shoes,
for Sundays and play dates
I come from mom and dad, determined, dedicated and just,
laborers for the family

Where I Come From...
By Kimberley Noseworthy

I come from parents who love me
and instill in me the values and morals that guide me
and encourage me to be the best I can be.

I come from a childhood where I could dream and pretend
and believe that wishes on stars came true.

I come from a home that is warm
and is my refuge from life's complexities
and inequalities and frustrations.

I come from a life of experiences and expectations that have inspired
who I am
and I would not change a thing.

Where I Come From...
By Stacey Noseworthy

I come from a street that is up on a hill
in a house with a deck overlooking a city.

I come from grass, flowers and trees
in a house on a hill overlooking a city.

I come from my parents
who decided to build the house overlooking the city.

Where I Come From...
By Angela Nurse

I come from Schreyer Crescent in Power's Pond.

I come from the Pearl, where the bang was like a wave.

I come from trots to the store for Mr. Freezies.

I come from 50 cents worth of candy and Haagen-Dazs.

I come from roller blade competitions.

I come from Cochrane Pond and The Beach Boys.

I come from my Dad the brave, strong, and patient.

I come from my Mother who sang me to sleep.

I come from dance lessons and choir practice.
I come from bowls of blueberries and milk.
I come from Nan's chocolate fudge.
I come from homemade play dough and a kitchen full of tupperware.
I come from tangles and frizz.
I come from sky rides across the water.
I come from best friends like Katie.
I come from Grease and Girls Just Wanna Have Fun.

Where I Come From...
By Donna Oake

I come from an island, surrounded by sea.
I come from a home that's white and pretty.
I come from Nora and Leyton, who believed in and feared God.
I come from a fishing village, built upon cod.

I come from housework and visits from family.
I come from Sunday dinners, followed by "Kisses" candy.
I come from school and church lessons that taught me to believe.
I come from the smell of bread, where there were many to feed.

I come from a fishery that ran out of fish.
I come from tired, old people who no longer can wish.
I come from roads and fields that are all overgrown.
I come from a place that I no longer call home.

Where I Come From...
By Cindy O'Brien

I come from a homestead where neighbours are good friends
I come from a high school where teachers know students' last names

I come from a house of home-cooked meals

I come from a family that gathers for every occasion

I come from parents who love and are loved

I come from softball and "Tomboy" games

I come from BBQ's on hot days and spotlight as a child

I come from good friends who are always there

Where I Come From...
By Nadine O'Rielly

I come from a place small and free
where the chill of the air blows from the sea
A humble Island where everyone is known
for many years I had lived and grown

I come from a family that made me believe
that to live life, you have to love life and also grieve
As a child with an older sister and brother
we learned through the years to depend on each other

I come from a childhood where memories were made
many will stay in my heart forever, though others will fade
I come from a home where we loved to celebrate
Sunday masses and Christmas dinners would never be late

I come from a home that I will never forget
from the singing to the laughing and always the family pet
I come from St. Brendan's an Island faraway
where the rising of the sun brings another special day

Where I Come From...
By Ashley Pardy

I come from a place where nobody is a stranger,
Where children can play without any danger.

I come from a neighborhood where everyone lends a hand,
Whether cooking or cleaning we help all we can.

I come from a family where hard work is key,
Who did all they could to provide a good life for me.

I come from a garden where children play for hours,
With grass and trees and rocks and flowers.

I come from a beautiful place that I love,
Where the sound of the sea is a whisper from above.

Where I Come From...

By Cindy Parsons

I come from snow and cold.
I come from piano lessons
and playing saxophone in the band.
I come from a family of four.
I come from pictures of friends
and runs for the border on Friday afternoons.
I come from music and dancing.
I come from gatherings for coffee
and movies and popcorn.

Where I Come From...

By Janice Parsons

I come from apple wallpaper and hardwood floors.
I come from a big blue house across from a little green store.
I come from a cool breeze off the beautiful bay
I come from singers and entertainers.
I come from "up the point" not "in the road".
I come from Sunday dinners at Nan's around the arm.
I come from loud and happy family gatherings.
I come from riding bike and baseball in Tucker's Field.
I come from sand and slate.
I come from my very own photo album on the shelf.

Where I Come From...

By Amy Power

Where I come from is wonderful.

Where I come from has history.

Where I come from has bright, smiling,
welcoming faces.

Where I come from is slow, peaceful and quiet.

Where I come from is a wonderful place to live.

GADGETRY, MAGIC, STORYTELLING AND TEACHING: THE COMPUTER CONFERENCE AS WRITERLY TEXT

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Abstract

Angela Carter sees technological 'gadgetry' as offering the possibility of a continuation, or even a transformation, of storytelling (1990, pp. xxi-xxii). In this article, I use Freirian and Bakhtinian theories of dialogue to examine some of the pedagogical possibilities of computer conferencing for dialogue, storytelling and other imaginative acts. Bakhtin (1986) sees all life as situated within dialogue, while Freire (1970) argues that dialogue is something we must come to through a process of conscientisation, facilitated by his pedagogical method of 'problem posing' education. I suggest that computer conferencing can enable a form of collective storytelling that is dialogic in both the Freirian and the Bakhtinian senses of the word.

Author's note

I wrote this article several years ago when using online discussion as a course assignment was still a fairly novel idea and many of our students had never even used email. I still believe online discussions have the kind of potential I describe here and yet I rarely use them any more in my teaching. This is for two reasons: 1) in my experience, to use them effectively usually requires a great deal of time and involvement on the part of the instructor - considerably more than traditional classroom teaching does - and I have not had the time; 2) email is now used so extensively, and so many courses have an online discussion assignment, that I find students are often jaded. There certainly isn't the kind of excitement the students express in this article. I still think the article is worth sharing because of the intrinsic interest of the students' online stories quoted here, and the discussion of a particular kind of online discussion, probably not the kind most commonly used as a course assignment.

Gadgetry, magic, storytelling and teaching: The computer conference as writerly text

"'We all start out knowing magic... but then we get the magic educated right out of our souls.' (Robert R. McCammon)

I just wrote that awful midterm.

Now I'm off in search of magic to fill my empty soul."
(an email message on a student listserv)

In a review of cultural critics' views on the impact of the media and the Internet, Weaver, Slattery and Daspit (1998) describe a vision of 'a compressed, fragmented world where certainty of progressive causes no longer exist[s]' (p. 25). In more popular forums, several violent crimes including the Littleton massacre have been ascribed, in part, to the killers' engagement with the Internet.

Angela Carter presents a more optimistic view of the possibilities inherent in technology:

Within that 'video gadgetry' might lie the source of a continuation, even a transformation, of storytelling and story-performance. The human imagination is infinitely resilient, surviving colonization, transportation, involuntary servitude, imprisonment, bans on language, the oppression of women (1990, pp. xxi-xxii).

Storytelling, magic and the enhancement of the human imagination have always seemed to me to be a very big part of what teaching should be about. At the same time, most teaching situations impose all sorts of constraints on such activities. In this article, I explore some of the possibilities of 'gadgetry' for telling stories, performing magic and other imaginative acts. More specifically, I examine what happened when a group of students were asked to participate in a listserv as a means of extending and enriching class discussion in ED4005, a basic teaching methods course for students in a one year post graduate secondary B.Ed. program in our faculty.

My analysis of this assignment is based on the writings of Paulo Freire (1970) and Mikhail Bakhtin (in Morson, Ed., 1986). Both writers are concerned with notions of pedagogy and dialogue. However, Bakhtin sees all life as situated within dialogue, while Freire suggests that dialogue is something we must come to through a process of conscientisation, facilitated by his pedagogical method of 'problem posing' education. The writings of both are useful as ways of illuminating what happened on the listserv and why it matters.

The students in ED4005 had considerable knowledge of their subject areas but were just beginning their teacher education. This course was supposed to provide practical information on lesson and unit planning, teaching strategies, and so on. While I understood their need to learn these things, I wanted also to provide a forum for a more philosophical and imaginative discussion of teaching. I chose to use a listserv because some students were unfamiliar with any computer applications and the list seemed the least intimidating way to teach them basic use of email and conferencing skills - skills which are almost essential for new teachers these days. Each year I find there are fewer students in our faculty who are "computer phobic" and now I might choose a more flexible and sophisticated conferencing forum. However, the forum itself is not the focus of this article. Rather, it is the conversation which took place there.

Borrowing an idea from Sumara and Luce-Kapler (1996), I put together a 'writerly text' (Barthes, 1974, in Sumara and Luce-Kapler, 1996) designed to require active participation on the part of the reader and to raise questions on a variety of topics. The students' assignment was to contribute three substantial entries to the listserv, in which they would comment on aspects of the writerly text or other education related issues. These entries would count for ten percent of their final mark. In the writerly text, I included excerpts from provincial department of education documents, the media, student teacher journals and philosophers of education - choosing pieces I thought students would either identify with or react strongly to. I prefaced these excerpts with an explanation of the notion of a writerly text, the idea that all texts are constructions, and a request to respond to any part of the text that

'moved, touched, angered, puzzled or delighted' them, or to add other quotations and comments if nothing in my original entry did seem relevant to them. I sent this document as the initial entry to the conference. The following are representative examples of quotations used in my initial entry:

As you well know, I have found this term rather difficult. There were even times that I considered giving up. However, when I look over the past term, I remember the words of my mother, 'God does not give us a cross that we cannot bear' and, of course, 'What does not kill you will only make you stronger'. However, I believe there are times in our lives when that cross appears unbearable... *(a student teacher reflecting on her internship)*

What a WONDERFUL experience this has been...! *(another student teacher, also reflecting on her internship)*

Wedded to child-centered nostrums and 'metabolic' curriculums, elementary teachers have pressed for small class sizes *(and more teachers)* in the name of 'quality education'. Yet behind the rhetoric lies this ugly truth: It's far easier to watch 18 individuals frolic in a sandbox than it is to direct 30 kids to high achievement. (Andrew Nikiforuk, in the Toronto *Globe and Mail*)

What is it that guarantees the internal connection between the elements of personality? Only the unity of responsibility. For what I have experienced and understood... I answer with my life. (Mikhail Bakhtin)

The overriding objective in all of our attempts to reform the system is to transform this society from one of persistent under-achievement to one whose achievement ranks with the best in the nation. (Newfoundland and Labrador Department of Education document, 1994)

I used the same writerly text with two different sections of the course. In one section, the first responses comprised a passionate and angry reaction to the government document describing our own province as 'a society... of persistent underachievement'. The discussion soon branched off to respond to other quotations and bring in new topics of discussion. In the other section, initial entries took the form of a discussion of what it might mean to be a good teacher, and whether a good teacher was the same thing as an 'effective' teacher. The students in this group told stories of people - often their own parents - who had been influential teachers in their lives. In both cases it seems that sections of the writerly text that students were able to relate to their own lives and experience enabled them to begin a conversation and go on to challenge and extend their own knowledge and understanding of issues. Of course, it is also possible for this to happen through class discussions, films, written materials and so on but, as I outline later, the listserv did, in fact, have some advantages over traditional class discussions. In addition, because of the nature of this particular course, which was somewhat technical and practical, and had a large number of students, it was difficult to have extended discussions during class time.

Freire (1970) uses the term 'generative theme' in reference to themes which are somehow central to the consciousness of a people and which will, therefore, lead to meaningful and ultimately liberatory discussion and education. I had this notion of

generative themes in mind when I chose the items for the 'writerly text' with which I began the computer conference. Just as Freire found that students did not always go where he had anticipated in their responses to generative themes, I also discovered that the students soon began using the listserv for their own ends. Although they did a considerable amount of analytical and theoretical writing, their main interest seemed to be storytelling. They obviously did not consider this part of their actual assignment but simply did it for the pleasure of it. For instance, a number of students contributed stories in which they recounted experiences of waiting anxiously to see if they had been accepted into the program. These stories were long and detailed in many cases, using modern technology to do a very traditional form of storytelling in which there was humour, drama, a strong sense of audience and loving attention to detail. I have shortened the following example considerably but I think it gives a sense of this aspect of the list.

The reason why I am writing tonight... is that I just finished reading Terry's letter about receiving the dreaded envelope from the faculty. This was my third time applying for the program... My parents had gone away for the summer leaving me home alone. Every morning I would go to the post and see if the letter was there. Meanwhile my mom would phone every second day to ask "Did the letter come yet? You got to phone in and see, my son, what the problem is." I was having no part of that. So the day finally came... I got up, got dressed, hopped in my truck and went out the road to the post. I... waited until she got the mail and suddenly I saw it - the envelope marked "Faculty of Education." I started to shake, literally. I stumbled back out to the truck and sat down trying to open the envelope... Then when I opened it, it was like I had a new lease on life. I practically cried on the way home. I told my dog first, cat second and then I phoned all of my family. My dad is hard of hearing and when he realized what I had said he just filled up along with my mom and the rest of my family. So as you can see I never had no pressure on me to succeed, not a bit.

Martha Ritter (1998) argues that plain storytelling without analysis or theorizing can play a key role in students' learning process and that we underestimate its power. Students using this listserv shared stories that, while often humorous, also clearly helped them elaborate their histories and their hopes, and develop a sense of solidarity and shared experience. My original intention had been for the listserv to foster informal yet analytical debate and discussion. However, it seemed to be in the telling of stories that the students were most deeply engaged. Mikhail Bakhtin, in his discussion of carnival, suggested that 'seriousness and folly enter into an open dialogue, which changes both sides, as real dialogue does' (Morson, 1986, p.13). Much of the discussion on the list exemplified the Bakhtinian idea of carnival. As in the excerpt above, the students frequently used humour to discuss serious issues in their lives. In an article in *College English*, Marilyn Cooper and Cynthia Selfe argued that 'the irreverence of the entries is not only a mark of the egalitarian nature of computer conferences but is also central to their success' (Cooper and Selfe 1990, p. 857). The informal and humorous nature of the list also enabled students to make light of their own weaknesses and mistakes, unlike traditional classes where students are often paralysed by the fear of appearing stupid. In the following example, a student mocks her own technical inadequacy:

This is my second attempt at sending a message to the class. About two weeks ago I was cruising along with an interesting and insightful message, feeling a

little like Bill Gates (*minus all that money*) when all of a sudden the message somehow got interrupted and I did not know how to reconnect. I was so traumatized and did not return to the computer until today and that's only because everyone else was doing the listserv thing. Anyway, enough about my phobias.

At the same time, the discussion was not always humorous and the carnivalesque nature of the conversation was sometimes tempered by discouragement, critique and even anger. Aoki, Bassett and Pridmore (1997) argue that with the use of a listserv the relation of students to professor is transformed since the list is a kind of 'virtual symposium [that] by the nature of its own artifice... tends to... open up an alternative discursive space, even in the face of determined policing to the contrary' (p. 166) thus working 'against the discourse of the Master' (p. 167). It was as if the students had forgotten that I was also a participant in the discussion. They criticized the program and other courses and professors in ways that I found impossible to respond to. There were numerous comments like the following:

According to the workload some of these profs drop on us you would think we are superhuman. I cannot believe the amount of reading we are required to do for [a course]. Is this man just a wee bit CRAZY? We only have 5 weeks of classes left, not five years!

and

Take, for instance, yesterday when [a professor] came to class... to tell us that the marks we received last week were not even really ours. God what is this? I don't know about the rest of you, but I was severely frustrated!!! Then you have [another professor] to just write bullshit for notes again. What the hell is that supposed to say to me?

Despite my sense of obligation to moderate, I waited. There seemed to be no point of entry for me and I felt extremely uncomfortable. The conference had indeed 'opened up an alternative discursive space'. However, the space provided its own response, with the words of another student:

Will I be shunned and looked at as a freak (*or more of a freak*) if I suggest that what we are going through now is maybe a little closer to what university education ought to be like than what we are used to? I may be way out to lunch here, but perhaps the reason we're all so disoriented by the supposed lack of organization and structure is that for the past twenty years we have been organized and structured to death and we are just not accustomed to this type of learning. Now, I am not saying that there are no problems with the program. And I would be infinitely more comfortable if the profs would just tell us what to do and when it was due and how much it was worth and how to go about getting it done. But I'm beginning to see this semester as a time of reflecting on the... issues and philosophies of education rather than a strict preparation for the classroom. I have found myself considering issues and ideas re education and the teacher's role which had never occurred to me before. And so we are left with more questions than answers. Is this not also one of the purposes of education, to cause us to ask these questions?

At one point students began discussing the merits of the list. Many of them contributed comments about how useful they had found it, both because it forced them to become comfortable with using computers (*something they saw as an advantage for prospective teachers*) and because of the sense of community they found within the list. They wrote comments like, 'I think I've fallen in love with the listserv,' and 'I cannot wait to read the entries from one day to the next. And every time I sit down to the computer and go to Telnet it always comes up, "You have new mail," and I love it!' One student elaborated further:

First of all I would like to agree with Nick's comment about the usefulness of this conference. At the beginning of the semester when this idea was mentioned it was met with a degree of apprehension by a lot of us. My favorite comment was William's: "I feel like I'm being dragged kicking and screaming into the twentieth century all over again." I could not have said it any better! But here we are, Will. We did it! And I am really glad that we all did. I definitely think that this is something that should be used in other courses! As much as I enjoy reading all of these words of wisdom and all of this cyber-bonding, I think that my favorite part of all of this is the tremendous sense of empathy that seems to be coming through. We are all in this together.

This sense of community extended beyond the end of term and the confines of the campus. It must be rare for students to continue with a course assignment after the course is over, but, in fact, this has happened every time I have used a class list (NB A year or two after the writing of this article, this stopped happening, presumably because the students either participated in other online forums or were more familiar with and less excited about this medium of communication.). In this instance, the students left campus for a twelve week practicum. They were scattered around the province and, in some cases, across the country. However, most still had email access and they continued to use the listserv to discuss their experiences and reflections and to seek support. Comments like the following began to appear:

My cooperating teacher is somewhat of an authoritarian figure. As he stated in class last week, "In here there is no democracy. It is a dictatorship and I am the dictator!!" I hope and pray I do not be graded based on his way of teaching.

and

They planned ahead of time exactly what time the whole class would burst into song. I found it amazing that twenty-seven of them could agree on something. Their grade in cooperative skills went up... And here's a little pointer for you. If everyone is sitting in class looking interested before the bell in the morning, something is up. In my case there was a picture of a naked woman taped above my head.

Even after completing the course and leaving campus, students continued to use this forum for sharing stories, entertaining each other and seeking support, solidarity and advice. These were not just trivial anecdotes but a shared process of making sense of daily life and future goals.

The use of a listserv or another form of asynchronous online conferencing can enable the following things to happen:

1. It can allow students who are not comfortable with speaking out in a large group, or expressing themselves in traditional academic ways to participate in discussion. Thus, it may be more democratic than traditional class discussions in some ways, providing that all students have adequate access to the Internet;
2. It can foster a more extensive, yet informal and exploratory, expression of ideas than do most classroom exchanges;
3. It provides a forum for a lateral or divergent, rather than linear dialogue. It is a dialogue that can move outside time, space, or chronological order;
4. It can enable both teacher and students to tell stories and to listen to each other in new ways, perhaps more carefully, since one can read and re-read, and respond after reflecting, unlike face-to face conversation (Yeoman, 1995).

Freire (1970) sees education as a dialogue in which participants reflect on their relationship to the world in which they live. Since it is based on the history and experience of the students, it can never be neutral. It is a pedagogy of praxis, an action/reflection model of learning where students reflect on their own lives and come to see themselves as active subjects and agents of social change.

Bakhtin writes of 'the word as a tool for pedagogy' (Morson, 1986, p.33) and of humour as 'both the form and the vehicle of popular liberation' (p. 106). Computer conferencing can be understood as a Bakhtinian polyphony of voices, each one having equal validity within the dialogue. This equality of voice and the Freirian dialogue emerging from generative themes and building on the students' own history and experience are the real potential strengths of computer conferencing. At its best it can enable this kind of dialogic experience. It will never be a substitute for other kinds of teaching but, in conjunction with more traditional forms of teaching and learning, I still believe it can enhance a democratic and imaginative educational process.

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TECHNOLOGY-BASED LEARNING ENVIRONMENTS AS TROJAN HORSES

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There has been a gradual shift in thinking which is taking much of the focus away from teaching and redirecting it instead towards learning. Along with this shift in thinking, there has emerged an increased interest in the notion of learning environments. For Perkins (1996), an environment has "length and breath, places and parts, non-living and living, simplicity and complexity, constancy and change" (p. v). Wilson (1996) describes a learning environment as "a place where people can draw upon resources to make sense out of things and construct meaningful solutions to problems"(p. 3).

Learning environments are not limited to one type. Besides classroom-based learning environments, we can also talk about constructivist, interactive, multimedia, adaptive, computer-based, asynchronous, constructionist, hypertext or collaborative learning environments. In many respects, there is considerable overlap in the use of terms. Many of these environments are subsets of technology-based learning environments and are therefore variations on a similar concept. Understanding the possibilities and potential that exist with these new environments may represent a first step in evolving a vision for the future of learning in general and for educational reform in particular. As Vosniadou (1992a) posits: " It has become apparent that educational technology may have a better chance to change the school environment if it is based on a new vision of what this learning environment should be".

The purpose of this paper is to explore some alternatives to the traditional classroom-based learning environment through a discussion of three types of technology-based learning environments: Computer-based, Interactive-Multimedia and Adaptive. The aim of the discussion will be to explore the possibilities, potential and, as well, some of the challenges, presented by each type of environment. As such, the discussion will centre around the types of learning afforded by such environments. The technological aspect is de-emphasized in order to first consider the psychological and theoretical underpinnings related to how individuals learn, how they acquire knowledge, and the types of knowledge they acquire in different learning environments. Using this perspective, this paper will explore some of the ways in which technology-based learning environments may act potentially as trojan horses and, as such, drastically alter the educational landscape.

Computer-Based Learning Environments

Several factors have contributed to the developments in computer-based learning environments. Improvements and advances in hardware capabilities have afforded greater computing power. Advances in cognitive and instructional science have moved thinking beyond the limits of behavioural psychology. The new systems of computer-based learning environments are being designed with a view to facilitating complex problem-solving through integrating wholes of knowledge (Dijkstra, Krammer & Merriënboer, 1992). Thus, many see in the computer a means to enhance students' cognitive skills and general problem-solving ability. This is in

spite of the fact that studies have failed to conclusively confirm the hypothesis that computer-based learning environments facilitate the acquisition and transfer of higher-order thinking and learning skills (Dijkstra, Krammer & Merriënboer, 1992). Nonetheless, Salomon (1992) argues that computers make possible student involvement in higher-order thinking skills by performing many of the lower-level cognitive tasks, by providing memory support and by juggling interrelated variables. Through a partnership with the computer, the user may also benefit from the effect of cognitive residue resulting in improvement or mastery of a skill or strategy. Salomon explains:

The intellectual partnership with computer tools creates a zone of proximal development whereby learners are capable of carrying out tasks they could not possibly carry out without the help and support provided by the computer. This partnership can both offer guidance that might be internalized to become self-guidance and stimulate the development of yet underdeveloped skills, resulting in a higher level of skill mastery. (p. 252)

According to Salomon, for computers to have an impact on classroom learning and to effectuate true change, it is the kinds of activities for which they are used and not the computers themselves that must be emphasized. The challenge inherent in this argument, notes Salomon, is that the computer must function like a Trojan horse affording activities that will necessitate profound changes in the learning environment. If computers are to affect learning, they cannot simply serve as an addition to the traditional teacher-dominated classroom in the same way that a television could. Properly introduced, the computer changes the classroom and possibly the school as a whole. For this reason, concludes Salomon: "Computer-based learning environments are not learning environments to which computers have been added (...) Rather, these are relatively new environments in which computer-afforded activities have been fully integrated into other activities, affecting them and being affected by them" (p. 252).

Computer-Supported Intentional Learning Environments (CSILE) (Scardamalia & Bereiter, 1992) provides an example of how computers can significantly alter the educational landscape. CSILE represents a restructuring of the classroom and patterning of schools after scientific research communities in order to provide places for sustained, collaborative inquiry in a "knowledge-building community". The environment is based on the assumption that knowledge is a human construction that takes place as a socio-cultural activity and that it is through apprenticeship with a mature scientist that a young scientist's skills are acquired. Students' work in various academic subjects is entered into a common hypermedia student-generated database accessible to all students so that computer activities are used in all areas of the curriculum.

Jonassen (1992) considers how computer-based learning environments should be designed and varied in order to facilitate advanced knowledge acquisition for expertise in complex and ill-structured domains. Specifically, the design should draw on cognitive flexibility, which is a conceptual model for designing learning environments based on cognitive learning theory. According to this theory, knowledge develops in the three phases of introductory knowledge, advanced knowledge and expertise knowledge. During the first stage, learners have little usable knowledge and

instructional systems often do not favour the development of skills beyond reproductive tasks and elemental applications. For this reason, learners often fail to acquire more advanced knowledge. Advanced knowledge is necessary for problem-solving and requires instructional conditions that illustrate the interconnections between knowledge and provide flexible representations of the knowledge domain. In the final stage, expertise is acquired only through domain relevant problem-solving experiences which are actually difficult to capture and make available.

Computer-based instruction has traditionally been characterized by a reductive bias that oversimplifies material and overgeneralizes methods that are more appropriate for introductory knowledge acquisition. As a result, subsequent acquisition of more complex knowledge structures is impeded. Jonassen argues that computer-based learning environments designed with hypertext can support advanced knowledge acquisition in ill-structured knowledge bases. Hypertext is a learner-controlled information base that can adapt its structure to suit the requirements of the learning task, thus allowing learners to acquire more widely applicable and transferable knowledge. Hypertext emphasizes constructivist learning by exposing the learner to multiple perspectives in order to convey the complexity of the content.

Cognitive flexibility theory suggests an approach to the design of computer-based learning environments that is based on understanding how advanced knowledge acquisition and successful learning are achieved. Vosniadou (1992b) also argues for an understanding of the learner and the learning process in order to better design computer-based learning environments. Knowledge acquisition involves restructuring as well as enriching existing conceptual structures. In order for students to be able to restructure these structures, they must first become aware of their entrenched beliefs and be provided with the opportunity to reinterpret them. In the case of science, children often come to the learning task with naive models and understandings of the world based on their everyday experience. These understandings often conflict with accepted scientific explanations. Knowledge acquisition thus requires a radical restructuring of these existing models and understandings. Vosniadou provides an example of such misunderstandings: "...children start with a naive model of the cosmos according to which the earth is flat and stationary and located in the middle of the universe. The sun moves down and hides behind the mountains during the night. The moon has its own light and the stars are small objects found in the sky only at night" (p.150). Vosniadou argues that these misconceptions or entrenched beliefs constrain the types of mental models of the earth that children can form. Factual statements therefore often appear counter-intuitive to students with these entrenched beliefs. For this reason, explains Vosniadou, learning environments must be designed to help students become aware of and question their beliefs, and to help them replace these beliefs with a different explanatory structure. Computer-based learning environments are well-suited to helping students restructure their entrenched beliefs. Computers can model or simulate otherwise highly abstract and unobservable processes thus helping students understand the limitations of their beliefs. Such environments also allow students to create and make external their own representations of systems in order to examine and modify them.

The role of computers in helping students restructure their entrenched beliefs reflects some of the changes which can be brought about at the classroom level. However, more evidence is needed in support of the computer's ability to enhance learning. As well, a better understanding is needed of how the computer might serve as a stimulus or catalyst for broader systemic changes in education in general. Salomon argues in favour of "a systemic, rather than an experimental-analytic paradigm for the study of system-wide changes" (p. 260). Such studies could provide opportunities to qualitatively observe how theories such as cognitive flexibility theory can translate into effective practice in the classroom. Scardamalia and Bereiter (1992) criticize the typical approaches to understanding computer-based learning environments which compare highly experimental innovations with "a stereotype of conventional didactic practice" or studies that typically contrast the "high-tech learner-centred classroom" with the "caricatured no-tech teacher-centred classroom". They argue that more refined contrasts are necessary to better understand the distinctive aspects of the new approaches.

Computer-based learning environments represent complex phenomenon with high potential for improving education and enhancing learning. Our understanding of how such systems can best be designed and implemented remains limited. Effective research in this area will present the challenge of understanding the complex interaction and overlap of variables in the educational setting. Researchers' efforts may be best deployed by first deciding on what types of learning they want such environments to promote. How best to design an environment to support such learning will then need to be considered. It is likely that computers and their software will form only one component of this environment. Roles, curriculum, activities and interactions will constitute some of the other factors that will combine to create the optimal learning conditions in the new environment. As such, understanding computer-based learning environments and their future role in education presents a complex challenge that will require serious and sustained focus and sharing of research efforts.

Interactive Multimedia Learning Environments

Interactive learning is not a new pedagogical approach. Twenty-five hundred years ago, Socrates used it with his students to whom he asked questions in order to promote active thinking on their part. Today, interactive learning, particularly with multimedia, involves considerably more than simply using a Socratic approach. Giardina (1992) provides a description of some of the characteristics of interactive multimedia learning environments (ILMEs). Such environments are not static with fixed roles played by the teacher and learner; rather, the equilibrium is dynamic "where the nature of information and its processing change, depending on the situation, the learning context and the individual needs" (p. v). Wilson (1992) makes reference to the tools and the activities they afford in order to define interactive learning environments as:

...environments that allow for the electronically integrated display and user control of a variety of media formats and information types, including motion video and film, still photographs, text, graphics, animation, sound, numbers and data. The resulting interactive experience for the user is a multidimensional, multisensory interweave

of self-directed reading, viewing, listening, and interacting, through activities such as exploring, searching, manipulating, writing, linking, creating, juxtaposing, and editing. (p. 186)

Whereas, at first glance, Wilson's definition may appear to capture the essence of what we might commonly think of as an interactive system, Giardina argues that the notion is actually quite complex and includes diverse elements such as student modelling strategies, multimodal knowledge representation, intelligent advisory strategies as well as diagnostic learning strategies. Another complex issue related to multimediated interactivity is that of control. According to Giardina, there is an intricate relationship between the learner and the environment: "Control and initiative oscillate between the environment and the individual according to the latter's decisions, which in turn are conditioned by the adaptability and flexibility of the environment in relation to individual differences" (p. 48). Depover and Quintin (1992) argue that, in any learning situation, control must be distributed:

Learner control in a learning situation must not be considered as a dichotomous variable expressed in terms of all or nothing but rather as a continuum, from a point of no control, where all decisions would be placed under the responsibility of an external design, to an approach where all decisions would rest in the learner's hands. (p. 235)

Closely related to the concepts of control in learning environments are the notions of adaptability and intelligence. Learning environments endowed with such characteristics might monitor the interactions of the user and react accordingly. Clark and Craig (1992) note that common to most definitions of interactivity is the ability to provide both corrective and informational feedback to the user. A system's ability to provide feedback demands a very sophisticated design since the system must not only be capable of noting the user's actions but of interpreting and then reacting or adapting to them. According to Duchastel (1992), this process of interpretation is difficult for a system to perform. The interpretation is a complex process involving transforming the user's actions into a representation of his knowledge which must be overlaid on the representation of the system's knowledge.

Duchastel explores the possibilities afforded by the merging of intelligent tutoring systems and hypermedia by combining the strengths of both systems into a Hypermedia Intelligent Tutoring System (HMITS). Whereas ITSs structure information and provide intelligent adaptiveness, hypermedia systems do not structure information and contain no pedagogical expertise. On the other hand, hypermedia systems do present considerable potential as learning resources and can allow full learner control relying on the student's own intelligence for learning guidance. HMSs could be designed to provide a level of adaptivity through tailoring of the interface or through selective orientation of the information. A more intelligent HMS would be able to build a student model, didactic knowledge and knowledge of its own display elements. A HMITS would afford learner control while at the same time provide orientation and intelligent adaptability.

Barker (1992) provides an example of a simple adaptive hypermedia interactive environment in the form of an electronic or hypermedia book. Electronic books or e-books can provide the opportunity for the user to experience the material

in a variety of formats. Various control mechanisms allow the book to "react" to the interests or needs of the user to explore or view different sections of the book in a non-linear order. Page control mechanisms in the interface allow the user to exit the book, access other books, use related resources. At the same time, control is sufficiently sophisticated to support orientation so that the user knows at all times where he is located in the book. Resources might include "global resources" such as a glossary, notepad or bookmarks. Local page resources could include elements such as pictures, sound effects or video animations or simulations.

Intelligent tutoring systems, hypermedia systems, exploratory, simulated worlds, and e-books are also examples of interactive multimedia environments, thus reinforcing Giardina's affirmation that interactivity is a concept which "readily adapts to all manner of situations". However, as Giardina notes, interactivity is not only defined in relation to the technical considerations of the environment but more so to the "complex design, the learner's actions and decisions, and adjustments tailored to individual differences"(p. 49). To understand the role that interactivity might play in learning we have first to consider the cognitive dimension and focus on the learning process and not the product (Giardina,1992). Yet, the most important focus in the design or the definition of interactive environments is first and foremost the learner. The concept of interactive learning environments may have become more complex since Socrates' time but the notion of the centrality of the learner has remained an essential and distinguishing feature.

As Giardina aptly argues, interactivity is a complex concept. Control, adaptability and intelligence: these are the three themes noted as central to interactive-multimedia learning environments. But which theme is the most central to the concept? Can a system be interactive if it is not intelligent? Can it be interactive if it does not provide control or does not adapt? Are all systems that provide control interactive? Are all intelligent or adaptive systems interactive? Must all three elements be present for a system to be interactive? In what degrees must they be present? These are but some of the questions that relate to the concept of interactivity.

A central consideration is the distinction between the notions of reactive, interactive and adaptive. To be considered interactive, a system must first and foremost be able to respond to the user. The user's actions trigger a corresponding action on the part of the system. However, what kind of response is required on the part of the system for it to be interactive? If a user presses on the key "w" on the keyboard and a "w" appears on the screen, the system has indeed responded to the user, an action has triggered a reaction, but is this interaction? If, in a hypertext or hypermedia system, a user moves from node to node by selecting links, can the system be characterized as interactive?

Schweir and Misanchuk (1993) refer to levels of interactivity and have constructed a descriptive taxonomy of interaction for multimedia instruction. The three hierarchical levels of interaction are referred to as reactive (in response to a given stimuli), proactive (user generation of unique constructions) and mutual (artificial intelligence). The authors note that a system can incorporate all three levels of interactivity with the mutual approach being of higher quality because of the opportunity provided for "meaningful mental engagement and learner investment". In the mutual level of interactivity, the system adapts to learner progress, advises,

assists the user and constructs and refines the environment based on learner input (Schweir & Misanchuk, 1993). Such action suggests both intelligent and adaptive behaviour on the part of the system. Bielawski and Lewand (1991) note that the key factor in intelligent systems is the ability to use knowledge and to associate and infer to perform tasks or solve problems. Adaptability suggests a system which knows something about the user and uses this knowledge to adapt aspects of the system to the user. An example of an interactive system incorporating intelligence and adaptability would be an intelligent tutoring system or expert system. Typically, however, ITSs do not offer a high degree of user control.

The challenge in the design of highly interactive learning environments would be ideally to create systems that can offer intelligence, adaptability and user control. Furthermore, if the interactive system is to respond to a wide range of user's interests and needs, it should be multimodal or capable of a wide variety of media formats. Combining features from different systems to create hybrids such as the Hypermedia Intelligent Tutoring Systems might allow designers greater leeway in combining diverse features to ensure a high level of interactivity as well as learner control. Emerging technologies and those available through the internet such as e-mail, newsgroups, video-conferencing and screen-sharing could also be combined with existing applications and learning environments in order to increase their interactive potential. The concept of interactivity, because it is so complex, affords it the flexibility necessary to merge with a wide variety of systems. At the same time, it can be an over-riding concept - that is- one which drives the design of the entire system. No doubt, as new technologies evolve and emerge, interactivity will continue to be a concept that is privileged by the designers of new systems.

Adaptive Learning Environments

The study of adaptive learning environments links instructional science with computational science. For computational Scientists, artificial intelligence has long been the focus of research efforts. For instructional scientists, the computer is increasingly perceived as a tool for enhancing learning. It is not surprising then that researchers are willing to combine traditionally distinct areas and to engage in interdisciplinary work in order to develop adaptive learning environments. The ultimate goal of such work is to "develop computer systems that provide or support effective learning experiences for a wide range of learners across a broad spectrum of knowledge domains" (Jones, Greer, Mandinach, du Boulay, & Goodyear, 1992, p. 395).

Perhaps the most well-known type of adaptive learning environment is that of the intelligent tutoring system. Such systems are characterized by a knowledge base, a tutoring strategy and, finally, a student model (McCalla, 1992). This student model is what makes an ITS an adaptive system since it is used in order to modify instruction to accommodate the needs of the student being tutored. The system can monitor the student's progress through a particular knowledge base and interpret where the student is and provide feedback on how he or she should proceed. While earlier version of ITSs suffered from a rigidity of prespecified and predictable control paths, more recent ITS research is focussing on creating flexible instructional plans and knowledge bases.

Nonetheless, ITS research still faces considerable challenges in representing large knowledge bases, in varying the student model and in providing a sufficient array of tutoring strategies (McCalla, 1992). An environment integrating so many components into one module represents a highly complex and sophisticated system - one which would be difficult to design effectively. A further weakness of intelligent tutoring systems is that they "fail to consider the context of learning and social interactions fundamental to learning processes" (Jones, Greer, Mandinach, du Boulay, & Goodyear, 1992, p. 384). Other criticisms of ITSs include the fact that they are modelled on an instructionist approach that emphasizes transfer to the student of knowledge that the tutor possesses. du Boulay and Goodyear (1992) question in its entirety the notion of domain knowledge and the ability of ITSs to represent it. They note that a domain such as the history of chemistry is "a human invention". The authors explain: "The danger comes when one starts attributing a 'domain' with an independent existence of its own. One slips from a mode of saying, 'For present purposes, this is how I want to describe the world' to a mode of saying 'This is how the world is'" (p. 321).

The numerous weaknesses and subsequent criticisms of intelligent tutoring systems have led to increased discussion and debate about ways in which they might be better designed. Woolf (1992) provides many suggestions for ways in which ITSs might be improved. She posits that what is needed are better cognitive models or descriptions of learning and teaching which could be encoded into knowledge-based tutors. Work on the modelling of good teachers and subject model experts might compensate for a weaker student model. Understanding of the cognitive processes (such as problem-solving) necessary to accomplish a task and reification of these process in the student and domain model would improve instructional leverage. She argues as well for improved tools that support meta-cognitive activities and that allow the system to infer student intentions from student plans which could be expressed to the tutor.

Other issues to be addressed, according to Woolf, are how often and how much feedback and error correction should be provided to the learner. The communication style of the tutor is also an important area needing to be addressed. Effective systems should be able to maintain interactive discourse with a user and tailor responses to the idiosyncracies of the particular user. At an epistemological level, research efforts will need to consider ways in which to identify the relationships between the system's domain knowledge and what the learner already knows. The tutor should be able to "structure the explanation to follow epistemological 'gradients' along which he or she is likely to comprehend and integrate the new knowledge it contains" (p. 227).

Laurillard (1992) asks how adaptive tutoring systems might be able to diagnose "what a student needs to be taught" (p. 234). Student modelling should enable the system to know the student in the same way it knows the domain. However, Laurillard questions how a model of a student might include aspects such as motivation, perception and interpretation especially when these might vary depending on the task in which the student is engaged. Laurillard also argues that an explicit model of how students learn, while essential to the system, is unknowable. At best, the system can model what students know but not how they came to know it.

For this reason, she explains, the student model must remain implicit and "manifested in the way the interaction develops" (p. 246).

Derry (1992) takes a different approach to improving adaptive systems by arguing that we should concentrate research efforts on determining how to design learning environments that favour the development of metacognitive processes. However, Derry is referring not only to the student's intelligence but, as well, to the system's intelligence about itself and its ability to regulate and control its operation. She selects a Vygotskian or cognitive apprenticeship approach to the tutor who serves as a mentor to model appropriate cognitive behaviour for the student. The role of the tutor in modelling support gradually diminishes as the student progresses through the shared activities. The goal of the system is to progressively transfer control of learning from the tutor to the student.

Issues of control have generated considerable discussion in relation to adaptive learning environments (ALEs). Authors Jones, Greer, Mandinach, du Boulay, and Goodyear (1992) point out that, while early systems of the 1970s and 80s gave considerable control to the tutor, today's design trends aim to provide the learner with more tools to control knowledge, reflect on the learning process and inspect what the system knows about the learner. They also argue that shifting classroom roles with teacher as a facilitator must also be reflected in the design of ALEs. The new environments should allow students to construct new knowledge and skills for themselves. One of the most important points raised by these authors is the issue of integrating ALEs into existing school and university environments. They note that the lack of flexibility common to much of school curriculum may make it difficult to introduce new instructional technologies. Restraints on teacher time and training are also factors which may limit the successful integration of the new adaptive learning environments.

Intelligent tutoring systems constituted some of the earliest applications of artificial intelligence in education. However, they have largely been based on traditional methods of learning and teaching and have been implemented primarily in the fields of math and science. They worked well with drill and practice methods with well defined goals for learning such as the development of factual knowledge and procedural skills (McArthur, Lewis & Bishay, 1994). Nonetheless, intelligent tutoring systems are not the only way of conceptualizing and designing adaptive learning environments. Research and developments in the area of online, adaptive hypermedia systems suggest new ways in which technology can be an effective tool for enhancing learning. Intelligent, online help as well as adaptive interfaces may allow for adaptive guidance and presentation based on the user's specific interests and needs. Adaptability may possibly be incorporated into large online hypermedia systems such as the World Wide Web through the use of knowbots or agents. Such systems may allow for a more discovery-type, constructivist approach to learning while at the same time providing some support and guidance to the user.

Progress in the design of ALEs may require investing intelligence in environment tools instead of a tutor. Such an approach might allow for the student to control interaction with the environment through selection of particular tools. However, the degree of student versus tutor control will depend on whether or not the environment is based on instructivist or constructivist principles of learning. For this

reason, designers will first need to resolve issues related to philosophy of learning and knowledge before proceeding to more practical concerns related to the development of the environments. What is learning? What is the role of the teacher? What role does the student play in his/her own learning? These are just some of the questions that will need to be addressed prior to designing the environments. As such, the design of adaptive learning environments may need to involve, not only instructional and computational scientists, but cognitive scientists as well.

Conclusion

The metaphor of an environment is intended to evoke a holistic entity comprised of a complex mix of variables that interact, intertwine and interconnect. An environment is an entire amalgam of roles, activities, goals, relationships, interactions, conditions, circumstances and influences that combine to provide the conditions for growth or learning of the individual. Use of technology is but one component of this complex system. Nonetheless, Salomon (1992) aptly argues that technology has an important role to play in this environment and in education in general. Salomon's notion of the computer as the "trojan horse" reminds us that technology is not simply an "add-on", that it has a more complex role to play. That is, if it functions as part of an environment and not simply as another tool to be used when required. That is, if it facilitates a change in other parts of the environment. The trojan horse analogy focuses our attention on technology's hidden capacity to drastically alter the status quo. The analogy suggests an intrusive, subversive approach which is perhaps indicative of the draconian changes that many individuals would hope to see realized in the traditional classroom. In this sense, technology--particularly the newer, emerging technologies--has become like a new-age messiah sent to liberate schools and education from the instructionist, teacher-centered, transmission mode.

The commonality between the perspectives of researchers whose studies were considered in this paper is an encouraging sign. It not only indicates some agreement of the need for educational reform but, as well, agreement on the form that this reform might take. Encouraging, as well, is the obvious preoccupation with starting reform from a discussion of epistemology and of learning theories. Such initial "groundwork" will pave the way for a firm basis for innovation in practice. New educational projects and programs can represent diverse interests and approaches while at the same time have one broad epistemological and philosophical base that unifies and strengthens them.

Whether technology-based learning environments will indeed reveal themselves as the Trojan horse is yet to be seen. It is possible that reform of education will prove to be an illusion or, at the very least, that it will encounter unsurmountable obstacles to its realization. Yet this possibility does not appear to deter researchers, writers and educators in their efforts to design and implement on a small scale their blueprints for new environments for learning. For now, integration of technology into learning makes brighter the proverbial light at the end of the tunnel. One can only hope that such efforts to reform education will not result, instead, in a tunnel at the end of the light.

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THE NEW MATH...TEACHER!

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Abstract

The implications of the shifting demographics of the mathematics teacher population in Newfoundland on leadership, professional development and employment opportunities have been noticeable for some time. The painting of this landscape now is the product of a broad base of personal experience gathered through living on the coattails of a sweeping generational demographic—the baby boomers—and a concern that a body of committed professionals has been set adrift during recent educational reform, curricular and systemic, in Newfoundland. Tensions of the rapid generational transition we are going through will be expanded upon as will some concerns about collegial casualties that may occur during the next three to five years (i.e. 2000- 2003/5).

Foreword

This paper is an attempt to paint one current view of the landscape that is the teaching force in Newfoundland as we enter the third millennium, with a particular focus on mathematics teachers. This view is framed against a time-line tracing most of the baby boomer generation through eras of influence socially and professionally, with emphasis on mathematics as a subject context.

The W.W.II baby boom is typically associated with births occurring between 1946 and 1965. Those born in 1946 would typically have entered the teaching force in Newfoundland in their early twenties and would likely now have retired from teaching [*Early Boomers*]. Those born in 1955 would typically have entered the teaching force in NF in their early twenties (i.e. in the late 1970s) and would likely be eligible to retire between 2005 and 2010. These teachers with about 25 years of experience make up a large portion of the Newfoundland teaching force [*Mid-Boomers*]. Those born in 1965 would typically have entered the teaching force in Newfoundland in their early twenties (i.e. in the late 1980s) and would likely be eligible to retire between 2015 and 2020. These teachers with about 10-15 years of experience make up a significant portion of the teaching force [*Late-Boomers*]. The remainder of the working teachers are not baby boomers and represent those born between 1965 and 1979 [*Generation X'ers*]. High school in Newfoundland was extended as grade twelve was introduced in the early 1980s. Together with programming changes over time, this typically translated into teachers entering the workforce at 25 years of age or older. These teachers with about 1-10 years of experience currently make up a small portion of the teaching force.

NeXters are not yet in the teaching force...those born after 1980 would likely be completing pre-requisites for entrance to teacher training programs. They will be pre service teachers enjoying observation days and internships over the next five years. These teachers will have experienced current methods engaging changing curriculum usually with a technologically literate base. They may also be a critical pool of personnel, and one that should be attended to if concern about attractiveness

of the workplace in the face of numerous retirement vacancies is deemed to be a potential problem.

Some tensions surrounding the sociological phenomenon of baby boomers include generational tensions in terms of employment opportunity—when positions become available for generationally trailing teachers. Other tensions occur when employers attempt to appropriately fill numbers of rapidly opening positions. There is the interesting challenge then of perhaps having the least experienced teachers as the most qualified in the candidate pool for current educational leadership positions.

We live in a time of exploding technologies and an emphasis on co-operative learning and other group strategies intended to improve team-building and communication skills, of alternative assessment strategies, of interdisciplinary coherence in curriculum documents and of increased public awareness and accountability. Educationally, these are very dynamic and changing times. Few professionals, young or old, in any field have any baseline experience with which this pace of change -- and its effect on the workplace -- is comparable. The current pace of educational change, placed in the context of a rapidly changing teacher demographic, presents many personal and management challenges for teachers of all ages and for the administrators that hire them.

The Context

Reform

Reform takes many forms. For many teachers, reform maybe associated with the shift in the nature of materials and methods as a constructivist-style reform framework and more cross- subject coherence engage curricula. The breadth of this shift, and the momentum curricular reform now seems to possess, can cause stress. Another reform in Newfoundland education involves tailoring curriculum content toward special student needs. This has occurred virtually simultaneously with shifting mathematics curriculum, creating a dual shift for Newfoundland mathematics teachers—a shift in content and methods (really a dual shift on its own) and a shift to a stratified curriculum delivery model known as *Pathways*. Technology is also reforming teaching. Whether it be school intranets for attendance and record keeping, web based course delivery, teaching with/through technology, or simply guiding teachers toward forms and information that now only appears online, teachers rapidly are coming to grips with a very different classroom reality than existed even ten years ago.

Recent Decades and The Shift

In this brief overview of historical context, it is necessary to step in and out of a local Newfoundland context. Generally, the larger perspective is presented with relevant Newfoundland circumstances noted as well.

Late 1960 to early 1970s

The late 1960s through the early 1970s was a time of societal questioning, of rebellion, and of the establishment attempting to maintain itself. Societal tensions

were abundant. Youth sought freedom of expression without establishment trappings. At the same time, the post-war boom was fading and attention was returning to education as a means of securing prosperity. This was also an era which witnessed Vietnam and the space race. There was a perceived need to maintain technological advantages to act as a deterrent to a Third World War. This lent authority to a *Back-to-Basics movement* in schooling during the days of *flower power*. The subject of mathematics was a cornerstone in this *Back-to-Basics* curriculum.

Late 1970s through the 1980s

The late 1970s through the early 1980s saw a questioning of educational product. Was the focus on basics producing results? How were we, and North America as a whole, faring against other countries and cultures in education -- in mathematics in particular? Computing power was showing signs of changing much of the manner in which the world did business and communicated. Would we be ready? Was our curriculum up-to-date? Back-to-Basics curriculum was growing old.

Furthermore, cognitive theory (what we know about how we learn) was making strides forward (thanks in part to a century of warfare and a culture affected by the now much more common medium of television). It was becoming much more chic, not to mention pedagogically reasonable, to ground curricular change in sound learning theory. For example, many educational documents of that era reflect the language of behavioral psychology, using descriptions such as... "The student should be able to...sketch the graph of $y = x^2$."

Professional organizations of mathematics teachers began to react to societal angst regarding the nature of mathematics curriculum and the delivery of mathematics in schools. Pressure to reveal the real benefits of mathematics instruction, including questioning the manner and methods used to deliver it, were increasing. Yet, mathematics seemed mired in a traditional style of instruction that increasingly contributed to teachers of the subject appearing as traditionalist icons and not dynamic educators actively searching for the most modern methods of instruction to engage and enable children.

The National Council of Teachers of Mathematics (NCTM) researched and proposed a curriculum framework and delivery model for mathematics built upon a popular cognitive theory, constructivism. This framework first took the form of the *Curriculum and Evaluation Standards for School Mathematics* commonly referred to as *The Standards*. High on the list of inaction in this framework is a technology friendly common core curriculum differentiated by the depth and breadth of treatment and the nature of the applications. In the slipstream of this first reforming document came *Professional Standards for Teaching Mathematics* (1991) and *Assessment Standards for School Mathematics* (1995).

The Shift

NCTM suggested a re-thinking of delivery of mathematics curriculum to include more use of concrete manipulatives, alternative sources of assessment data, incorporation of technology including use of graphing calculators, and even writing for formative and summative purposes in mathematics! This occurred at a time when

many experienced teachers had born witness to what could be termed educational fads...initiatives which waxed brilliantly and may have failed to deliver the results desired under the conditions in place. In their waning they effectively create a backwash view that perhaps the status quo would have been better and moneys better spent enhancing other aspects of schooling rather than pursuing the exercise that apparently ended up near where it started. The position could be taken, for example, that NCTM's platform would end up like so many others as just another fad. A particular mental model seemed entrenched and unchallenged.

Mathematics is often be perceived as a bastion of the traditional. Incorporating alternative assessment methods such as portfolios and journals formally into mathematics assessment would certainly be viewed as a departure from methods that many would claim were "tried and true". Reduced emphasis on "drill and practice", while not necessarily viewed as a bad thing, did not appear to be embraced by teacher practice at this time. A focus on group work and engaging in problem solving through cooperative learning, using activities where students actively generate authentic data, may certainly have seemed non-traditional enough to provoke nervous commentary among any teacher whose methods might generally be considered traditionalist. The departure toward the more student empowering approach of constructivism may have made visualization of how such a classroom might look and function difficult for many. This may have been made more tenuous by the fact that few teachers could be held up as models of such an approach. Clearly, healthy skepticism toward the approaches put forward by NCTM should not have been unforeseen.

The College Board's Advanced Placement (AP) Calculus courses were willing to challenge their own perceptions of traditional calculus content and delivery. How calculus was taught under AP dramatically changed during the 1990s. This was largely a result of the power and ease of use of graphing calculators to enhance instruction. The status of strands of content and specific sub- topics were, and are, consistently scrutinized as to their relevance, given current tools such as graphing calculators.

NCTM proposed a tack not dissimilar to The College Board's...that traditional strands be questioned, that their role be re-evaluated, and that their treatment be examined in light of the use, purpose and tools of the day. As one example, Statistics and Data Management as a content strand is to receive increased emphasis under an NCTM framework and would embrace technology in its treatment. Congruent triangle proofs from Euclidean Geometry will receive less emphasis.

While duly noted by many teachers as a possible change force, NCTM's thrusts did not seem broadly embraced by all but the strongest of its own advocates. This is perhaps due in part to the reliability of the fad experience. That is, past experiences which seemed to support the notion that "This too shall pass" and implied a return to a state similar to present conditions, may have made teachers generally reticent to invest significant effort up front. Another consideration, also, was the problem such a radical shift in emphases generates in terms of the redevelopment of teacher generated resources. Resources tailored to the language and approach of older curriculum documents and styles would have to be revised. Clearly this would increase the workload for practicing teachers in the updating of

personal materials...no small task given the fundamental shift NCTM was proposing. In addition, it may well have been virtually impossible for practicing teachers to envision many of the directions of NCTM in any kind of a concrete fashion since it may not have formed a part of their individual pre service or in-service experience. This is no criticism of any teacher. Rather it speaks to the magnitude of the departure suggested by NCTM at the time.

It is worth noting that, in the 1980s, education did not generally fare well in the fiscal scheme of things. Many Newfoundland schools were asked to do more with less and serious questions were raised about *right sizing* of educational resourcing. Professional development funding underwent similar scrutiny. Apparently, the bell tolling shifting educational sands and a clear need for professional support did not appear to be in sync with fiscal Newfoundland.

The 1990s

The 1990s in Canada brought the School Achievement Indicators Program. This effort of the Council of Ministers of Education, Canada (CMEC), contributes to increased awareness of provincial performance on a national assessment criteria. The late 1980s through 1990s also brought about several provincial blocs of curriculum development and purchasing power such as the Pan Canadian Curriculum, the Western Canadian Protocol, and the Atlantic Provinces Education Foundation. These blocs were expressions of a desire to have the most modern and effective curriculum possible and were intended also to improve standards and reduce overall costs, thereby not taxing further what was now the fiscal reality.

The 1990s in Newfoundland saw program consultants at the Department of Education reduced in number. Similar actions followed at school boards as the boards themselves were collapsed in 1997 from 26 to 10, with commensurate personnel adjustments. Provincial in-service models were re-thought. Provincial personnel who formerly conducted in-service sessions for teachers were now program development specialists only; responsibility for implementation shifted largely to board personnel. Effectively, real take-up rates, and some would argue opportunities, for professional development seemed seriously affected.

A teachers' strike in 1994 publicized issues such as class size, workload and job stress as immediate concerns. The Newfoundland education system seemed to be feeling the stress of accomplishing more with less. It was also a time when finding specialist teachers in some core areas was becoming more difficult and boards would begin to face the struggle of attracting quality candidates to their more demanding positions. At the same time, teacher demand elsewhere in Canada seemed to be increasing and active recruitment of Newfoundland pre service teachers continued. As technology exploded and educational structures began to show their age, the reality of the burdens on Newfoundland educators became more obvious.

The 1990s, however, was also the era that saw The College Board's AP programs first creep into Newfoundland schools and with them examinations that were credible, valuable and in growing demand. The calculus courses under this program required calculator treatment in a form not seen before. In fact, by 1995, the AP Calculus AB mathematics examination was graphing calculator active; the exam

was designed to take full advantage of graphing calculators. This was a change force that provoked a re-thinking of calculus education, not just in high schools but in post secondary institutions. It also fostered in AP teachers an awareness of standards in feeder courses and of access to and flexibility with technology. In the 1990s, the AP Calculus curriculum had evolved from non-calculator-active (i.e. classic style calculus delivery) to scientific calculator- active (available for portions of the exams only), and eventually to graphing calculator-active where the machine is necessary, assumed present in instruction, and needed in many examination problems. This AP evolution occurred simultaneously with the emergence of mathematics reform as a powerful force in curriculum.

Beyond 2000

NCTM has continued its efforts in an updating of its *Standards document* framework embodied as *Principles and Standards for School Mathematics* scheduled for publication in April 2000. As one indicator of influence, some testing programs are actively meshing existing provincial curricula against the draft of such framework documents in establishing and/or revising mathematics testing criteria.

Teacher Training and Early Experience

Born 1955

Teachers born in 1955 have about 25 years of experience in the year 2000 making up the largest portion of the teaching force [*Mid-Boomers*]. *Those* teachers were initially trained in the mid to late 1970s in the midst of the *Back-to-Basics* movement in education. During the mid 1970s to late 1980s, these teachers would witness some curriculum changes that were essentially incremental changes or were based on initiatives that would wax and wane as did many fads of the 1960s and 1970s.

Born 1965

Teachers born in 1965 with about 12-15 years of experience make up a significant portion of the teaching workforce [*Late-Boomers*]. *These* teachers were trained in the late 1980s... The *Standards* were on the horizon. During pre service education, these teachers would witness a shift to more behavioral language in curriculum documents and the growing question about how best to engage technology in the classroom. In the late 1980s, teachers generally were beginning to hear about issues like alternative assessment, manipulatives and graphing calculators.

Born 1975

The remainder of teachers are not baby boomers...they are teachers with less than 10 years of experience and make up a small portion of the teaching force. Pre-service teaching methods for many of these teachers would begin to serve more of the sorts of initiatives proposed by *The Standards*. Traditional views of mathematics methods would likely be challenged in- training. Teaching with technology, whether manipulative or electronic, would become much more of a reality.

Summary

The phenomenon that has become mathematics reform is unique many ways. The impact on assessment strategies, the perspective on technology incorporation and the apparent durability of the platform seem to have become realities. Different generations of teachers have different perspectives and experiences but they commonly face the challenge of significantly adapting their practice. How well have professional development opportunities and levels of resource allocation in Newfoundland prepared and supported teachers for engaging the practices that current curriculum and policies seem to be embracing?

Generation X'ers in particular are at an interesting career juncture. While possessing the least voice demographically, the least seniority, and little or no administrative authority, they may possess in advance the very skill sets necessary to adapt well to a reform driven curriculum. How might this play out during the hiring rounds that will accompany the retirement of the mid-boomers?

Discussion

The available technological tools and pedagogical shifts associated with reform driven curriculum affect all teachers. Few teachers overtly claim to be well prepared in managing such change. One parallel that strikes the author as having a few similar characteristics, and therefore possibly a few practical lessons, was the introduction of the ordinary scientific calculator and the effect it has had on practice. Calculators have been available for some time. In the mid to late 1970s, tables of logarithms and trigonometric values became redundant with the availability of the scientific calculator. Through the 1980s, calculators became more commonplace in the hands of students. There was some question raised about the impact such a device might have on students' numeracy? Would students become calculator dependent or were they simply becoming technologically literate in the tool of the day?

This tool placed mathematics teachers in an interesting and tenuous position. There seemed to be little or no initial (and apparently no subsequent) broad-based training in appropriate incorporation of scientific calculators into instruction no matter what the grade level. Sparse research offerings at the time most likely made the development of wise strategies for employment of that resource difficult. Yet, the presence of calculators in the classroom became a reality and something teachers began to deal with on a daily basis.

An interesting dichotomy results when the possibility of a calculator dependent generation of learners is contrasted with the background of their teachers (who themselves were in all likelihood not as calculator literate in the 1980s as they would be today). One might think that teachers raised on mental math and pencil and paper would rail against unguarded calculator use in a classroom! As many teachers may have found, however, attempts at controlling the use of a calculator may have been perceived as disempowering the student or as removing the opportunity for the child to become literate in a blossoming technology. This duality may have caused some teachers to struggle with what exactly might best serve students in terms of calculator application. Certainly, as professionals, teachers would exercise their best judgment and do whatever they felt was in students' best interests.

It would be reasonable, then, to expect some clarifying information and direction for teachers, students and the public regarding the treatment such technology should receive. Such parameters would normally be established through definitive guidelines in curriculum documents or through working guidelines set by teachers themselves within a school system or board. They would be supported through professional development if necessary and would consider any available research.

General statements about calculator use crept into curriculum documents through the 1990s. For the most part, however, teachers themselves seemed charged with defining the role scientific calculators would play in learning. While teachers are perfectly capable of making judgements about pedagogical matters, a lack of external clarity surrounding definitive use and place of calculators, to say nothing of establishing conventions for use and providing a baseline calculator literacy in-service, certainly are factors in any calculator related issues discussed today.

Similar concerns might be expressed regarding graphing calculator use today or the general expectation that technology be smoothly integrated into curriculum. Such concerns might also be expressed regarding a broadening of assessment strategies and cross curricular coherence in mathematics teaching. Effectively, teachers may feel they are in the same position with respect to reform initiatives, that a lot of the implementation is being left to the best efforts of teachers as professionals. While teachers are certainly professionals in their fields, they do not publish the curricular rules which govern them. Responsible implementation, in a manner consistent with curricular intent, demands at the very least concurrent field support through professional development. Otherwise, we may look back in ten more years wondering why another factor that could have been controlled has emerged as an issue in the teaching of mathematics.

Implementation of the stratified student support in the form of a *Pathways* model appears to have increased teacher accountability and workload. Teachers are now explicitly involved with modification and enrichment of individual course elements and managing the natural increase in record keeping.

At a time when accountability, testing programs and public interest in educational matters have increased generally, early retirement may be more attractive than ever for mid-boomer teachers. In Newfoundland, there is certainly evidence of such a phenomenon. It is also evident on a national scale. For example, in a recent media piece on the CBC National News, educators point to a shortage of up to 20 000 teachers by the year 2001 as increases in graduates from teacher training programs lag behind the dramatic increases in retirement upon eligibility.

Conversations the author has held with many recent retirees immediately prior to their retirement indicated that there was certainly a reticence about leaving a career they enjoyed so much. For many of those teachers, the retirement decision seemed out of tune with much of their careers. Political concerns surrounding collective bargaining may have contributed to the decision to retire, for some measure of control seemed lost. For a generation that over several decades possessed much of societal purchasing power and may actually have dampened the pace of change

through sheer demographic breadth, retirement under such perceived conditions seems less than appropriate and perhaps somewhat unfortunate.

Owing to the pace of change in general, and in mathematics education in particular, this may well be a difficult time to attract credible candidates to leadership positions within education, positions which many mid-boomers currently hold (For example, 1999-2000 data from the Newfoundland Department of Education database -- generated for the author on March 24,2000 -- indicate that, of active full-time teaching units, the vast majority of Department Head positions in schools are held by teachers aged 45 years and older. The same is true of Program Specialist positions at the school board level and of administrators). Newfoundland school boards are progressing through the pains of wholesale re-organization. They are now poised to lose the tail end of the mid boomers to retirement, effectively releasing decades of experiences in leadership at all levels of schooling. Attracting candidates to leadership positions during times of such change may prove challenging. With the present age stratification of the teaching force in Newfoundland, as in many other locations, new hiring are likely to involve younger, perhaps much younger, personnel with the potential to occupy positions of leadership for some time. Can we speak of an "echo"?

One question arising through this transition in leadership is: "Are positions being filled with candidates who would do the best job in the same or better circumstances, or are conditions such that some candidates are choosing not to apply?" They may not be the same thing. For example, many leadership roles today are perceived as very stressful. Many late-boomers may be at points further along in their career and personal lives when faced with decisions about upward mobility than their senior colleagues were. What might normally be perceived as a rite of ascendancy may not hold attraction for late-boomers. However, difficulty attracting first-rate candidates to positions would rarely be obvious to the public since positions within hierarchies become filled as a matter of course and the system rumbles on.

At a time when mathematics in particular is changing so much, and there is the potential for this turnover of leadership to influence mathematics delivery for 10-15 years, a clear view of the characteristics, background, and abilities of the candidates measured against the needs of each school has never been more important. Depending on circumstances in individual boards and schools, it may be the teachers with less than 10 years of experience who now find themselves qualified, informed and occasionally alone in their willingness to apply for positions of leadership.

Concluding Concerns

There is a generational shift occurring that has not been witnessed in Newfoundland education on this scale before, and there are-- and will continue to be - casualties. All teachers are now faced with dramatic changes in methods and technologies which many claim have not been supported by professional development. All teachers deserve accessible growth opportunities that enhance ability to create and deliver educational experiences under the terms set out by the province and its boards.

Given the magnitude of change and the historical context of recent educational change, adequate information and enabling opportunities seems the minimum degree of reasonable support for those who find themselves within three to five years of retirement. I feel sure that, if given a choice, teachers would say their last years should in many ways be their best years. Neglect in terms of support for those teachers may compromise what is possibly our richest educational resource in a generational window that is rapidly closing.

For the many reasons discussed earlier, teachers at mid-career may also feel unsupported professionally through this time of significant curricular change. They may be viewed, however, as providing the next generation of leaders. Many such teachers may struggle with gauging their own state of preparedness for the demands of such change. Many cannot be presumed to be hungry for the pressures of leadership. Like their more experienced colleagues, these teachers may not have anticipated or been explicitly prepared for the changes they are facing. Factors contributing to any continuation of such tendencies risk disenfranchising teachers who may be struggling through these changes and who might potentially influence students for 10-15 years.

There are those early in their careers who may also be looked to for leadership at a time when education is at the very least a hectic and stressful existence. Candidates may seek opportunities, but we must be sure to ask what they are offering.

If not through the 1990s, now is the time to reexamine what it is that teachers are expected to do and how the employer supports them in doing it. Now is the time to re-focus on reasonable expectations that an employee knows will be accompanied by re-training and material support as the world changes. To do less may risk disenfranchising more senior and mid career teachers and risk exacerbating the teacher shortages already predicted, while further compromising the leadership pool in the process.

A re-socialization of mathematics teachers in this province has begun and, at least in light of mid-boomer retirement and consequent hirings, will last at least three to five years. How will the new culture look? What will its defining characteristics be? We finally seem to have arrived at a more realistic embodiment of "new math". For that, of course, we will need *The New Math...Teacher!*

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RE-THINKING ENGLISH LANGUAGE ARTS TEACHING: IMPLICATIONS OF CURRICULA AND COMPUTER TECHNOLOGIES

Read Literacy Conference, May 13-14, 1999 (*Reading, English and Drama*)

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The Atlantic Provinces Education Foundation

Since my first introduction to the Atlantic Provinces Education Foundation (APEF) and its documents relating to English language arts curriculum, I have found several of its themes and controversial directions interesting to explore in both my teaching and my research. Media literacy or cultural studies, critical literacy, and, especially, the integration of technology in all aspects of English language arts curricula continue to be my areas of research interest. In this article I will talk about and illustrate these issues in relation to the preparation of English education students here at Memorial University.

I am an advocate of the new English language arts curriculum. I approve of its six strands and its six essential graduation learnings. This does not mean that I de-emphasize the importance of reading and writing, but rather that I believe these abilities can be taught and practiced in relation to different texts and literacies. If I were to point out a weakness in the APEF English language arts curriculum, it would be its attention to critical literacy, and it is thus the point on which I will focus.

The Newfoundland/Labrador Context

Although I am relatively new to the Newfoundland/Labrador context, I understand the fear of de-emphasizing reading and writing, the traditional literacy. Nonetheless, I will argue that it is important to expand our notions of texts and literacies, in both cases broadening our meanings of the terms to include a wide variety of forms and new media. And it is equally important to build on the cultural strengths Newfoundlanders and Labradorians do have – like a strong oral tradition. What I will attempt to demonstrate is that there is an inter-linking of these texts and literacies that will continue to support the acquisition and practice of traditional literacy while offering additional abilities important for students entering a new century.

To return for a moment to the teaching of education students: I often remind them and myself that they're learning for the long term – possibly 35 years in the teaching profession. I need to get them to look forward to new curricula and trends in English language arts learning rather than back to their own literacy learning experiences (although I encourage this kind of reflection for a different reason). The same holds true with school children. We hear a lot about lifelong learning, and of course that's true of all education – we apply the knowledge and literacies and abilities we acquire in all kinds of situations throughout our lives, and, in those situations, learn new knowledge and further develop and diversify our abilities. I believe the APEF document provides a framework and encourages the acquisition of

a variety of literacies that will provide a solid base from which to learn new technologies in a future that promises to continue to change at a rapid rate.

Multiple Literacies

One of the foundational assumptions of the APEF documents, in my view, is the expanding of notions and definitions of literacy. No longer are we to emphasize the reading and writing of *only* print texts at the expense of media and other texts. In response to new information technologies and computer mediated communications – to changes in both media and messages – as well as to the altering entertainment preferences of the students we teach, most new curricula (for example, the APEF, the Western Canadian Protocol, and British and Australian curricular documents,) are redefining literacy for the English language arts (ELA) classroom. The APEF, for example, tells us that:

... what it means to be literate will continue to change as visual and electronic media become more and more dominant as forms of expression and communication. As recently as one hundred years ago, literacy meant the ability to recall and recite from familiar texts and to write signatures. Even twenty years ago, definitions of literacy were linked almost exclusively to print materials. The vast spread of technology and media has broadened our concept of literacy. To participate fully in today's society and function competently in the workplace, students need to read and use a range of texts (p. 1).

Although I do not particularly endorse the role of schools as preparing students to “function ... in the workplace,” I do believe that reading the world is as important as reading the word, to paraphrase Freire (Freire and Macedo, 1987, pp. 30-32) and believe it is important to prepare students to be informed citizens who read media and other texts competently and critically, for social and political purposes.

Trend (1997) highlights the importance of incorporating other literacies when he says, “Young people are alienated by the disparity between the type of literacies sanctioned in school and the literacies they practice in their daily lives” (p. 139). New curricular documents are redefining literacy, texts, and goals. They have recognized that media and technology figure ever more prominently in the lives of students we teach, and that the nature of English language arts instruction and curricula needs to expand to incorporate the forms, genres, conventions, and structures of a wider variety of texts.

As members of a global society at the end of the twentieth century, we have come to expect that information will be shared with us through a wide variety of media –billboards and bus boards, television programmes of all kinds, vanity license plates, computer programmes, Web pages and other Internet sites and technologies, newspapers and magazines, memos, tabloids, graffiti, digital signboards, and on and on. The impact of new technologies on mass communication media is highly familiar to us as citizens. In response, curricular foundation documents also expand definitions of texts. The APEF, quite explicitly, notes:

In this document, the term text is used to describe any language event, whether oral, written, or visual. In this sense, a conversation, a poem, a novel, a poster, a music video, a television program, and a multimedia production, for example, are all texts (p. 1).

Curricular documents, as should be expected when our North American world runs on technology, indicate that our students should learn to use technology “to meet their own information needs” (APEF, p. 40). The APEF describes a series of competencies for information retrieval and processing (p. 40) and provides examples of Technological Competence, one of six Essential Graduation Learnings (p. 9). In the Western Canadian Protocol (WCP), grade 9 students will “prepare and use a plan to access, gather, and evaluate ideas and information from a variety of human, print, and electronic sources (p. 36). Just as instruction and learning in reading and writing does not end when we learn to decode and encode meanings in words, so are there conventions and rules and competencies we may acquire with greater fluency and discrimination in relation to other forms of literacy. These are defined in the APEF documents as speaking and listening, viewing and other ways of representing, in addition to reading and writing. I advocate the use of computer technologies as production tools that assist students in discovering and understanding some of the conventions and techniques that define the craft of other creators of texts. Just as we learn and teach literary conventions, we can analyze and reproduce the conventions of other kinds of texts. Thus I argue that, within a critical pedagogy, a variety of computer technologies can be used to achieve some of the outcomes defined in the APEF documents. Thus, at this point, I think I should comment a little more on critical literacy and pedagogy.

Critical Literacy in the Freirean Sense

By now one of the phrases that has become common in English language arts circles and in the APEF document is “reading the word and the world.” Freire’s phrase, as it is often translated into practice, means that students are challenged to read the texts around them as well as print texts, that they bring their own experiences to bear on the more formal texts with which they engage, and that they engage in a critical examination of their own oppressions. The objective is to resist cultural reproduction and to bring “students’ cultural capital – i.e. their life experience, history, and language” to canonical and popular texts, so that they are “able to engage in thorough critical reflection, regarding their own practical experience and the ends that motivate them in order, in the end, to organize the findings and thus replace mere opinion about facts with increasingly rigorous understanding of their significance” (Freire and Macedo, 1987, p. 148).

These conceptions of critical literacy developed, for me, from Louise M. Rosenblatt’s work (1938, 1970). With others, she argued for reader response, for replacing the customary model of literature study which features teacher-directed discussion of specific “revealing” passages in the literary text and privileged meanings, with activities that encourage students’ exploration of their own responses to the text. This rejection of “new criticism” approaches de-emphasizes the author’s intention and craft; it also mitigates against teaching strategies that intend to get at *the* meaning to focus attention, rather, on the life experiences and cultural knowledge

and beliefs that students bring to the text and which give rise to their individual and shared responses.

Such discussions can lead into different kinds of critical investigations. On the one hand, students might further investigate *how* their identities, relationships, goals, beliefs, and values are represented in their responses, and further, how these identities and values are constructed in the texts they read or consume in school and other social venues. This can lead into the kinds of activities commonly undertaken in media literacy and cultural studies. The APEF uses the phrase “writing and other ways of representing” to suggest, among other meanings, that a variety of technologies and kinds of texts can be created to convey ideas, responses, knowledge, and understandings; in fact, to represent identities, meanings, values, experiences, ideologies, and cultures. And our engagement with others’ texts is, in effect, a process of understanding their representations and making them meaningful to ourselves. In critical literacy, we are helping students to question those representations, to dig into them to uncover seemingly hidden meanings and ideologies; to make explicit the assumptions and beliefs that underlie the surface meanings of both the texts they create and the texts they read and view. To accomplish these ends, we may acquaint students with the conventions of various media as I have just suggested; involve them in semiotic analyses of signs and their iconic, indexical and symbolic meanings; engage them in intense hermeneutic readings; and challenge them with deep viewing of television programmes and commercials, to name a few possibilities.

A second sense of critical literacy is often found in the writing of British and Australian educators who use conventional, even canonical texts, as well as new media texts, to explore with students the ways in which texts themselves position us to accept and reproduce particular meanings (Peim, 1994; Morgan, 1997). Thus the work with students involves examining texts to see how particular genres, narrative modes, literary devices and styles themselves encode meanings. It also involves encouraging resistant readings and investigating the gaps and silences in texts that we are positioned to fill in culturally ordained ways. In a moment, I will show some texts produced by education students to demonstrate this kind of work.

Critical literacy and pedagogy, however, “incorporates both critical thought and critical action” (Myers, Hammett, and McKillop, 1998, p. 77), as readers of the world and the word develop and act on critical projects that are transformative, emancipatory, and democratic (Freire and Macedo, 1987). If we take seriously the APEF outcome that includes citizenship (see page 6), we will recognize the role of critical literacy in the preparation of informed, active citizens. The APEF English Language Arts document urges that students “use their own voices to understand, shape and share their worlds” (p. 42). Freire and his interpreters argue that literacy learners should be offered opportunity and assistance in reading, discussing, and writing their own worlds and lived experiences, as I said earlier. In addition, however, the political goal of conscientization is important. It is achieved as learners, collaboratively and individually, recognize oppressions and as they acquire and use literacies to name the world, that is, to write and thus transform it (Freire, 1970). In classrooms, we may engage students in discussion, in “critical and liberating dialogue” (Freire, 1970, p. 52) about histories and representations that may not on the surface seem to oppress them, but which do so in leading to the oppression of

others. The construction of particular versions of masculinity and femininity are examples of such oppressions, but they can include other racial, class, and ethnic prejudices, as well. We can encourage them to publish texts that use writing and other ways of representing to explore representations and to share personal histories and cultural and other identities. Lewis (1995) provides us with another fine example. His students at Jimmy Sandy Memorial School in the “isolated sub-Arctic” (p. 30) community of Kawawachikamach, Quebec, used Internet, multimedia, and other technologies to collect and audio record, write, illustrate, and publish community legends and stories, thus preserving Neskapi traditions and cultures. Not only do such activities preserve culture, they also open up histories for examination. Students who have engaged in these activities can, I think, begin to “understand the connections between their identity formation and subjectivities and their positioning in sociohistorical discourses,” and, further, can “envisage and work toward preferred futures (Singh and Moran, 1997, p. 126). Furthermore, they can articulate these preferred futures and begin to take steps toward their realization through projects of possibility (Simon, 1987). In venues like the Internet, students can publish their points of view and advocate kinds of social action that they deem appropriate in the given situation. It is important that they not feel powerless and frustrated to influence their worlds, but that they learn to act in socially just and appropriate ways to bring about change. This challenge is a radical and dangerous-sounding one; it does not have to be. It can involve creating informational Web sites, writing letters and electronic communications to those with institutionalized power, creating alternative and changed images with the same technologies that originated them, and so on. Which leads me to the uses of technologies in doing English language arts.

New Technologies and the English Classroom

Most of my research in using new technologies for knowledge construction and literacy learning, including media literacy, has been with secondary English education students at The Pennsylvania State University. There, my colleagues and I asked our students to consider the usefulness of computer technologies in teaching English language arts by experiencing those possibilities themselves. Here at Memorial University, Dr. Barrie Barrell and I have continued that approach.

One of the obvious uses of technology is to have students discuss texts, issues, and ideas on electronic bulletin boards or asynchronous Web conferences or through email. Web conferences generally involve a student raising a question or issue for discussion with some explanatory comment, and other participants contributing to any particular thread of conversation that appeals to them. In high schools, such conversations might be initiated in relation to media or other texts students are studying as individuals, small groups, or as a class. One common text or multiple texts with similar themes or other commonalities might form the basis for the Web conference/discussion. One grade 12 teacher with whom we were working had each student present speech on a topic of interest to her or himself. Fellow students each wrote and emailed a response to the speech, with discussion of points raised as well as other kinds of comments; the speaker responded to each student and then provided the class with a composite of the important ideas raised by classmates. These activities use technology to satisfy some of the instructional demands set out in the speaking and listening strands. They also require reading, writing, and synthesis or *précis*. My colleagues and I have asked students to compose Web

pages that represent knowledge, ideas, readings of texts, and challenges to an Internet audience. These Web pages, as well as sharing students' perspectives, invited debate and response from others, thus stimulating further reflection.

We also asked students to compose several different hypermedia projects. Students were able to learn quickly how to digitize audio, video, and images; how to create movies from scanned images and digitized audio; how to replace the soundtrack of a digitized video clip with a different audio track; how to manipulate and change existing images; and how to combine any and all of these products with print text in a hypertext programme or Web site. The hypermedia were composed to represent readings of and reactions to text sets (a variety of books on related themes read by individuals or small groups); to explore critique representations of race, gender, and so on in the media; and to represent meanings of classic texts like Shakespeare's *Romeo and Juliet*. In hypermedia, not only can a number of different media be combined in one space or window, but also hyperlinks between spaces can take reader/viewers instantly to related sites. Several spaces can be kept open on the computer screen so that several different texts can be viewed together. This juxtaposing of texts invites discussion of the questions, challenges, and conflicting views they represent individually and in relation to one another.

In addition to the computer technologies discussed above, there are other technologies already familiar to teachers in schools: cassette recorders, school PA systems, radio broadcasting booths, video cameras and VCRs, and computer desk top publishing programmes that produce newspapers, brochures, and magazines. All of these media permit students to represent and share ideas, knowledge, and identities. And all of them can be used within a critical pedagogy to achieve the outcomes envisioned in the ELA curricula.

Constructing Knowledge

Let me talk a bit more about the *Romeo and Juliet* hypermedia. By gathering together a variety of media culture texts on related themes (suicide, first love, parent-child conflicts, despair, etc.) the students were constructing knowledge about those themes and about Shakespeare's play. Hypermedia, which allows several texts to be available or open on one screen, makes explicit the connections between ideas and texts. Rosenblatt (1978) declares, "We are not usually aware of the organizing or constructive process – the fitting together and interpretation of visual clues – which results in the act of perception" (p. 50). Similarly, we are not always concretely aware of the previous readings, events, and experiences that we bring to a "new" text in order to make meaning of it. This intertextuality is made explicit in hypermedia when several windows are open on the monitor screen; in each space or window, too, several different texts can be displayed: print text (the Wordsworth sonnet, the student's personal reflection (M.A.M), an introduction to the Styx song "Babe," and the quick time movie that shows scenes of ninth grade students reading *Romeo and Juliet*. The soundtrack is the Styx song: "Babe I'm leaving / I must be on my way ... / I'll be missing you" (Styx, 1987). These textual explorations of various moments of despair can lead the students to a deeper understanding of the Shakespeare text. Although, in composing hypermedia, they start with the Shakespeare text and bring in the media culture texts to illustrate it, in reading *Romeo and Juliet* they, rather, bring understandings formed in multiple experiences with media culture to the classic text.

In the Suicide strand of the hypermedia, clips from several videos and quotations from poems, novels and songs illustrate this: *My Darling, My Hamburger* (Zindel, 1969), "Wanting to Die (Edmund Vance Cook), "Grind" (Alice in Chains, 1995), *Dead Poets Society* (Weir, 1989), and several others have provided the students with understandings of suicide. Similarly in the Balcony, First Love, and Parental Conflict strands, popular culture texts demonstrate the variety and number of perspectives on the themes shared in songs and films that students bring to their reading of Shakespeare. What I am saying here is that we do not need to abandon our traditional texts altogether: media texts bring new understandings to those texts; and conversely, those traditional texts bring new perspectives to media texts if we begin with them. To digress and return to my political/citizenship theme for a moment: if a unit of activities begins with representations of a current media controversy, students could go from there to find historical literary protest texts (perhaps with each student finding and linking a different one in a common Web site). This is a useful activity students might well be motivated to undertake. Other follow-up lessons could invite response to and critique of classmates' texts or even the identification of points of similarity to create additional (internal) links between specific words, and images, etc., in the various texts. Some of these canonical texts would be easily available online. (I am thinking, for example of Milton's sonnet "To the Lord General Cromwell" or Swift's satirical essay "A Modest Proposal" about eating Irish babies.)

In another way, hypermedia facilitates knowledge construction. Students may also learn first hand about the construction and manipulation inherent in media texts. Combining scanned images and digitized audio tracks (including their own tape-recorded commentaries), students create movies. They also use image software to scan, crop and manipulate images, including their own digital photographs; they use sound software to digitize, crop, and change audio; and they use video software to work with video clips. In composing the *Romeo and Juliet* hypermedia, students learned how movie soundtracks affect and change the mood, reactions, and meanings of the visual images and scenes. They experienced the effects they can create in viewers when they replaced, with several different songs, the original soundtrack of the Juliet's funeral scene in Zeffereilli's (1968) movie version of the play. Alice in Chains' "Grind" (1995) and "Girlfriend in a Coma" (The Smiths, 1987), when used as soundtracks for the scene, seemed to completely change our reaction to and interpretation of the scene. Our attention was focused on different visual images, and the visual images appeared to be different (movement seemed faster, and so on.) By constructing these effects themselves, students will have a more practical understanding of how professionals achieve the effects that move them as audiences.

These are a few illustrations of the constructivist learning possibilities of hypermedia and other technologies. As others have argued, computer technology supports learning in a variety of ways that empower students as producers of knowledge (Spender, 1995, Jonassen, 1996; Jonassen, Peck, and Wilson, 1999). It can also support learning within a critical perspective used to support the accomplishment of critical literacy objectives laid out in the curricular documents. The APEF, for example, includes a section on Equity and Diversity that tells teachers that "...the curriculum must...":

critically examine different experiences and perspectives within social and cultural contexts

examine ways in which language and images are able to create, reinforce, and perpetuate gender, cultural and other forms of stereotyping and biases

use their own voices to understand, shape and share their worlds ... (p. 42)

There are other challenges to teachers within the realm of critical literacy/pedagogy included in the document. Some of the activities I have already described illustrate how computer mediated communications technologies can be used by students to exchange points of view. These same technologies can be used to access diverse viewpoints on a global scale. Additionally, Internet technologies can be used to access, deliberate about, and research multicultural and world literature within a critical pedagogy. My colleague Barrie Barrell and I (Hammett & Barrell, 1999) have also used the possibilities of Internet technologies to encourage secondary English education students to represent their cultural identities and resistant readings of E. Annie Proulx's (1993) novel *The Shipping News*. In a site entitled Newfoundlanders Read *The Shipping News* (<http://134.153.160.118/educ4142/index.html>), the students shared their reactions – not always favourable – to the novel, interpreted and explained different passages, provided additional information, and represented their own identities, cultures, and communities to illustrate or challenge various themes and ideas in the novel.

Such generative processes as the construction of Web pages in response to readings of other texts does involve students in “critically examin[ing] different experiences and perspectives within social and cultural contexts” (APEF, p. 42). In their *Shipping News* Web pages the students explored connections between a variety of texts, building an intertext that exposes ideas, representations, readings, and reactions for critique. By publishing their work (and their identities) on the Internet, and by inviting responses, the students are potentially discovering how their texts affect an audience. They are engaging in a unique social and cultural experience. It is social at the point of creation, as the students’ work collaboratively on the class Web site to represent readings that are themselves social engagements (with E. Annie Proulx and her text participants or characters), and at the point of publication, as the students both add their e-mail addresses to invite response and post their pages on the World Wide Web. It is critical in the sense that students adopt agentic rather than objective positions in relation to texts; that they intervene in, interpret, and reinterpret texts; and that they contest the positions and ideologies offered by texts. Students learn that experience is mediated by authors of print and other media texts, and they learn that they, too, can mediate their own and others’ experiences.

These are a few of the possibilities I see in the APEF English Language Arts Foundation document. Studying media and using new technologies should pose no threat to the traditional literacy of reading and writing. As I have demonstrated and as new Canadian curricula have recognized, the study of all these texts and literacies can be integrated to both complement and challenge one another.

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THE NATURE OF STUDENT-TUTOR INTERACTIONS: A LOOK INSIDE A MATH HELP CENTRE

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Why and how do students attend the math help centre and what sort of learning and teaching takes place there?" This question guided the research that is to be discussed in this paper. The math help centre served as the focal point for the research. The setting is a room at a university campus in western New York. Its principal role is to serve the student population of three first year mathematics courses. These courses are designed for students who require some form of basic skills development in mathematics or, alternatively, precalculus preparation. Students in other courses are welcome to make use of the services offered. However, priority is given to students in any of the three courses.

The help centre is staffed from 10 a.m. to 4 p.m. (Monday - Friday) by tutors. The tutors include graduate students who serve as instructors for the three aforementioned courses as well as undergraduate students. The instructors are present in the math help centre two hours weekly. Most undergraduate tutors spend anywhere from three to five hours weekly in the math help centre.

Initially, the research was restricted to participant observation and informal conversations with some students and tutors. The observations allowed me to develop a sense of the help centre as an environment. Paraphrasing Taylor and Bogdan (1984), as an observer my intent was to establish open relationships with informants. "Working with informants is the hallmark of ethnographic fieldwork. It involves an ongoing relationship" (Spradley & McCurdy, 1972). The desire for such a relationship led me to visit the help centre regularly (about twice weekly for 1-2 hours on average per visit) over a six week period.

A total of 6 in-depth interviews were conducted. Five students and a tutor were interviewed. These students (Ann, Cliff, Ellen, Pam, and Shelley) all visited the math help centre 3 or 4 times weekly. The tutor, Carla, spends 10 hours weekly in the help centre. The transcripts of these interviews combine with my field notes from observations and informal conversations to provide the data for this research. It is this data that lays the foundation from which themes may develop. The spirit of the research experience is captured by the following quotation: "Our advice is to not hold too tightly to any theoretical interest, but to explore phenomena as they emerge during observations (Taylor & Bogdan, 1984)."

This spirit was exemplified by an early experience in the course of the study. While exploring the possibility of doing research at the help centre, I engaged in conversations with some tutors and the coordinator of the centre. It was suggested by them that a core group of students visited at regular hours because they had developed bonds with specific tutors. The tutors adhere to a weekly schedule that remains constant throughout the semester, thus making it feasible for such routines to establish themselves. In fact, I expected to be observing such relationships.

However, this expectation was contradicted by my early experiences in the context of the study. It appears that students have preferences but it is not so common for strictly one-to-one relationships to develop. Quoting Heidi, a tutor at the help centre:

There are some people I may see more of because they drop in when I'm here but it's not specifically to see me.

The matching seems to be more random than I had initially anticipated. The following excerpt from my field notes echoes this sentiment. The conversation was between a student named Bob (B) and me (J):

- J: Do you use the Math Place much?
B: Quite a bit.
J: Do you work with a specific tutor?
B: No, whoever is here but some are better.

This message was reiterated throughout the course of the study. The idea of random matching is expanded upon further along in the paper.

Let us return to the umbrella question: "Why and how do students attend a math help centre and what sort of learning and teaching takes place there?" Themes have been extracted from the data in an effort to address this question.

Three themes are discussed in this paper. The first of these concerns the random matching of students and tutors. The second deals with the routine nature of attendance. It is to be argued that these two themes are overshadowed by a notion of convenience. By this, I mean that what is convenient to the student takes precedence over their desires to work with particular tutors or to be present at specific times.

The crux of the paper rests with the third theme: the help centre as a crutch. We shall examine this theme in greater detail than the others. Data will be presented that suggests that students become dependent upon the help centre as a means of coping with mathematics.

Let us begin to address the research question through the medium of the data. The idea of random matching provides a starting point for our discussion. The following conversation with Pam, a student, suggests that preferences are tempered by convenience. That is, the timing of the visit to the math help centre takes precedence over the desire to work with particular tutors:

- J: Do you find yourself drawn to particular tutors or particular people that you try to work with when you are there?
P: Yes. I work better with some than others.
J: Does that in any way affect the timing - the times that you come to the help centre?
P: Oh that I come at certain times.
J: Knowing that certain people will be there.
P: Yeah I mean I come when it's good for me but you know yeah I like to look for certain people.

- J: So you wouldn't say that it influences the time. It's more that when you're there.
- P: Yeah (as I speak).
- J: You sort of will look for certain people.
- P: Yeah but I realize that certain people I work better with but it's just basically the one-on-one. It could be anyone.

A similar story is narrated by Ellen:

- J: Do you find yourself bonding with any particular tutors?
- E: Yeah - a couple of them that I know that they just help me more than the others do.
- J: In what way?
- E: Well two of them - their explanations, just the way they explain the problem to me - just it comes out a lot better. It almost seems like they know math a little bit more than the other ones, in my opinion. I don't really know if they do or not, but.
- J: So, now with these tutors has the bond developed a bit randomly also?
- E: Probably, yeah. I think so. It's just something that I notice just in that I mean I don't think it's a mutual one. You know what I mean. I'll notice that I'll be looking for a specific one and I'll wait for her if she is with someone else versus asking someone who I don't think really explains it as well.
- J: Would you say that you attend the help centre at certain times because these people are there?
- E: No, only when it's convenient for me. It just so happens that they're usually there - like I know one isn't there on Monday, Wednesday and Friday when I'm there but then two times I've been there on Tuesday she's been there.

The voices of students indicated that they indeed exhibited preferences. However, these preferences were secondary to their desire to be present in the help centre at times which were convenient to them. The following excerpts from interviews with two students, Shelley and Cliff, lend further support to this idea:

Excerpt 1

- J: Have you been developing a bond with particular tutors?
- S: Going to certain ones?
- J: Uh-huh.
- S: Yeah, I guess so. I think that some do explain things better. They just are better teachers. People get things across easier than other people do. Yeah there is a difference but I don't say get away if they come up or scram if I don't like the way they explain something.
- J: You don't fix your schedule based upon who will be there.
- S: No.
- J: You work with whoever is there.
- S: (laughing) I'm not that organized to fix my schedule like that.

Excerpt 2

- J: Have you found that in going to the help centre that you have developed any sort of special bonds with particular tutors?
- C: Yeah. Sometimes you know you find certain tutors can explain pretty good and certain tutors can relate to you better than other ones, you know, which is common.
- J: How do you attend the help centre? Do you attend pretty randomly or do you tend to have a routine that you follow?
- C: Mainly I'd say in between routine and random. Usually I come whenever like after class, like after my math class, or early in the morning. Like if I have an hour break I'll come in between. Or sometimes I'll just come if I get the chance to come.
- J: So when you come to the help centre it's not really determined then by who the tutor is - or do you find yourself coming because so and so will be there?
- C: No, I just come because I have a break or if I am available to come but I'm under no obligations. Or if I really just need to learn a problem, I'll come. So it depends on the person. [OC: Cliff meant that the timing of the visit would determine the person with whom he'd work.]

Recall that one element of the research question concerned itself with "how" students attend the math help centre. That is, do students attend in some random manner or do they integrate regular visits into their schedules in some form of routine? Again, the bells of convenience rang loud and clear through the data. The convenience that affected the nature of student-tutor relationships also exhibited itself through the students' descriptions of routine visiting patterns.

In the preceding conversation with Cliff, he described his somewhat routine attendance. In doing so, he clearly stated "I'm under no obligations." The emphasis was on convenience. Consider the following excerpts from conversations with two other students, Ellen and Shelley respectively:

Excerpt 1

- J: How do you attend the help centre? By that I mean do you make it part of a routine for you or is it some place that you just go to randomly?
- E: It's a routine according to my time schedule. I commute so I don't want to come up here unless I absolutely have to. So when I have free time usually 11-12 or whatever Mondays, Wednesdays, and Fridays. That's usually when I come. Only once in awhile if I'm really having trouble or if we're having a quiz or a test coming up, then I'll come in specially.

Excerpt 2

- J: How do you attend the help centre? By that I mean do you attend it in a sort of routine as part of your schedule or is it pretty random?
- S: I'd say it's more routine now. Well I don't have a set schedule. I'm trying to do that but I can't say I do. It's just try to get in a couple of days a week.

Probably I've been in more now than I ever have because it gets harder and harder.

Another student, Ann, explained that she attended the help centre in a routine manner:

- J: How often do you tend to use the help centre?
A: Every day or sometimes I'll skip a day if I really understand the assignment well.
J: Do you use it at a particular time each day?
A: Usually at the end of the day when my classes are over. I'll spend maybe a half hour to an hour there.

As a tutor, Carla observed the preferences of students. She describes her observations:

- J: Is there generally consistent use of the help centre Monday to Friday?
C: It seems like Mondays, Wednesdays, and Fridays are more busy.
J: Is that do you think because they have math on those days?
C: Yeah. It's all to do with their schedules.

My own observations did not pick up on the strong bias towards routine that has been expressed through the comments. Although the observation times varied somewhat, I did not tend to see the same people each week on a Monday morning between 10:30 and 11:30 or on a Wednesday afternoon between 2 and 3 o'clock, for example. I was usually present at those times during the course of the study. In fact, four students failed to show up for interviews at agreed upon times. (One of these interviews was conducted when we met another day at the help centre). These students selected times at which they would meet me in the help centre. Quoting one student:

Let's meet at the help centre because then if I forget about the interview, I'll be there anyhow. I'm usually there at that time.

Why were these people unreliable? I can only conjecture that they planned to be there but something else came up that was more important to them.

A self-centredness expressed itself through convenient selection. It is like having a routine but...or wanting to work with a particular tutor but... The help centre certainly played an important role in the day to day academic life of many students. Some spent as many hours in the centre as they did in class (three and a half hours weekly). The question "What brings you to the help centre?" produced responses such as:

Shelley: Well I need extra help. It's hard to do it on my own and I think it's just easier when you know you have somebody there to work with. It sort of disciplines. For myself it's hard for me to just do it at home and it's better if I come into a separate place - I don't know how to explain it but a place where it's quiet and everyone is doing the same thing more

or less and obviously if I have a question, I can have it answered. I can't answer my own question at home.

Ellen: Basically to help me with my homework because there is no point in me sitting at home you know wasting time for like 2 or 3 hours or whatever when there's people there who are qualified to help me work through the problems.

Jeanette: I don't get stuck as much.

The comments of Shelley and Ellen reflect a dependency of sorts. In reviewing my field notes, I came across an informal conversation between Carla and myself. This took place at the outset of the study. The following few lines are quite telling:

- C: People who come by regularly tend to do less work.
- J: Do they become dependent on you?
- C: Yes. I'm interested to see what you find.

Could it be that students utilize the math help centre as a crutch? Consider the following scenario. Two students, Patsy and Lloyd, are both visiting the help centre for the first time. There is a copy of a take home test on the bulletin board. An attached note informs tutors that they may assist students with the test. A conversation transpired among the three of us:

- J: Why did you come to the help centre today?
- P: We had a take home test. I have some questions. I want to get the correct answers but I also want to understand how to do them. They will be tested again in the final.
- J: Is that why you're here, Lloyd?
- L: Yes. The take home test.
- P: I usually go to my teacher for help. But I didn't think it was fair to ask her lots of questions about the take home test.

Philip regularly visited the help centre. As he was preparing to leave one morning, he shared these comments:

- J: You use the help centre a lot.
- P: Me and math don't get along. I work better here.
- J: Do you come here as a form of discipline - so that you'll work more effectively?
- P: No. I can't do the math on my own. I can do it here but when tests come, I can't do it.

My final interview was with Carla. At the time of the interview, I had no recollection of her earlier comment about regular students not working as hard. However, the issue of dependency surfaced. She identified students' need for confirmation as a reason for coming to the help centre. The issue of self esteem was raised:

- J: What's your perspective on the students that use the help centre in terms of their backgrounds or what's bringing them here?
- C: Well it seems like lots of different people come in here but a lot of the people who come in regularly have lots of trouble with math - like it really scares the heck out of them. They are the ones who show up all of the time and they are the ones that don't have so much problems with the math. Just their self esteem I think. They just need to be told, yeah you're doing it right. That's what I think.
- J: How would you describe the learning that takes place in the help centre?
- C: Learning to trust themselves. I mean there's personal things like trusting you're going to get the right answer. Or that when the answer in the back of the book is wrong often, to be able to trust yourself that you did it right...

Further along in the interview...

- J: How many students would you say, in the afternoons, that you see, come in here 3 or 4 days a week?
- C: I'd say about 12 that come in a lot. I'd say half of them don't really need to be in here. I'm glad they are but it's not for math. It's just for getting their confidence up.
- J: Yeah. If you were able to change something about the set up here, in terms of the way students interact with tutors, is there something that you'd like to change/see changed?
- C: I'd like to see more, as I was talking about, more interaction of the students instead of just talking to them. I would like them to get more involved in the process of what they're doing. That's hard because it would be so easy for us to sit down and just do one of these problems and say here's the answer but then it does absolutely nothing for them. So I'd like to see more of that, I think. But some of it is going on so I don't know what I would change exactly.

Carla's depiction of students as passive learners seems to be reasonable. Ann used the phrase "they'll show you how to do it" in an interview. When asked to explain what she meant, Ann replied:

They'll actually sit down with a piece of paper and look at the problem you're doing and tell you exactly what you're doing wrong for each individual problem which the teacher obviously doesn't have time to do in a classroom situation.

One day I found myself observing a student, Barbara, and a tutor, Marsha, who happened to also be Barbara's instructor. Barbara seemed confused. The following dialogue ensued:

- M: If you believe me that this is standard form, you would erase everything you wrote.
- B: (no response)
- M: Erase everything on the page.[OC: Barbara erases the work and Marsha proceeds to instruct her on how to do the question.]
- B: I see now.
- M: Is that completely factored?

- B: Yes.
M: Set it equal to 0. Is it fully factored?
B: Yes.
M: No, it isn't. [OC: Barbara smirks and completes the factoring.]
M: Are you trying to do things too fast. People that take more time and write neatly tend to make less errors.

It seemed like the help centre offered a reliable source of support to these students. However, its real function may be to act as a coping mechanism - a crutch on which one could rest. With respect to tutors, Ellen had this to say:

...you know they're not the replacement of a teacher over there but I mean it's a lot better than struggling by myself.

When Ellen was invited to add any final comments at the conclusion of her interview, this is what she said about the help centre:

They've been doing their own surveys I guess about having it continue and I think it definitely should. It definitely has helped me because there have been some homeworks (sic) that I mean I've had no clue as to what to do. Then I'll go in and they'll help me through it and then I'll see how it's done and then I can do it myself and then you know it's done.

Carla spoke about the learning objectives of students who used the help centre:

- C: Other people they seem like they want it as a crutch. There are a lot of people who do their homework in here. They want to be able to have it checked in case they come up with problems. I'd say most of them are that kind. They have a difficult subject to get through and they just want someone here.
J: Do many of the students come in here with the intent of saying "Look at I don't understand a topic (e.g., inequalities). Can you help me with inequalities?" or is the help they want generally geared to specific question?
C: Most want help with a question in the book but sometimes it will turn out that they actually do want help with a subject but they'll never come out and say it - hardly ever.
J: So that you're saying as the tutor you would pick up that they're looking for help beyond that question.
C: Right.

Here we have evidence that places the responsibility on the tutor to root out the question that the student may really want to ask. The student is playing a passive role in his/her own learning process. The metaphor of the passive student leaning on a crutch seems to categorize much of the learning that is taking place in the help centre.

Conclusions

Initially I set out to shed insight on the following question: "Why and how do students attend the math help centre and what sort of learning takes place there?" In developing the question, it was the learning and teaching aspects which interested me most. However, this paper may not reflect that. Why?

Insight into the nature of learning and teaching has been gained through the discussion of each of the themes; however, the paper has taken a different flavour the one I might have anticipated before delving into the data. The dependent nature of the student population raises concerns about mathematics education. My experiences as a mathematics educator have led me to believe that the teaching of mathematics as a product oriented subject leads to increased levels of dependency. In contrast, teaching which places greater emphasis on process provides students with greater potential to adapt their knowledge. This conceptual basis reduces the dependency upon others for ideas and insight.

What are the implications for the help centre? If dependency upon the centre is perceived to be undesirable, then tutors and instructors may consider shifting the emphasis of teaching and testing from product towards process. I have seen various examples of tests. In my opinion, these tests have been extremely product oriented. The name of the game appears to be getting the answer through the use of algorithmic procedures. If this is the gist of the game, then students have seemingly learned a strategy that allows them to work effectively within the rules.

While chatting with Cliff about the nature of questions and learning in the help centre, he provided further insight into the role of the help centre in his own academic pursuits. His assessment of the situation indicates that his personal strategy is in place:

...O.K. when I'm going for a test or a test is coming around, and I realize a certain section I was weak in, 'cause a lot of times you try 'cause we get a lot of homework and it's like you got to keep up with the homework trying the homework you get, you know. I tend to worry more about the homework and the grade. It's like I have to finish my homework. But when it comes test time and she, the teacher, kind of slows down on the homework you know you have to think about what subject, you know what chapter you were weak on and then you go back and tell them "Could you teach, you know help me with this chapter all over because I think a lot of things I didn't understand but I had to go by it to keep up you know?"...

It is not my desire, nor is it my place, to judge the math help centre. Though I must confess that it disappoints me to see more students who perceive mathematics as a discipline defined by right and wrong answers. The need to be right brings out a body of students who rely heavily upon the help centre.

I wonder if the instructors would be open to placing greater emphasis on process in their teaching? Or are they people who excelled in the same game? Are mathematics teachers open to exposing their weaknesses? Excellent teaching of

mathematics requires a strong conceptual basis. Outstanding performance on product oriented tests commonly does not demand such understanding. The dependency level of the students suggests to me that they have not been encouraged to develop a conceptual knowledge in their mathematical experiences at university or other levels of education.

I would like to close with a challenge to take risks and experiment with a process oriented emphasis. When that "I can't do this" becomes "Wow! I got it!", students feel proud of their accomplishment. That is how self confidence can grow!

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PLACEMENT TESTING AND REMEDIAL MATHEMATICS FOR POST-SECONDARY STUDENTS: PRESCRIPTION FOR SUCCESS?

Chris Brown

Foreword

Issues surrounding placement of students in math courses at the post-secondary level have implications for mathematical practices of teachers and students at the secondary and post-secondary levels. Presently these matters are receiving considerable attention at Memorial University of Newfoundland with the increasing prominence of the Mathematics Skills Inventory (MSI) as a screening device for entry into first year math courses. Chris Brown's article provides an organized expository piece on the topic of placement testing and remedial mathematics. The references and additional titles in the appended bibliography provide a helpful resource to those who may wish to further examine the research in this field. The article itself represents a revision of a paper initially prepared this past semester for a graduate course: (ED6630) *Critical Issues in Mathematics Education*. It has been informative assisting Chris with these revisions in an effort to prepare the paper for publication in *Morning Watch*. Previously unpublished research of my own also appears in this issue. The research was conducted in a math help centre specifically designed to assist students who had been placed into remedial mathematics courses at a large university. Both Chris and I feel that the simultaneous publication of the two papers will enrich the potential discussion that may ensue. Comments on the papers are welcomed.

John Grant McLoughlin

Introduction

It is widely recognized that many students entering post-secondary institutions - community colleges and universities - are deficient in the mathematics background that is presumed necessary for the successful completion of post-secondary level mathematics courses. Various reasons may be proposed to explain this situation:

- Recent high school graduates enter with math grades that give a false impression of satisfactory backgrounds either because the grades tend to be inflated, or because the actual content coverage differs from the official curriculum.
- High school math courses may not include the particular content needed to prepare students for post-secondary math courses.
- Mature students who have been out of school for a number of years have lost their math skills or may never have acquired them at all. (This applies especially to entering students at community and technical colleges, but to a lesser degree, at universities as well.)

Whatever the reasons may be, a common approach to dealing with this problem is to assess all students' math skills at entry with a placement test, and then

place underprepared students in a remedial math course (or series of courses) that is intended to bring the students' skills up to the necessary level. The student who successfully completes the remedial program should reasonably expect to succeed in first-year post-secondary level mathematics. By this means, post-secondary institutions hope to extend the opportunities of higher education to a larger number of people and enhance the enrolment and retention rates in mathematics.

Of course this process is not as simple or foolproof as it seems. One of the most important questions that need to be asked is: How effective is the partnership of placement tests and remedial mathematics in improving the success of underprepared students? This article will offer insight into this question by providing a brief overview of widely used placement tests in mathematics and of typical methods of their administration and use. Evidence will be presented from selected longitudinal studies that purport to show that students did benefit from placement testing and remediation. Opposing views and general criticisms of this process will also be considered. The paper concludes with the author's personal view on the use of mathematics placement testing and remedial mathematics.

Placement Tests

Tests are widely used to assess the mathematics skills of students entering the first year of studies at post-secondary institutions . For example, a survey of 1,297 such institutions in the United States found that over 90% used math assessment tests (Lederman, Ribaud, and Ryzewic, 1985). In the local context, Memorial University of Newfoundland and the College of the North Atlantic both use math assessment tests, though in different ways and degrees. Broadly speaking, placement tests take two forms: standardized scholastic tests developed by national or state/provincial bodies, and locally developed tests created for the purpose by an institution. Tests commonly used in the U.S. include:

1. Scholastic Aptitude Test - Math (SAT-M);
2. American College Testing Program (ACT);
3. Assessment of Skills for Successful Entry and Transfer (ASSET);
4. New Jersey College Basic Skills Placement Test (NJCBSPT);
5. Mathematical Association of America Placement Test Program (MAA);
6. Descriptive Tests of Mathematical Skills (DTMS).

Most of these are actually sets of tests that include one or more components on mathematics. A Canadian diagnostic/placement test is the Mathematics Skills Inventory (MSI) developed by Rudolph Zimmer at Fanshawe College in Ontario. It is in use at Memorial University of Newfoundland .

Placement tests may be administered to students in a variety of ways. They may be taken by high school students in the last month or two before graduation. They may be given to students during the first week of university/college attendance or they may be available to take at any time during a six-month (or longer) period before a student is scheduled to start a program. Students may take the tests in a variety of settings ranging from a large hall with hundreds of others, to a small room with a few others, or a computer terminal all alone.

Of course it is the results of the placement tests, the students' scores, that are considered meaningful. Ranges of scores, referred to as cut scores, are selected by the standard test developers or the institution's math faculty to assign students to categories, and thus courses.

These categories may be loosely described as prepared, underprepared, and very underprepared (Three categories are most common, though sometimes just two are used.). For a test with a maximum score of 100, say, students with 60 or more would be assigned to a college-level math course, students with scores from 50-59 would be assigned to a developmental course (elementary algebra), and the rest would be assigned to a basic math course (arithmetic only).

With placement decided, the next step in the process is the remedial mathematics program. What do these programs teach? A survey of 79 post-secondary institutions in the U.S. produced a broad categorization of 4 typical courses (McDonald, 1988). A quick look over the content briefly described there (see Table 1) shows that most mathematics from kindergarten to high school is included.

Table 1: Remedial mathematics courses: Brief overview of content

Course	N	Content
Computation/Arithmetic	15	Operations with whole numbers, decimals, and fractions. Applications, "Story" problems (Signed numbers in some)
Basic/Developmental Math	54	As above, plus signed numbers, real numbers, and basic geometry. Word problems, "real life " applications.
Beginning/Elementary Algebra	63	As above (less time on computation) plus symbols, algebraic expressions, operations.
Intermediate Algebra	23	Comparable to secondary school first-year algebra. (Sometimes high school grad. level)

Adapted from: " Developmental Mathematics Instruction: Results of a National Survey". Anita D. McDonald (1988). 79 institutions with 'exemplary' programs responded.

Most institutions offered two remedial courses: basic math and beginning algebra. McDonald also noted that the content of "Intermediate Algebra" was often included in a college-level course at many institutions, making it remedial for some but college-level for others.

The assignments resulting from placement tests may be mandatory, recommended, or just guidelines for a student to consider in their math course selection. Students may or may not have the option of appealing a placement or taking a retest at a later time with the aim of achieving a higher course placement. These variations can make it difficult to sort out the exact effects of course assignments on students' future success. In the next section, two studies which provide support for placement testing and remediation are reviewed in some detail. Course assignments for both of these situations were nominally mandatory but some flexibility in terms of appeals and retesting was allowed.

Research Supporting Placement Testing and Remedial Mathematics

A Standardized Placement Test Example

A longitudinal study of the cohort of students entering a Connecticut community-technical college in Fall 1990 covered the period from Fall 1990 to Spring 1993 (Sturtz and McCarroll, 1993). All students took the New Jersey College Basic Skills Placement Test (NJCBSPT) which included two mathematics sections - mathematical computation and elementary algebra. Students' scores resulted in recommendations for placement in one of three courses - Basic Math I, Basic Math II, or a college-level math course. Details of the cut scores and numbers of students recommended for each are presented in tables 2 and 3 which have been adapted from Sturtz, Alan J. & McCarroll, Judith A. (1993).

Table 2: Cut scores for mathematics tests in the NJCBSPT

MATHEMATICS (NJCBSPT)	
RANGES (Scaled scores)	RECOMMENDATIONS
<= 160 in Computation	Basic Math I (Computation)
>= 161 in Computation and <= 171 in Algebra	Basic Math II (Algebra)
>= 172 in Algebra	College Math

Table 3: Recommended course placements for New Jersey college-entry students (1990)

Recommended Course	N	%	Mean Score	Standard Deviation
Basic Math I	499	71.1	151.8	5.06
Basic Math II	179	25.5	167.2	5.28
College Math	24	3.4	179.7	4.71

Placement was nominally mandatory. However, some students followed recommendations; others appealed placements and enrolled in higher courses; others still opted to take a lower than recommended course, while some did not enroll in any math course. In fact, about 29% of the students originally tested never enrolled in any math course over the six terms of the study. Most of these students had discontinued studies at the institution.

What happened to the students who did enroll? Table 4 shows that success rates in math were good for those who followed recommendations, but slightly lower for those who took a course higher than originally assigned.

Table 4: Recommendations, enrollments, and success* rates

RECOMMENDED COURSE	ENROLLMENT LEVEL								
	LOWER			RECOMMENDED			HIGHER		
	N	% Succ	MEAN	N	% Succ	MEAN	N	% Succ	MEAN
Basic Math I				322	63	151.7	35	60	153.2
Basic Math II	24	92	161.4	82	78	167.2	15	67	170.6
College Math	0	n/a		19	84	179.7			

(* Success = Grade A, B, or C.)

What exactly does this mean in terms of the assignments by the placement tests? Considering the group of students recommended for Basic Math I we see that

63% of 322, or 203 were successful. But, 60% of 35, or 21 students that appealed and took Basic Math II were also successful at the higher level. Thus, it might be argued that the cut scores alone had misplaced these 21 students out of 357 in the Basic Math I group for an error rate of about 6%. A similar review of the Basic Math II group shows that 67% of 15, or 10 students were successful at a higher course. Again, based on cut scores alone, 10 out of 121 or about 8% of the students were misplaced. Would such error rates be acceptable in a mandatory assignment process?

Sturtz and McCarroll suggest another way to assess the success of the process. The underprepared students who followed recommendations were compared to those who did not in terms of persistence (mean number of terms attended) and quality point average (similar to GPA) over the six terms of the study.

Table 5: Following recommendations: Did it help?

CATEGORY (Basic Math Courses Only)	MATHEMATICS STUDENTS		
	N	Mean QPA	Mean No. of Terms
Recommended and Successful	268	2.71	4.15
Recommended and Not successful	136	1.45	3.63
Higher Course and Successful	31	2.92	4.74
Higher Course and Not Successful	19	2.33	3.58
No Math Course	224	2.07	2.47

They conclude: "Students who were successful in their recommended basic-level courses tended to continue enrollment ... for a slightly greater number of terms (Sturtz and McCarroll, 1993, p17)." This conclusion really does not say much as it is probable that those who failed in the remedial math courses would be more likely to withdraw from college and would obviously have a lower mean attendance as a group. With regard to QPA, it also seems obvious that the successful groups must show the higher QPA's whether or not they followed recommendations. In fact, it is the students who challenged assignments and took higher level courses who show the highest QPA and persistence. Does this show that self-selecting a higher than recommended course is the best route to success?

Finally, the study looked at how the remedial cohort fared with college-level math. While asserting that overall the evidence supports the placement process, they note: "Data for completion of college-level math courses are inconclusive (Sturtz and McCarroll, p17)." Only 28% of students who enrolled in Basic Math I, and 55 % of students who enrolled in Basic Math II eventually completed a college-level math course.

This study reveals a number of the difficulties in evaluating a mathematics course placement process. It is relatively straightforward to collect data on test

scores, grades, and attendance; it is not so straightforward to interpret the data and determine if it is reasonable to say that the placement process is significantly beneficial to underprepared students.

An Institutionally Developed Placement Test

At Pembroke State University in North Carolina, the Mathematics Department created its own test to assess math skills and place students in remedial or first-year university math courses (Truman, 1992). Development and piloting of the process took about two years. A large part of the paper deals with how the test was constructed, and how the content, validity, reliability and other statistical aspects of the test were assessed and improved. The author then reviews the success of the placement and remediation process over the most recent three-year period.

The placement test was administered to all entering students during summer freshmen orientation. Based on scores, students were assigned to one of two remedial courses, and one of three first-year math courses. Students who felt they were misplaced could apply for a retest; only 2% of 1375 students have done so in the three-year period reported on in the paper (Truman, p62). To evaluate the effectiveness of following recommendations, the final grades of first-year students in the Fall term were compared with their choice of course level for three consecutive years.

Table 6: Accumulated results for Fall semesters: 1988, 1989, and 1990.

Student Enrollment Category (N)	Final Grades					
	A	B	C	D	F	W
Below Placement Level (262)	52	78	57	42	21	12
At Placement Level (461)	58	112	136	81	53	21
Above Placement Level (52)	5	6	13	16	10	2

(adapted from Truman, 1992, p. 63)

Reviewing the figures in this table, we see that a large proportion of students - 262/775 or 34% - took courses below the placement level. As might be expected, this group shows a relatively high average grade. The 461 students who followed recommendations include 53 who failed, or 11.5%. This can be described as an 11.5% false-positive error for the placement test, i.e. the test placed that portion too high. Finally, 52 out of 775, or 6.7% took higher courses than recommended and, not surprisingly, show a low mean grade. However, 24 of these students were successful as defined in the previous study, meaning that 24/775 or 3% were placed too low by the initial test. (The reader might compare this to the 6-8% low placement error for the test in the first study.) As far as Truman is concerned the evidence from these results is clear:

After 5 years of mathematics placement testing at Pembroke, the mathematics department is convinced that this program provides an efficient, practical, and workable method of placing students in mathematics courses which give them the best chance for educational success (Truman, p64).

Is this conclusion reasonable? Certainly, the rate of failures is relatively low, as is the rate of dissatisfaction with placements. But, something does not seem quite right with some of the numbers. For example, if 1,375 students took the math placement test in the period described above why are there only 775 students in the table of grades? What happened to the remaining 600? And if just 2% of 1,375, or 23 students (Truman, p. 62) asked for a retest, how is it that 52 students took courses higher than placement level? Of these 52 students, 24 of them were successful. This calls to question the claim that only 3% were placed too low. The fact that 46.2% of the students who took the initiative to get placed in a higher than initially recommended course were successful suggests that the potential for inappropriate placement in this direction merits further attention. This false-negative error rate is unacceptably high. In addition, there is no follow-up data presented to indicate if successful underprepared students are enrolling in college-level math and what their success rates in those courses might be. Omission of this type of data in studies evaluating remedial math programs is unfortunately relatively common (Akst, 1986).

The papers by Sturtz and McCarroll (1993) and Truman (1992) clearly support the use of math placement testing and remediation in post-secondary institutions. They provide evidence to show that the process is beneficial to students. These papers also present, either implicitly or explicitly, indications that a score from a placement test alone does not tell the whole story. For example, though placement was nominally mandatory at both institutions, each one also provided a way for students to challenge and alter placements. Many students who had been tested never took any math courses at all. Did placement testing scare them away from math courses, confirming one more time that they can't do it? There must be other factors that affect a student's success in college-level mathematics. In the next section, criticisms of the math placement process and some views opposed to placement testing will be explored.

Opposing Views and Criticisms

The critique of the mathematics placement process may be described in terms of two broad camps - those who are fundamentally opposed to the use of tests for assigning people to particular courses or programs and those who accept the placement process but suggest it needs to be refined to include the effects of other factors beside math test scores alone. Perhaps we could call these groups Rejectors and Revisors respectively.

Rejectors' Views

In the field of assessment, placement testing is seen as a subset of selection testing. According to Glaser and Silver (1994), " Selection testing attempts to measure human abilities prior to a course of instruction so that individuals can be appropriately placed, diagnosed, certified, included or excluded." (p395) The last

word in that quote signals the main point in some of the opposition to placement testing. Placement tests may function to exclude people from post-secondary education rather than aid access because they may be seen as just one more hurdle. Assigning people to ability groups is seen to be a kind of academic tracking, and may actually serve to reproduce or entrench inequities rather than help eliminate them (Kingan and Alfred, 1994). For example, Glaser and Silver, summarizing Oakes (1985), note: " In studies of the academic tracking of students for mathematics instruction, data regarding instructional practices suggest that students assigned to the lower tracks of many high schools tend to receive less actual mathematics instruction, less homework, and more drill-and-practice of low-level factual knowledge and computational skill than students assigned to middle and higher tracks (p398)."

Another aspect of the exclusion or barrier view is the notion that remedial courses deter enrollment due to the extra time and money needed to complete a program (Morante, 1989), or that placement in remedial classes stigmatizes students with respect to their peers and may lead them to become demoralized and drop out (Kingan and Alfred, 1994). This kind of grouping may also have serious implications when visible minorities are "over-represented " in remedial classes.

Some opposition to placement testing and remediation derives from a financial argument combined with a touch of what might be called higher education snobbery. In this view, underprepared students and remedial courses just do not belong in college or university as their presence tends to lower standards. The time and money needed for testing and remediation is better spent on the students who are prepared and the resources they need (Almeida,1986). Aligned with this view is the notion that underpreparedness is the result of poor content or instruction in high school math courses, so the problem should be fixed there (Platt, 1987).

Revisors' Criticisms

A significant amount of the criticism directed at mathematics placement testing is focused on the research which suggests that many other factors, particularly noncognitive or psychosocial factors, are important in determining a student's success in mathematics (Bridgeman and Wendler, 1991; House, 1995; Penny and White, 1998; Ting and Robinson, 1998). These factors may include: self-confidence, commitment, attendance, gender, ethnic background, age or maturity, financial circumstances, self-rating of math ability, parent's education level, motivation, teacher's attitudes, mode of instruction, and teacher's gender (Ting and Robinson, 1998). Critics propose that some of these factors should be assessed in specially designed questionnaires or interviews and used in conjunction with math test scores to make better placement decisions.

Another area of the criticism focuses on the math placement test itself. The tests may need improvements in terms of content and predictive validity, discrimination, reliability and the choice of cut scores (Morante, 1989; Truman, 1992) . Within the same frame also lies the debate over using general achievement tests (such as SAT) versus content-specific basic skills placement tests. After an extensive review of assessment and placement, Jerry Weber (1986) concludes:

Content-specific placement tests in combination with other student data will yield effective assessment forming a basis for placement decisions. Performance on general achievement tests (ACT or SAT) or a subsection of one achievement test should not determine basic skills course placement (p28).

Similarly, Wattenbarger and McLeod (1989) note that studies conducted on Florida colleges show that "...standardized entrance examinations do not provide information of sufficient accuracy to justify placement into the mathematics curriculum based solely on the math portion of the tests (SAT and ACT were used in one study.) (p18)." Most community colleges and a high proportion of universities do use institutionally created content-specific tests, though about half the universities are likely to rely on SAT or ACT scores (Lederman, et al., 1985; McDonald, 1988).

Finally, the remedial courses offered to upgrade students' math skills are subject to criticism from a number of perspectives. Courses vary widely in content, duration, and mode of delivery. This may simply reflect different needs in different contexts and an effort to be flexible on behalf of students' needs. More significant is the observation that many do not use any special instructional strategies directed at the characteristics of underprepared students (Laughbaum, 1992). The faculty who teach the remedial program may be temporary, less qualified, and not well integrated into the post-secondary mathematics departments to the detriment of their students (Penny and White, 1998).

Summary and Conclusion

Clearly the problem of how best to deal with underprepared math students at the post-secondary level is as thorny and long standing as many problems in education. The combination of placement tests and remedial mathematics courses is a well-established process that many post -secondary institutions provide as a solution to this problem. But is it an effective one? The research evidence reviewed in this paper, and similar studies, indicate that it may provide a reasonable level of success for some students in some contexts. However, if placement is based solely on the results of math skills tests without considering significant noncognitive factors, research suggests that a high number of unsatisfactory placements may occur. Further there is concern that this process perpetuates social, gender and ethnic biases, and discourages enrollment. Then, how should we proceed?

It is my view that retaining all first-year students, regardless of background in the first-year math course, is not an option. The pace and level of these courses quickly frustrates and discourages underprepared students. Attempting to remediate these students in regular class time is not possible for most, and extra help in off-class hours usually suffices for only a few of those who need help. Under these circumstances, I think the only suitable option is to employ a mathematics placement test that identifies those who are underprepared, and to offer suitable remedial courses which provide the necessary mathematics upgrading. But this process should be careful, considerate and flexible. Careful - in the selection, evaluation and ongoing review of the placement test(s) itself, and in selection and training of faculty to teach remedial courses. Considerate - of the other factors in the students' situations. Flexible - in the timing and mode of delivery of both the placement test and

the remedial courses. Students should have the option to take the test before the regular program begins and be able to do a retest if they wish. Remedial courses should be available in the summer and at night at a reasonable number of sites. They should be delivered in ways that reflect the nature of adult underprepared students. A process like this should have the qualities needed to make it a prescription for success.

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REFLECTIONS ON RELIGION IN THE SCHOOLS OF NEWFOUNDLAND AND LABRADOR

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Introduction

The Education System of the province of Newfoundland and Labrador has undergone a period of turmoil during the past decade. Attempts to reform the system have led to periods of frustration, confusion and, in many cases, conflict between parents, teachers, leaders in education and the churches. The province has been subjected to a Royal Commission in Education and two referenda in order to develop a more effective and efficient educational system. The following represents a brief review of the events which have led us to the current state of education in this province. The focus in this paper is primarily on the involvement of the churches in education and some personal views on the potential which exists for churches and parents to have input into the Religious Education Component of the school programming. It is worthy of note that the views expressed by the author may reflect an element of bias resulting from his former role representing the *Churches In Integration* as Executive Officer of *The Denominational Education Commission*.

Historical Background

In the province of Newfoundland and Labrador, schools were started by churches or by various religious societies inspired by churches. As a result, a system of denominational education evolved with several denominations having rights in legislation when Newfoundland became a Province of Canada in 1949. These rights were included in the Canadian Constitution under *Term 17* of the Terms of Union. Following Confederation, tremendous growth was experienced in many aspects of education in the Province. Largely in response to this growth, in 1964 the government of the day established a *Royal Commission* to make a careful study of all aspects of education in Newfoundland and to make recommendations regarding change. As a result of the discussions which were prompted to a substantial degree by the work of this Commission, two major developments occurred which were very significant for the denominational system of education. Through a process of discussion and negotiation, the major churches involved in education agreed to withdraw from direct involvement in the *Department of Education* and carry out their mandate through agencies established outside the Department structure. As a result, in 1969 *Denominational Education Councils* were established to represent the educational interests of classes of people which had rights to operate schools in the province. Therefore, the rights exercised by the various denominations in matters of education were reposed to these councils which were given specific mandates in provincial legislation.

A Royal Commission: Our Children Our Future

In August, 1990, the *Government of Newfoundland and Labrador* announced the appointment of a *Royal Commission* to study the organization and delivery of education in the Province. Over the next year and a half, the Commission examined

all aspects of education and were told by the public that significant changes needed to be made in the whole educational enterprise. Although most people felt that something drastic was needed in order to improve the quality of education for the children of this province, there was no clear consensus as to what ought to be done. Each special interest group was lobbying for their own version of reform and these, not surprisingly, were often in tension and conflict. With respect to the denominational nature of education, the report states that " the Commission was told repeatedly that the denominational system in its present form creates divisiveness and is an impediment to social cohesion." Parents wanted to maintain traditional values in schooling to ensure the stability of the family and the community. A public opinion poll conducted by the Commission clearly showed that the public viewed offering a religious education component in the curriculum as contributing to a better overall education. The public also expressed the view that teachers have a responsibility to show a commitment to religious values and standards.

After significant input and consideration, the Commission in its report of March, 1992, proposed a modified denominational system. Under the proposed model, the churches were to have educational input at the highest level of government and a continuing role in the spiritual development of students of their denominational persuasion through the development of religious education programs and pastoral care initiatives. It envisioned a system which involved the formal integration of all faiths and the development of policies and practices which would involve all citizens in schooling and school governance.

The Referendum of 1995

Following the release in 1992 of the Royal Commission report *Our Children Our Future*, considerable discussion took place between Churches and Government related to possible ways to make significant changes in the structure of the educational system and yet maintain a significant influence of the Churches in the governance and operation of the school system. When it became apparent that differences held by the two parties were not resolvable, government went to the public of the province to seek approval for a change to the *Terms of Union* which would allow for the implementation of a new model for education. A referendum was thus called for September 5, 1995. By a majority of 55%, the people of this province voted to accept a new model for education, one which would retain the denominational character of the previous system, but which would provide the provincial government with additional powers to organize and administer education in the province. In October, 1995, the provincial legislature passed a resolution to amend *Term 17*, adopting the model that had been presented during the referendum. In December, 1996, the Term was passed by Parliament in accordance with section 43 of the *Constitution Act, 1982*. The amendment was proclaimed April 21, 1997.

The Legislation which followed the change in *Term 17* mandated that the denominations representing the classes of persons having rights under Term 17(a) of the Terms of Union of Newfoundland with Canada jointly establish a *Denominational Education Commission*. An agreement to establish this Commission was signed on January 24, 1997. The main roles of the Commission were to support programs in religious education and to advise the Minister and the denominational committees of school boards respecting issues of concern to the Commission.

The government, through a revision of Term 17 and the introduction of new legislation assented to December 19, 1996, provided for significant input by the churches into the governance, administration and programming of the school system. In the programming area, the new Term gave persons having rights the right to provide for Religious Education as well as religious activities and observances for the children of these classes in these schools. However, what was created with this new constitutional term and legislation was a system which was more confusing and complex than existed prior to the 1996 legislation. The new legislation made provision for uni-denominational schools as well as interdenominational schools. School trustees were allocated on the basis of proportional population by denomination. Committees of school boards had significant authority in uni-denominational schools with lesser roles in interdenominational schools. Often these committees consisted of individuals who were not school board trustees. Inequalities began to occur as a result of teacher reassignment and redundancies. Concerns were being expressed as to which students would be able to attend schools classified as uni-denominational and those classified as interdenominational schools.

A particular concern for the *Church Leaders in Integration* was the greater division which was created among their people as result of the new structure being put in place. Within our province, some neighbors and family members with opposing viewpoints on these educational issues were having significant problems resolving their difficulties. Indeed, friction was created among church leaders and further divisions occurred.

On May 23 and June 18 -20, 1997, Mr. Justice Leo Barry heard a petition from the applicants, adherents and representatives of the Roman Catholic and Pentecostal denominations, seeking an injunction to prevent alleged violations by the school boards and government of constitutionally guaranteed rights to uni-denominational schools. On July 8, 1997, Justice Barry made his decision known and subsequently issued an order restraining the school boards from closing schools operated as Roman Catholic and Pentecostal schools in the school year 1996-97, without the consent of the *Catholic Education Committee* or the *Pentecostal Education Committee* of *The Denominational Education Commission*. Mr. Justice Barry stated, however, that there must be an expressed parental preference for a uni-denominational school under the minimum standards or requirements for adequate schooling by the *Department of Education* and the school boards for 1996-97, after allowing, in a non-discriminatory fashion, for changes necessary to recognize the declining student population and reduction in teacher allocation. The order also required that the effects of the school designation process carried out in the spring be suspended until the government had an opportunity to have school board members elected on September 30, 1997. The newly elected boards were to have had a reasonable opportunity to carry out a new registration process to determine parental preference for any school, where so requested by a Denominational Committee of the Denominational Commission. In the new designation process, the non-returns were to be ignored.

The decision of Justice Barry referred specifically to the Roman catholic and Pentecostal Denominations. On Friday, July 11,1997, the *Church Leaders in Integration* met with the Minister of Education and members of his staff and requested the same benefits afforded the Roman Catholic and Pentecostal denominations be

afforded to *The Churches in Integration*. In a letter dated July 14, 1997, the Minister of Education stated that "we would be willing to afford your committee similar treatment in similar circumstances and facilitate discussions with the appropriate school board, as necessary." The proposed new structure for education and the resulting frustrations appear to have precipitated the call for a new referendum in September, 1997.

The Referendum of 1997

A new proposal from government to the people of Newfoundland and Labrador involved the complete removal of the churches from the governing of the schools. It meant that the existing *Term 17*, which sets out denominational rights in the constitution, was to be completely replaced. The new term made the legislature responsible for the administration of schools and gave students the opportunity for religious education and observances. The question posed to the people of the province on September 2, 1997 was as follows:

" Do you support a single school system where all children, regardless of their religious affiliation, attend the same schools where opportunities for religious education and observances are provided?"

Prior to the referendum vote the wording of the proposed *Term 17* was released to the province's people:

17.(1) In lieu of section ninety-three of the *Constitution Act, 1867*, this term shall apply in respect of the Province of Newfoundland.

(2) In and for the Province of Newfoundland, the Legislature shall have exclusive authority to make laws in relation to education, but shall provide for courses in religion that are not specific to a religious denomination.

(3) Religious observances shall be permitted in a school where requested by parents.

Seventy-three percent (73%) of those who voted indicated support for the approach which the government was proposing. Analysis of the results indicated considerable support in all parts of the province and among people of all denominations and religious faiths.

Post 1997 Referendum Initiatives

Since the passage of the revised *Term 17* and the subsequent legislation, new school boards have been elected and considerable reorganization has taken place at the school level. In the programming area, development of a common religious education program for all students has been taking place.

In a document entitled *Religious Education, A Curriculum Framework (Interim Edition)*, the *Department of Education* has clearly described a rationale for a religious education program. This framework points out that humans have always had a quest

for the spiritual side of existence and a determination of the purpose of life. Young children seek answers about life here on earth and life beyond. They wish to know what makes us different from other living things, what is the source of suffering, how happiness can be found, what happens after death, and other fundamental questions. These are questions addressed by all major religions and should be addressed in the curriculum of this province. Although the school has an obligation to provide opportunities to address these questions, the church and home carries greater responsibilities in this area.

Students in this province must recognize that they live in a world that is truly multi-cultural and multi-faith and that each person can value and celebrate his/her faith. Religious and denominational intolerance can only be eliminated when individuals have a greater understanding of the worth of religious views and traditions that are not their own. Although our tradition has been greatly influenced by the Judaeo - Christian, a religious education program should provide accurate information about other world faiths without diminishing the values and truths found within Christianity.

Support for a religious education program in this province exists within *The Atlantic Canada Framework for Essential Graduation Learnings in Schools*. A specific Learning for this province states that "Graduates will demonstrate understanding and appreciation for the place of belief systems in shaping the development of moral and ethical conduct."

The religious education program proposed for this province is a non-denominational program. Some of the principles and objectives which underlie the curriculum are:

- the curriculum will be non-confessional.
- major attention will be given to Christianity because this reflects contemporary Newfoundland society and its heritage.
- students will be given opportunities to make personal decisions about their own spirituality and religious traditions.
- students will develop an understanding and a respect for different belief systems.
- students will develop an awareness of the influences of religion on local and global events.
- students will acknowledge that human beings share essential truths and experiences that are much more important than those which divide them.
- students will develop a respect for the place and role of parents and faith communities as primary influences on the faith lives of young people.
- through their study of Christianity and other religions, students will come to appreciate the intrinsic worth of each of these religions for its adherents.

Further delineation of these principles is evident in the Curriculum Framework. Curriculum materials which existed under the former structures are being used and others are being developed to meet the needs. The result will, no doubt, be a strong curriculum and with periodic modifications will help prepare the students of this province to face the challenges of the twenty-first century.

Conclusion

During the past decade the educational system in the province of Newfoundland and Labrador has confronted significant challenges. Declining enrolments in a province with vast and varied geography have meant that difficult decisions have had to be made related to the reorganization of the school system. Movement from a system where the churches have had a considerable impact on the administration of schools and on the delivery of programs to one which removes all legislated authority has been a difficult and demanding one. The system which is developing, however, appears to be a one in which there will be a greater cooperation among those who administer the school system and a greater understanding of and appreciation for the religious beliefs of those who adhere to different denominations and faiths.

There are those who have concerns about the availability of a religious education curriculum and the opportunities to celebrate religious observances. Legal opinions state that, under the revised *Term 17*, religious education courses of a non-denomination nature are guaranteed. The term also makes it clear that "religious observances shall be permitted in a school where requested by parents". It is thus the responsibility of the churches and parents to ensure that the valued religious observances and celebrations are carried out.

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TEACHING FRENCH THROUGH MUSIC IN THE FRENCH IMMERSION KINDERGARTEN CLASSROOM

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French Immersion is estimated to be “the most effective approach available to second language teaching in the school setting” (Genesee, 1994, p 37). Nonetheless, concerns prevail with regard to students’ overall oral language proficiency (Bonnar, n.d.; Cummins, 2000; Genesee; Mandin & Desrochers, 2002). During the 1980s, concern was raised over the grammatical inaccuracy of French Immersion students, a phenomenon which Lyster (n.d., as cited in Bonnar) describes as “fossilized interlanguage” (p. 4):

These intralingual errors are caused by the students’ tendency to simplify and overgeneralize the morphological rules of the French language based on what they already know [in English]. Since communication as opposed to accuracy was emphasized in the classroom, much of the negative transfer becomes fossilized interlanguage (p. 4).

To address this inaccuracy, some studies (e.g. Boland-Willems, Dupont, Fluette, Lentz, Maurice, & Molgat, 1988; Bonnar, 1988; Cummins, 1988; Lapkin & Carroll, 1988; Mandin & Desrochers, 1991; Marrie & Netten, 1991; Netten, 1991; Netten & Spain, 1989; Tardif, 1994) proposed various recommendations that focus primarily on attending to morphological and syntactical aspects of French, concepts which are developed in the grades one to three curricula (Boland-Willems, et al.). However, Weber and Tardif (1991, as cited in Halsall, 1998) found that French Immersion kindergarten students do not engage in any sort of grammatical analysis, and only memorize words that are significant to them in the kindergarten context. Furthermore, Boland-Willems and colleagues caution that French Immersion kindergarteners do not possess a sufficient linguistic base to begin learning any kind of formal grammar.

Krashen’s (1982) Input Hypothesis calls for “natural communicative input that is appropriate for his/her current stage of linguistic competence” (Schütz, p 11). To develop second language oral skills at the kindergarten level, teachers should capitalize on various activities or projects focused on deepening students’ knowledge of language (Cummins, 2000, p. 30). The French Immersion kindergarten language arts curriculum guide for Newfoundland and Labrador (*La maternelle*, 1992), suggests supplementing language modelling with a visual and concrete support, [as well as] nonverbal aids such as gestures, mime or exaggerated intonation” (p. 46). Although these forms of input are important (Fonseca Mora, 2000; Medina, 2002), Cummins includes conventions of different musical and literary forms” (p. 30) among his suggestions for enhanced language development. Since kindergarten children arrive in the classroom with many [musical] concepts already formed” (Boardman, 2002, p.11), music could effectively provide meaningful activities that allow for considerable interaction with peers” (Alvarez & Berg, 2002, p.127), despite the language barrier of the French language.

The focus of this paper is the use of music in second-language learning at the kindergarten level in the context of the Newfoundland and Labrador French immersion program, presented through a review of research in musical development in the young child and music research in learning and second language acquisition. A sample integrated music/second-language instructional approach will be then presented.

Musical Development in the Young Child

Musical experiences are inextricably woven into the very fabric of infancy and childhood" (McParland, 2000, p. 1). Studies have shown that "early childhood musical experiences in the form of lullabies, musical crib mobiles, and most especially, musical interactions where the baby is an active participant, can aid in the development of the neural networks necessary for later music processing" (Olsho, 1984; Trehub, Bull, and Thorpe, 1984, as cited in Hodges, 2002, p. 3). Furthermore, "the type of baby talk typically spoken to infants emphasizes pitch, timbre, dynamic inflections, and rhythm patterns in order to convey meaning" (Hodges, p. 6). Psychological and linguistic studies reveal that the interaction between music and language acquisition is activated in an infant as early as four days old (Fonesca Mora, 2000, p.148). Opportunities, not just to hear music, but to interact in musical games and activities are critical to emotional and psychological development" (Dissanayake, 2000; Gembris & Davidson, 2002, as cited in Hodges, p. 14). Therefore, it is not surprising that Hodges deems the home environment critical to musical development in the earliest years.

Hodges (2002) provides a clear path of musical development throughout a child's infancy and early childhood. By age five, the child can extract an underlying pulse from surface rhythm, enabling him to keep a steady beat (p. 13). Also, in melodic development, the five-year-old "is now able to sing an entire song in the same key without modulating, with an increasing awareness of a set of pitches instead of just contour" (Ibid). These natural developmental advances would suggest that music has a much broader effect that goes beyond the aesthetic merit of music (Persellin, 2001), which "makes music a powerful vehicle for teachers" (McParland, 2000, p. 3).

Music and Second-Language Learning

Since kindergarten children have little or no linguistic base in the French language (Boland-Williams, et al, 1988), and musical abilities in rhythm and melody have already been developed (Hodges, 2002), using music to enhance second-language learning at the kindergarten level would appear to be beneficial. Second-language education is one of the disciplines that has explored the incorporation of music into its curriculum" (Lowe, 1998, p. 4). The literature abounds with statements regarding the positive effects of music on first and second language acquisition" (Medina, 1993, p. 5). Several studies have shown that music, and particularly songs, helps second language learners to acquire vocabulary, grammatical structures and idiomatic expressions, to improve spelling and pronunciation, to build comprehension skills, to develop the linguistic skills of reading, writing, speaking and listening, and to expand cultural knowledge (Lems, 2001, p. 1; Little, 1983; (Lowe, 1997, p.17; Medina, 2002, p. 1). Combining language and music also encourages deeper

processing of information, dramatically increases reading comprehension and retention, and invigorates the learning process" (McParland, 2000, p. 3).

Music use in the second language classroom is consistent with both of Krashen's (1982) hypotheses of Comprehensible Input and Affective Filter (Medina, 2000). The Comprehensible Input Hypothesis claims that language is acquired when students receive challenging comprehensible input that is slightly beyond their present level (Cook, n.d.; Taber, n.d.). "If learning is to be meaningful, then what we do in the classroom must be relevant, holistic, and authentic" (Miller, 2002, p.73). Songs are authentic, and share all of the same elements of an oral story, except that the means of conveyance is musical rather than spoken (Medina, 1993). Furthermore, target vocabulary, grammar, routines and patterns are modeled in context" (Medina, 2002, p. 1). Songs tend to use high frequency lyrics that have emotional content. This makes them strong candidates for word study or for reinforcing words already learned through [other] means" (Lems, 2001, p. 12), and thus meet the criteria of comprehensible input (Medina, 2002).

The Affective Filter Hypothesis states that language acquisition requires the student to feel confident, relaxed and diverted (Cook, n.d.; Taber, n.d.):

It is therefore, in the interest of the second language teacher to provide an environment which evokes positive emotions. Music does precisely that. Whether learners simply listen to instrumental music, vocals in the target language, or sing in unison, it is a pleasurable experience. Furthermore, singing songs in unison produces a sense of community and increases student confidence in the second language. Thus, music, however it is used in the classroom, evokes positive emotions which can lower the affective filter" and bring about language acquisition. (Medina, 2002, p. 6).

Although the students are more relaxed, they are also more attentive than usual when learning songs, and are therefore, more receptive to learning (Medina, 2002). Music can affect us emotionally in many different ways by using tones to produce feelings, rhythm to convey movement, patterns and timbres to express emotion, and harmony and volume to create energy (Cullen, 1998). Carrier (n.d.) offers four other advantages to integrating music with language instruction: it reassures students they don't have to hear everything to understand the essence; it provides "real" listening tasks; it is highly memorable because we naturally replay songs in our minds and therefore unconsciously practise the structures and vocabulary of the songs; it provides painless rehearsal and reinforcement of structures, pronunciation, and vocabulary (p. 1&2).

Integration of music and second language learning is also supported by Gardner's (1993) theory of multiple intelligences (as cited in Medina, 2002, p. 7). Gardner categorizes eight distinct intelligences that appear to be independent of one another (Ibid.). Both musical and linguistic intelligences fall into the domain of verbal abilities (Ibid) because musical and language processing occur in the same area of the brain, and there appear to be parallels in how musical and linguistic syntax are processed (Maess & Koelsch, 2001, as cited in Lems, 2001, p. 2). In fact, it has even

been found that different types of music instruction affect different aspects of cognition (Rauscher, 2003).

Music and its subcomponent, rhythm, have been shown to benefit the rote memorization process. A rhythmic presentation benefits memorization, especially when the verbal information is meaningful" (Glazner, 1976; Shepard & Ascher, 1973; Weener, 1971, as cited in Medina, 1993, p.5). "Music has also proven beneficial when the objective has been to retain the meaning of the verbal information" (Isem, 1958; Botarri & Evans, 1982, as cited in Medina, p. 5). In a study of nine primary-age dyslexic boys, Overy (2002, as cited in Rauscher, 2003) found that music instruction improved rapid temporal processing skills, phonological skills, and spelling skills. Costa-Giomi (2000, as cited in Rauscher) found that "children who begin music instruction very early in life are likely to show the greatest benefits in spatial development" (p. 5):

A meta-analysis of a set of 24 correlational studies found a strong and reliable association between music instruction and reading test scores (Butzlaff, 2000). A more recent study found that ninety 6- to 15-year-old boys with music training had significantly better verbal memory than children without such training (Ho, Cheung, & Chan, 2003, as cited in Rauscher, 2003).

In a study which incorporated jazz music into the curriculum, "student confidence soared; student interest increased; and, in some cases, student achievement improved" (Renwick, 2002, p. 3).

Well developed aural skills are crucial to successful second language learning (Dunn, 1977; Failoni, 1993; Gonzalez, 1984; Majhanovich & Robinson, 1979; Rivers, 1981, as cited in Lowe, 1997). Not to be confused with the simple act of listening, aural comprehension involves listening, evaluating, comprehending and interpreting, all of which are basic to second language development (La materielle, 1992, p.45). Therefore, aural comprehension is one of the most essential components of the kindergarten French immersion experience (Ibid.). Similarly, music is initially acquired through the aural sense (Hodges, 1980, as cited in Lowe, 2000). Musical thinking is distinguished by audiating" (Gordon, 1987, as cited in Alvarez & Berg, 2002, p.122), which is hearing in one's mind the sound of music that we have heard, as well as music we are predicting. Audiating is to music what language is to thinking" (Azzara, 2002, p.174). Listening to music involves many skills including perception, comprehension, and analysis of music. It is a fundamental music skill and a requisite for all other music skills" (Persellin, 2001, p. 5). Researchers and educators suggest that if listening is an essential skill required for both language and music acquisition, incorporation of music learning in the second language classroom should be considered" (Lowe, 1997, p.17).

Native language acquisition takes place before children can read and without explicit instruction of any kind" (Medina, 1993, p. 2). There is substantial evidence that incidental vocabulary acquisition occurs by listening to oral stories (Cohen, 1968; Elley, 1989; Eller, Papps, & Brown, 1988, as cited in Medina) "because familiar vocabulary and syntax contained in the stories provide meaning to less familiar vocabulary" (p. 3). Studies by Wallon (1975), Snow (1977), Feu and Piñero (1996),

and Crystal (1986, as cited in Medina) have shown that the mother tongue is also acquired through listening to the melodic contours, discourse intonation, voice pitch, and rhythm of stressed and unstressed vowels. In other words, language itself is musical (p. 149).

“It is currently a common practice to use songs in the classroom to support second language acquisition” (Medina, 1993, p. 1). However, “if music is a viable vehicle for second language acquisition to the same extent as other nonmusical means, then songs can no longer be regarded as recreational devices, having little instructional value” (p. 22). Songs can be used to present language, to develop linguistic aptitudes, and to strengthen reading-readiness skills (Malloch, p.2). Songs contextually introduce the features of supra-segmentals (how rhythm, stress, and intonation affect the pronunciation of [speech] in context). Through songs, students discover the natural stretching and compacting of the stream of speech” (Lems, 2001, p. 5).

Story songs, which are stories that have been set to music, provide opportunities for both language and musical acquisition (Medina, 2000a, p. 1). Given the extensive list of benefits of integrating music and language, if the content of the oral story and story song are identical, with the exception of the vehicle of delivery, then it follows that acquisition of the vocabulary may be enhanced through the musical version (Medina, 1993). Although meaningful information is memorized with greater success than less meaningful information, retention is even greater when more meaningful verbal information is learned with music” (Medina, p. 7). In a related study, Medina (2000a) found that second language learners who listened to the illustrated sung stories acquired an average of 1.5 words by the end of the treatment, while those who heard the illustrated spoken rendition of the story acquired an average of 1.0 words” (p. 2). She concluded, This points to the positive effects which music may have upon language acquisition. More specifically, it suggests that illustrated story-songs may produce greater vocabulary acquisition than illustrated traditional spoken stories” (p. 3). Furthermore, because of the positive effects which music has upon second language learners, story songs may motivate and captivate the attention of second language learners in ways that oral stories cannot (Medina, 2002, p.5).

Music in the French Immersion Kindergarten Language Arts Program

Medina’s (1993) method of story-songs could easily be adapted and implemented into the French immersion kindergarten language arts program. If the kindergarten teacher does not have the ability to compose an appropriate melody for an entire story, help could be obtained from the school’s music specialist. However, if the teacher wanted to use this approach independent of the music teacher, key structures from a story could easily be extracted and put to a simple tune, either familiar or original. In the classic story of *La petite poule rouge*”, for example, which is part of the Newfoundland and Labrador French immersion kindergarten curriculum (La maternelle, 1992), language outcomes include the development of vocabulary of farm animals, use of the structures ‘Qui yeut + infinitive + direct object, and the responses ‘Pas moi! and ‘Moi, among others. It could be assumed that most children already know this story in English, so understanding the meaning of the story line would not likely pose any difficulty. However, by setting this story and these

structures to music, more attention could be given to the rhythm and accent of the language. Furthermore, this musical dialogue would serve well in a role-playing activity.

First of all, the students should be introduced to the melody. The melody should be simple, perhaps even familiar, and the tempo moderate; otherwise, the children will pay more attention to learning the melody than the lyrics (Medina, 2000a, p. 8). Melodies that use the pentatonic scale (de, re, mi, sol, la) are recommended, as they are easy to sing and pose no difficulty to children (Birkenshaw, 1981, p.5). (This particular melody uses a simple five-note scale of do, re, mi, fa, sol.)

Figure 1 Poule.jpg

Introducing the melody first makes pedagogical sense for still another reason. When humans are simultaneously exposed to several new stimuli, they experience what is referred to as "secondary task overloading." This cognitive overstimulation can prevent students from learning the skills which they are attempting to acquire. Therefore, in order to avoid this effect, it is advisable to first expose students to the melody of the story-song prior to introducing the story-song itself (Medina, 2000a, p. 10).

Once the melody has been adequately internalized, it would be appropriate to study the rhythm of the song. The students can clap the steady beat as they sing the melody. When asked if they clapped on every note, they should soon discover that they did not. The students can then clap the rhythm of the melody by clapping on every note, thus discovering that they clapped more often. To emphasize the difference between beat and rhythm, half of the class can sing the melody clapping the steady beat, while the other half simultaneously claps the rhythm.

When the children are comfortable with both the melody and the rhythm, the key grammatical structures can be extracted from the story: 'Qui veut + infinitive + direct object, and the responses 'Pas moi! and 'Moi. The children clap the steady beat followed by the rhythmic pattern while the teacher sings the words of the first line.

Figure 2. Steady beat and rhythmic pattern of first line.

* * * *	* □?□? □?□?*
Qui veut semer le blé?	and Qui veut semer le blé?

The same process can be used for the other questions in the story that use the same grammatical structure: 'Qui veut couper le blé? Qui veut faire du pain? Qui veut manger du pain? However, upon clapping the rhythm of 'Qui veut faire du pain?', the students should discover that there is something different in the rhythm. This is a prime opportunity to discuss syllabification. The third word in most of the lines is a two-syllable word (semer, couper, manger), but 'Afaire' is a monosyllabic word. Therefore, although the steady beat remains the same, the rhythm pattern changes.

Figure 3. Steady beat and rhythmic pattern of third verse.

***** □?□? *

Qui veut faire du pain? and Qui veut faire du pain?

The remainder of the lyrics can now be set to the rest of the melody through the same process:

It is not sufficient to simply sing the routines and patterns which are found in the song's lyrics. Learners must be able to "transfer" this knowledge to new and different contexts. This exercise allows learners the opportunity to generate original utterances using song patterns and routines in different contexts (Medina, 2000b, p. 3).

Therefore, as an extension to this melodic grammatical practice, the teacher can sing other questions in different context, such as 'Qui veut fermer la porte? Qui veut laver ses mains? The children could not only respond appropriately with 'Pas moi or 'Moi, they could also try to formulate questions of their own.

Using a well-known tune to 'sing daily routines and commands is also a means of integrating music into second language learning (Fonseca Mora, 2000). For example, a clean-up command could easily be adapted to the tune of Twinkle, Twinkle, Little Star."

Figure 4. Clean-up song, to the tune of "Twinkle, Twinkle, Little Star" by S. Power-Piercy.

C'est le temps de nettoyer; On a fini de jouer.
Ramassez tous les déchets, et rangez tous les jouets.
C'est le temps de nettoyer. Qui est prêt à travailler?

This simple song provides a myriad of grammatical lessons with the following structures: C'est le temps de + verb; avoir finir de + verb; imperative form; qui est prêt à + verb. "The more rhythmic and intonated the utterances we teach are, the more holistic the learning will be" (Fonseca Mora, 2000, p.151).

Changing the lyrics to previously learned songs could also impact on language learning. Edith Butler's "Luc va à l'école" is a recommended song in the kindergarten curriculum (La maternelle, p.161). Its opening line, "Luc va à l'école avec son chien Fido," has the exact same rhythm as the command a teacher could possibly use at dismissal time: "Ferme ton sac d'école, et cherche ton manteau."

Figure 5. Rhythmic pattern for "Luc va à l'école" and suggested variation.

□?□? □?□? * □?□? □?□? □?□? * X

Luc va à l'é-co-le a-vec son chien Fi-do.

□?□? □?□? * □?□? □?□? □?□? * X

Ferme ton sac d'é-co-le, et cher-che ton man-teau.

The repetitiveness of singing this command each day reinforces the structure of the command and the rhythm of the utterance, and its musicality instinctively encourages children to join in and sing as well.

Conclusion

The evidence is conclusive to support the claim that the combination of music and a pedagogically-sound technique produce greater second language acquisition than is possible when using music alone" (Medina, 2000b, p. 1). Not only can children benefit from additional exposure to the second language; songs can provide the classroom teacher with an alternative means of promoting second language acquisition apart from nonmusical means such as oral stories" (Medina, 1993, p. 22). Given the widespread availability of musical resources today, highly developed musicianship skills are not necessarily a prerequisite to this approach. Innovativeness, a desired quality in any effective teacher, is all that is required to teach a second language through music.

Considering the concerns over the quality of oral proficiency in French immersion students, oral development should begin as early as possible. Since research has found several commonalities between musical and linguistic development (Lowe, 1998), and when one considers the educational implications of Gardner's (1993) theory on multiple intelligences (as cited in Medina, 2002), and Krashen's (1982) hypotheses of Comprehensible Input and Affective Filter (as cited in Medina, 2000), it follows that music is a viable vehicle for second language acquisition" (Medina 1993, p. 18). Furthermore, given the limited linguistic abilities for French immersion kindergarteners to begin learning any kind of formal grammar (Boland-Williams, et al., 1988, p. 41), music should be embraced as an integral part of the French immersion kindergarten language arts program.

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SCHOOL AND CURRICULUM: A PLACE FOR SOCIAL JUSTICE

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Social justice, like most social constructs, is not easily given to ubiquitous definition. Griffiths (1998) provides a starting point in her "working definition" of this term, a key point being that the good of each individual is balanced against the good of all, and vice versa:

"It is good for the common interest, where that is taken to include the good of each and also the good of all, in an acknowledgment that one depends on the other.

The good depends on there being a right distribution of benefits and responsibilities" (p.89).

Certainly, there are many expressions of belief in the need to have social justice permeate our decisions and the operation of our institutions:

"If we believe in equity and justice, we will structure our schools one way. If we believe that our children are entitled to succeed on the backs of others, we will structure them differently. This is the choice before us." (Maude Barlow and Heather-Jane Robertson, 1994, cited in Canadian School Boards Association, 1997, p. 4).

"Poverty is the enemy of education ... Schools are not primarily responsible for poverty... But there are things schools can do to counteract the deleterious influences of poverty" (Benjamin Levin, 1995, cited in Canadian School Boards Association, 1997, p. ii).

"We must measure our progress by the standard of care that we set for the least privileged among us [...] The true challenge of leadership is to rally a nation to its unfilled promise. To build a society based on equality, not privilege; on duty, not entitlement. A society based on compassion and caring; not on indifference or neglect." (Paul Martin, Prime Minister-Elect, Toronto, November 4, 2003, cited in Campaign 2000: 2003 Report Card on Child Poverty in Canada, p. 1).

Social Inclusion

Levitas (2003) suggests that the larger construct of social justice may be understood through social inclusion and social exclusion. Her understanding of social inclusion is based on the assumption that most political and social agendas in the developed world have an inherent or underlying sense of a better world. She believes that such a world is more likely to be attained through a utopian, rather than an ideological stance. This is a transformative idea and not unlike feminist postmodern

theory. Utopic (idea or orientation) would act as an analytical tool in terms of excavating and rebuilding a better world or just society inherent in political and social doctrine. In order to move towards a utopia of social inclusion, it is necessary to confront social exclusion. One kind of social exclusion described by Levitas is redistributive discourse (RED), which shuts people out from accessing certain social benefits. She maintains that social exclusion is a consequence of poverty but cautions against the simplistic notion that raising income will reduce exclusion, just as the simplistic notion of raising literacy standards will put all people to work. Social exclusion is much more complex: "... it is dynamic, processual, multi-dimensional, and relational" (p. 2).

Part of the complexity lies in a misunderstanding of "excluded" groups in society, or even a non-awareness or non-acceptance that such groups exist. For example, how many families on social assistance can take advantage of Registered Education Savings Plans for the future education of their children? How many can take advantage of a similar purpose of the Learning Bonds, announced during the 2004 Federal election? Other factors that add to the complexity of fighting for social justice is that the very people for whom it is desirable may feel harmed by the struggle for it. As Griffiths (1998) points out, "... there is a fine line between 'giving a voice' to subjects and betraying them" (p. 41). Translated into reality this means that many people on low-incomes are proud, resourceful people, and do not wish to be pawns in the system, even if the intent at times is to help them. Historically, the majority of Newfoundlanders and Labradorians never had much money but felt secure in what they had, lived comfortably according to their standards, and had an extended network of family support. Therefore, terms like "poverty" or illiteracy" are seen to be hurtful for the very people for whom they may be used to advocate better conditions.

The Fourth World

During the 1980's the notion of a Fourth World was frequently addressed in academic and political circles. Hamadache (1984) describes the Fourth World as: "underprivileged categories of society, especially the poor living in the marginal city districts, or on the outskirts of cities and in rundown areas, migrant workers and their families and certain minorities or underprivileged groups" (p.23).

The goal behind the discussion was to highlight the erroneous belief that if the Third World could be brought up to Second or First World standards all would be well. Hamadache and others wanted to point out that conditions within First World countries are crying out for attention, especially within inner cities. These are the excluded B the unemployed, the underpaid, the underhoused and the undereducated, all of which equate to poverty. The consequences of poverty, as they relate to learning are summarized in the report *Literacy and Poverty: A View from the Inside* by the National Anti-Poverty Organization (1992):

- Poverty produces hungry children who cannot concentrate in school;
- Poverty often produces crowded living situations - - no private, quiet spaces where children can study;
- Poverty can fill a home with worry, stress and tension, making it difficult for children to concentrate;

- Schools frequently steer children from low-income families into dead-end courses;
- Native people, persons with disabilities and other minority groups also receive unequal treatment;
- Poor, undereducated parents often lack the confidence to challenge the school system; schools are often unresponsive when these parents seek better treatment for their children (pp. 21-22).

Opportunity

Levitas (1998) believes that opportunity is a key concept in challenging social exclusion and social injustice. Opportunity is not a "quick fix", such as "make work projects "as a panacea for long term gainful employment. Opportunity for inclusion is not a treatment by removal" plan, such as the attempt to deal with youth social problems in some Aboriginal communities by removing the children from their communities for treatment. Opportunity for inclusion is not removing children in school from participating in the expected learning outcomes (curriculum) set down by the Provincial Government, when there is no sound and solid basis for doing so.

Opportunity must be assessed in terms of expected outcome. If a cross-section of people in Newfoundland and Labrador were asked what is the "expected" education of a child entering kindergarten, what would they answer? One source they could consult would be the Curriculum Guides from the Provincial Department of Education, Division of Program Development. There, they would find Essential Graduation Learnings, General Curriculum Outcomes, and Specific Curriculum Outcomes and Themes. As an example of the latter, if one were to check the specific themes for grade 5 in the Physical Education Program, one would find nine themes. Theme 7 is: "Gymnastics: Demonstrating basic gymnastic skills in a simple routine on floor and apparatus." For each theme, there are Sample Learnings, Teaching Strategies, Student Assessment, and Resources and Notes.

However, the Curriculum Guides are not the only policy documents that decide who shall be included in, or excluded from, the intended or expected education for students. A document from the Department of Education, Division of Student Support Services, is somewhat like an amendment to the provincially approved courses/intended outcomes, and provides for four levels of modification, each level excluding a child more and more from the expected or intended outcomes. These modifications are known as Pathways 2-5, Pathway 1 being the canonical or idealized curriculum plan. Allocation beyond Pathway 1, or exclusion from Pathway 1, is done through an ISSP (Individual Support Services Plan), which involves a number of individuals who are connected to the child in some way (school, family, health, justice, etc.). But what is the procedure for excluding children from the curriculum as stated in the Provincial Curriculum Guides and on what basis is the modification supposed to be an accepted education for these excluded children?

It would seem to make sense that each and every Specific Curriculum Outcome would be assessed to determine which outcomes are not attainable by the child, with a very clear picture of why the child cannot attain them. A child's education life, and all the consequences of that, are at stake. To what extent are generic reading and writing and math tests -- and in the case of reading, often not

administered by clinical reading specialists -- used to exclude children from the Provincial Approved Curriculum for Pathway 1? At one ISSP meeting, the author acted as parent advocate and the focus was the parents not wanting the child moved from Pathway 1 to Pathway 2. During the discussion, an educational representative stated that unless the child were designated as Pathway 2, he would not avail of the "proximity strategy". On enquiring, I was informed that the proximity strategy could allow the child to sit closer to the teacher.

Even if we face the reality of Pathway 1 exclusion, the next big question is what support is given to the child? If a child needs specialized help in becoming a reader and writer and this has been demonstrated by a clinical reading specialist, then how can a high school volunteer provide the kind of support needed? Would any of the readers of this article who needed the services of a medical specialist be satisfied with a helper who told them that he/she had a first aid course? Why should it be any more so in education? Once there is exclusion, as Levitas so aptly stated, there is social injustice.

Information and Opportunity

Without information, opportunity is limited. An informal survey (by the author) among parents showed that very few understood the Pathways portion of the curriculum. For example, one junior high school student was allocated to a range of Pathways B from P1 to P4 B for various subjects. The boy could not read independently at a primary grade level, and yet on a report card all of his subject scores were above 70, with at least one subject in Pathway 1 (a subject involving reading) attaining 100 percent.

There are no standardized achievement, norm-referenced tests being administered in Newfoundland and Labrador. Yet, two editorials in the Telegram (July 14, 20, 2004) contained the words "standardized tests" and addressed the pros and cons of such tests with regard to the testing in the province. The province does administer Criterion Referenced Tests (CRT). The provincial curriculum is an outcomes based curriculum and so CRT's are appropriate for assessing to what extent this curriculum is successful. However, what is happening is that CRT's are being interpreted as standardized tests, and results are reported on children. The 2003 results of the Grade 6 reading CRT's showed that 35 percent or approximately 2455 children failed to meet the expected level of reading. Reading is not normally "taught" after grade 6 which means that in six years time, over 2000 older teens, if they are interested, will be enrolling in ABE classes. A social justice question is who is being excluded by these tests? No overall data of this nature are available but, from my experience, children of low-income families seem to make up a disproportionate number of the failing students. Also CRT test results are compared from one year to the next, which is impossible, since CRT results are based on different tests in different years.

The one use that could be made of CRT test results is to provide feedback to individual schools/classrooms/teachers about which curriculum outcomes need more attention. If for example, grade 5 children in Classroom R are doing very poorly on the Gymnastic intended outcome, then through analysis and reflection solutions might

be developed. This is one way how in-service or professional development activities should be decided.

Possible Approaches for Solution

Levitas (1998) states we can take either of two approaches in dealing with exclusion or social injustice: distributive or utopian. Distributive involves a shifting or moving of factors so that the problem appears to be ameliorated, such as often occurs in the Pathways solution, for if a child in need of specialized help is not provided that help, then the child is still being excluded from learning. A utopian approach involves changing the system. Levitas believes: "A utopian approach suggests the need to focus more on the kind of society we would like to build B assessing policies and programmes in terms of the contribution they make to this end, while making the yardstick itself explicit and open to democratic debate" (p. 4). The starting point in a utopian approach is providing information and opportunity. Hopefully, this will lead to acceptance by the power holders and a willingness to change, as Purpel and McLaurin (2004) point out: "... the principal ingredients necessary for significant change are the acceptance of the need for significant change and the will to make such changes" (p. 140).

Curriculum Expectation

It is necessary to understand which are the intended curriculum outcomes for children entering school. Is there a "core" or "basic" curriculum that all children should experience? Much as been said and written about school fees/charges but such fees/charges must also be understood in terms of what children can expect from their schooling. Data collected through a study on school fees/charges (Community Services Council of Newfoundland and Labrador, 2003) showed considerable disagreement at times between teachers and administrators over what counted as curriculum versus what counted as extra- or co-curriculum, and whether these experiences occurred during school hours. For example, 44 percent of teachers said that School Bands constituted curriculum (versus extra- or co-) and 34 percent of them said it occurred during school hours. Sixty-seven percent of administrators believed the School Band constituted curriculum and 35 percent stated it occurred during school hours. As another example, there was high agreement among teachers and administrators that Field Trips were curriculum (84-91 percent) and occurred during school hours; an even higher percentage stated that charges were levied for this curriculum experience. A point is that low-income children are more likely to be excluded from this curriculum activity, such as staying home on these days, even if the school does take extraordinary measures to include those without payment. A second point is that field trips are seen by teachers and administrators as intended curriculum, and therefore the notion of exclusion should not even be a factor.

Informed Teachers

This is especially crucial for the next cohort of teachers entering schools. Universities have a serious responsibility to ensure that pre-service teachers do not just take in information about Government and School Board policies and practices regarding curriculum. They must develop not just a sound knowledge base of what is,

but must become perceptive, critical, and reflecting thinkers in really understanding what this means in the actuality and reality of social justice. They must understand (or for some, re-connect) to the many instances of the consequences of curriculum exclusion.

Universities for teacher preparation must also continually evaluate the knowledge which beginning teachers should have. "Evaluation 101" should be a requirement for all, so that different types of tests and their interpretation are understood.

Revisiting Policy and Practice

There should be periodic review and revision of policy and practice. Some documents on the Pathway plan are now almost ten years old. This revisiting and review should not be exclusive to a few Government or School Board employees, but should provide an avenue for input from all who have been involved or impacted.

Research

Finally, a culture of research must be promoted. More and more Master's programs are becoming non-research programs, often because the candidates see research as being elusive and unrelated to their work. Teachers are in an ideal situation as "action researchers" to gather key data on curriculum implementation. Some suggested questions for research are: beir lives like 5 or 10 years after they withdraw from school? Who cares? Who cares and does something about it? Who doesn't care?

Conclusions

Children's lives (today), adults' lives (tomorrow) are at stake. From day one, when children enter the school system, all these stakeholders who have some responsibility for their experiences must understand that responsibility through the lens of social justice. All children are children of promise, but the reality is that many of them do not fulfill that promise, and ignoring that reality certainly does not benefit the children. There must be a learning climate of inclusion and this entails providing the best education for all, keeping in mind that a child, who for whatever valid reason, cannot attain idealized education outcomes, must have access to the best support.

"... school experience ought to be seen as an opportunity for the growth and learning of all (my italics) who dwell in a particular educational institution" (Purpel and McLaurin, 2004, p. 127).

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The Role of Mediating Teachers in Newfoundland's New Model of Distance Education

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Introduction

As the education system in Newfoundland and Labrador moves away from the traditional model for distance education towards a web-based, e-learning model, schools and the administrators and teachers who staff them will have to adapt to new roles. These new roles will have to reflect an increase in the number of courses that are offered through distance education, along with an ever-changing technology that will be required for students to access these courses.

This article will consider the role of the school-based or mediating teacher in the new model of distance education offered by the Centre for Distance Learning and Innovation (CDLI). The initial discussion will be a review and commentary of the literature surrounding the role of school-based teachers in the traditional distance education system to the new web-based, e-learning model. This will lead into a consideration of the duties and time commitment of the school-based or mediating teacher during the CDLI's first year of implementation.

New Model for Distance Education

Online learning will become even more prevalent in the coming years. Our challenge as administrators will be to differentiate those that have the appearance of quality from those that truly deliver unique and enriching learning experiences for students (Berman & Pape, 2001).

The traditional or legacy distance education program for rural high school students in Newfoundland and Labrador was implemented in September of 1988. The main purpose of this innovation was "to provide access for students in small schools to high school courses that were considered important for graduation and for post-secondary admission but that were difficult to offer in such schools" (Government of Newfoundland, 2000, p. 72).

The legacy distance education program made use of the postal service and telephone system. Required course materials, such as textbooks and student handbooks, were sent to students by mail. Assignments and student questions were faxed between students and their teachers. Synchronous communication between the teacher and learners would occur through the audio graphics technologies (e.g., teleconference and telewriters or electronic whiteboards) developed by Memorial University's Telemedicine Centre (Government of Newfoundland, 1992, pp. 319-320).

When it began in 1988, the legacy distance education program offered only one course - Advanced Mathematics 1201. This course had an enrolment of 36 rural students in 13 different schools. The initial pilot worked well and by the 1999-2000 school year the legacy program had grown to 11 courses and almost 900 enrolments. A total of 703 students in 77 different rural schools were taking one or more courses

in Chemistry, French, Mathematics, and Physics (Brown, Sheppard & Stevens, 2000).

In 2000, the Ministerial Panel on the Delivery of Education in the Classroom has recommended a number of significant changes to the legacy distance education. These changes were outlined in chapter six of their final report, *Supporting Learning (2000)*. Four key recommendations provided the direction for the changes:

Recommendation 58

that the province embark on a program to substantially increase the scope of distance education offerings in the schools through the establishment of a “Centre for Distance Learning and Innovation.”

Recommendation 59

that the Centre for Distance Learning and Innovation consist of a number of teachers, who may be termed Electronic Teachers or E-teachers, with primary responsibility for course delivery and evaluation and that, at the school level, teachers be assigned from the regular school allocation as mediating teachers to ensure appropriate interaction between students and E-teachers.

Recommendation 60

that an approach be taken to content packaging and delivery that is not totally dependent on high bandwidth technologies.

Recommendation 61

that most communications be through an Internet-based system incorporating e-mail, conference forums, Internet fax and similar devices, with minimal reliance on synchronous communications, fixed schedules or other constraining elements. (p. 73)

These changes will have a potential impact on all students and teachers in the province. The Panel believed that students in all schools should have access to computer-mediated, Internet-based distance education opportunities.

In implementing these changes, the Ministerial Panel (2000) stated that “teachers exert a more significant influence on educational quality than does any other aspect of schooling” (p. 50). It is school-based teachers who will have the responsibility of making the new model of distance education work. As the reliance on distance education increases, especially for small rural schools, the kinds of human and technical support provided by teachers will be crucial if students are to have any chance to succeed.

According to the CDLI (n.d.), in 2002-03 there were 317 schools with 83,000 students and projections indicate there will be around 59,000 students by 2010. Approximately two-thirds of these schools are classified as rural schools. Traditional

distance education programs have tended to target higher ability students in these rural schools. The new web-based model of distance education being implemented by the CDLI is being designed for all learners at both rural and urban schools.

However, much of the literature on distance education suggested that it may not be appropriate for all learners. E-learning places a much higher level of responsibility on the student for independent study and self-regulation than does traditional face to face instruction. Barbour (2002) found that students in web-based distance education should be able to work independently and have an intrinsic source of motivation (or be self-motivated) to be successful in that type of environment. The Ministerial Panel (2000) recognized this fact when it stated the “students are selected who are most likely to be able to function independently” (p. 78).

Yet, the Panel contends that “any initial disadvantage” created by the “high level of reliance on distance” will be “offset by the support system that would be put in place” (Govt NL, 2000, p. 86). The support system being referred to by the Panel consists of a distance education teacher (an e-teacher) and a school-based classroom teacher (m-teacher) whose job it will be to “ensure appropriate interaction” between the students and their “e-teacher” (p. 79).

This is one of the distinguishing features of the new model of web based distance education: the identification of, “an important mediating role for school-based teachers...” (Govt NL, 2000, p. 78). The legacy system of distance education has no formal or recognised role for school-based support.

Distance education courses are separated from others and students are expected to operate relatively independently of the teachers in the school. It is mainly for this reason that numbers have to be limited and students are selected who are most likely to be able to function independently. While the school principal has a role in scheduling and other teachers do assist with supervision, technical problems and content, this is not an inherent feature of the [new] system. (Govt NL, 2000, p. 78)

In the new model, school based teachers are given “direct responsibility for facilitating distance education courses...” This facilitating role includes, “liaison with the e-teacher and attending to matters of attendance, discipline, homework, assignments and other normal aspects of classroom life” (Govt NL, 2000, p. 82).

The Ministerial Panel (2000) emphasised that the mediating responsibilities of the school-based teachers does not include any planning, preparing or instructional duties for the courses they are facilitating:

This role would involve facilitating student learning but not direct responsibility for course preparation or instruction. (p. 78)

These teachers would not be expected to prepare for each course under their supervision. (p. 82)

The Panel noted that there “would be nothing to preclude these teachers from assisting students with matters of content” (p. 76) but the point is that it would not be part of their designated role responsibilities (Mulcahy, 2002).

Under the legacy system of distance education it was widely known, but rarely documented, that students often required and received a significant amount of assistance with matters of content from school based personnel. Students from the legacy system were also a select group chosen for their academic ability and their predisposition for independent study. Given that a wider range of students will be taking distance courses in the future it is expected that academic and pedagogical assistance would continue at the levels experienced in the legacy system or even increase.

The Panel recommended that “mediating teachers would be assigned to distance education classes as part of their normal teaching assignments” (Govt NL, 2000, p. 82) and offered this view of their working conditions:

Freed from much of the preparation burden it would be reasonable to expect classroom teachers to facilitate groups larger than the regular high school class, with these groups having several courses in progress simultaneously. ... The underlying principle is that multiple courses would be in progress in a single class. (p. 82)

The new system, as it is currently deployed, has 1-6 computers in one or more locations that are specifically designed as Centre for Distance Learning Innovation (CDLI) computers. These computers may be placed in an existing classroom, a computer laboratory, a learning resource centre, or a distance education room. While students may be enrolled in more than one web-based distance education course, only six students (i.e., the number of CDLI computers that are available) can be scheduled at any given time. With most rural schools using a timetable that offers 14 or 16 credits, this means that the greatest number any m-teacher could have is 42-48 students.

Given the wider range of students taking distance courses, the increased reliance on distance education to provide basic educational services, the role of school based mediating teachers are crucial to the success of the new model. The failure of the Ministerial Panel and the new model to recognise this and make the mediating responsibility a separate and recognized part of a rural teacher’s designated workload, with an appropriate and distinct provision of time during the instructional day, undermines this most important aspect of the new model.

Mediating Teachers in Practice

During the 2001-02 school year, the CDLI piloted ten of its web-based distance education course across the province. Each of the ten English-speaking districts was responsible for one course with 18-22 students from 3-6 schools in each course. Each school was responsible for placing the CDLI computers in an appropriate location (at the school’s own choosing) and selecting a mediating teacher. At the district level, each district would have one teacher for the web-based course (an e-teacher) and one district administrator (known as the Web-based Initiatives

Facilitator). In some instances the e-teacher and the Web-based Initiatives Facilitator were the same individual.

In the implementation year, the mediating teachers in the five CDLI schools in the participating district could be broken down in two ways. The first way was based upon area of on teaching expertise. In this regard, two of the mediating teachers were Social Studies teachers (or content-based teachers in the case of this district's pilot course), two were Mathematics/Science teachers (or non-content-based teachers), and one was a Technology teacher. The second way was based upon type of teacher. In this regard, four of the mediating teachers were classroom teachers and one was an administrator (who has some teaching duties).

According to a memo from the CDLI on 23 April 2001, an initial draft of the duties that may be included in a mediating teacher's role were:

- ! supervising distance learning students while they engage in online activities;
- ! monitoring the progress of distance learning students, including accepting e-mail notification from the e-teacher which express concern regarding the failure of a student to submit assignments, exams, etc. on time;
- ! following-up with such students to ensure future compliance;
- ! accepting grades and reports from the e-teacher and ensure that these get entered in the students term/end of year report cards;
- ! providing limited assistance to students who encounter difficulty in using asynchronous communication tools (chat, discussion threads, e-mail, etc., web browser, and learning management system);
- ! including online students on the teacher's class list and as such follow-up on absences from class as would be the case with other students in that class whom the m-teacher instructs directly;
- ! meeting, as requested, with the e-teacher, web-based initiatives facilitator, high school program specialist;
- ! in consultation with the CDLI, Virtual Teachers Centre of the NLTA and the School District, assisting staff colleagues in acquiring skills necessary for accessing web-based professional development opportunities;
- ! participating in district pilot course implementation team meetings upon request; and
- ! participating in provincial in-services and forums upon request.

In that same memo, the following were listed as responsibilities that would not be included in the list of mediating teacher's duties:

- ! providing regular instruction or tutorial assistance; and
- ! providing technical troubleshooting related to the CDLI workstation, network hardware or the operating system, as this was to be performed through a central help desk.

It was stated at this time, that as the 2001-02 pilot year progressed these duties would be further refined and defined based upon the experiences of mediating teachers themselves.

As a means to refine this list of duties for mediating teachers in the participating district, this list was sent to all mediating teachers during the first semester of the 2001-02 school year and they were asked to comment on which ones they were responsible for in their school, to what level they were responsible for these duties, and if there were any duties that they had assumed that were not listed in the above memo. The responses of the mediating teachers are summarized in the following table.

Table 1 - Summary of M-Teacher Feedback of Various Duties

Supervising distance learning students while they engage in online activities;	Some m-teachers are checking in on the students during their preparation periods (should the m-teacher have a prep period when the CDLI students have their course), but for the most part these students are largely unsupervised.
Monitoring the progress of distance learning students, including accepting e-mail notification from the e-teacher which express concern regarding the failure of a student to submit assignments, exams, etc. on time;	All m-teachers stated that this is something that they do on a regular basis or as needed. However, there was some concern expressed about the ability to do this as many of the m-teachers used their own commercial ISP or free web-based e-mail which they did not have access to during the school day. There were also comments about the m-teachers inability to use many of the communication tools showcased by the CDLI at the m-teacher in-service due to the school's computers not being able to handle the software.
Following-up with such students to ensure future compliance;	All m-teachers stated that this is something that they do on a regular basis or as needed.

<p>Accepting grades and reports from the e-teacher and ensure that these get entered in the students term/end of year report cards;</p>	<p>To date, there has only been one reporting period. The e-teacher sent out complete marks for each student to all m-teachers, so that m-teachers did not have to retrieve these marks through WebCT themselves. In addition, there was some confusion as to the teacher's comment section, whether that was something that should be filled out by the content-based teacher (the e-teacher) or the school-based teacher (the m-teacher).</p>
<p>Providing limited assistance to students who encounter difficulty in using asynchronous communication tools (chat, discussion threads, e-mail, etc., web browser, and learning management system);</p>	<p>This is also something that all m-teachers have stated that they do on a regular basis or as required. Most of the m-teachers stated that they did not have a problem with their own knowledge of the technology to provide this level of assistance</p>
<p>Including online students on the teacher's class list and as such follow-up on absences from class as would be the case with other students in that class whom the m-teacher instructs directly;</p>	<p>Some m-teachers stated that this was done at their school, but others stated that it was not done at all.</p>
<p>Meeting, as requested, with the e-teacher, web-based initiatives facilitator, high school program specialist;</p>	<p>All m-teachers stated that they have done this, but in some cases it has been difficult or impossible to be freed up from a class at the school level to have a meaningful meeting or, in some cases, others met with the e-teacher or WBIF.</p>
<p>In consultation with the CDLI, Virtual Teachers Centre of the NLTA and the School District, assisting staff colleagues in acquiring skills necessary for accessing web-based professional development opportunities;</p>	<p>All of the m-teachers stated that they have no had to do this to date. Some indicated that they would be interested in this responsibility, when and if it becomes a reality.</p>

Participating in district pilot course implementation team meetings upon request; and	None of the m-teachers have had to do this as of yet. At present, there is one m-teacher on the implementation team as a representative of all the others. Should experiments with the Intel Team Station technology used by the College of the North Atlantic be successful, all m-teachers may be able to take part in later meetings.
Participating in provincial in-services and forums upon request.	All m-teachers attended the initial m-teacher in-service in Gander that occurred in September. No other in-services or provincial forums have occurred since.
Not providing regular instruction or tutorial assistance; and	Some m-teachers with a background in the content area did state that they have provided both instruction and tutorial assistance. Most of this occurred during the NAPE work action, when there were technical difficulties in accessing the CDLI workstations and the Canadian History 1201 course, but has also occurred since this work stoppage ended
Not providing technical troubleshooting related to the CDLI workstation, network hardware or the operating system, as this was to be performed through a central help desk.	Some m-teachers with a background in technology have been required to perform these duties as well. However, as this was an unintended responsibility, it has been rather time consuming because adequate training in the software and hardware has not been provided.

As is illustrated in the above table, these m-teachers were performing roughly the duties that were outlined initially by the CDLI. Of some concern is that some mediating teachers have to perform some instruction, tutorial assistance and technical troubleshooting, particular the technical troubleshooting. For the most part, mediating teachers did not see their m-teacher duties as adding a great deal of work time to their current teaching loads. However, according to these m-teachers any increase in the number of students or in the amount of technical troubleshooting that is required would create a substantial increase in their work load.

In the words of one mediating teacher, "the role of mediating teacher does not add a significant amount of work to my day. I have it easy to communicate with the electronic teacher as well as the Web-based Initiatives Facilitator. The establishment of a troubleshooting site is great. For teachers with a limited technology background

this will definitely help them deal with the technological problems. I have only 5 students to look after so I don't have a lot of concerns but I would be concerned about the amount of extra work 20+ students would create (e.g., report card time)."

More strongly worded were the comments of the mediating teacher with the largest number of students during this period, who commented, "the role of mediating teacher has used up much of my preparation time and lunch periods. In the future, a strong consideration should be given to scheduling time for mediating teachers."

These comments outlined some of the concerns that will need to be addressed. From this mid-term evaluation, there were two main concerns that need to be considered:

1. the issue of the responsibilities of the m-teacher in terms of maintenance of the CDLI workstations; and
2. the issue of the amount of time required to do the administrative duties of an m-teacher when the total number of students begin to increase.

As a follow-up to the mid-term evaluation, all mediating teachers were asked to complete a second survey in late May (a copy of which can be found in Appendix A). In their responses to this survey, the mediating teachers' impressions of their duties did not change significantly from the mid-term evaluation. Table 2 considers their comments.

Table 2 - M-Teachers Feedback of Various Duties (Year End)

1. Supervising distance learning students while they engage in online activities.	Never 0	Sometimes 4	Often 1
2. Monitoring the progress of distance learning students, including accepting e-mail notification from the e-teacher which express concern regarding the failure of a student to submit assignments, exams, etc. on time.	Never 0	Sometimes 4	Often 1
3. Following-up with such students to ensure future compliance.	Never 0	Sometimes 4	Often 1
4. Accepting grades and reports from the e-teacher and ensure that these get entered in the students term/end of year report cards.	Never 0	Sometimes 3	Often 2

5.	Providing limited assistance to students who encounter difficulty in using asynchronous communication tools (chat, discussion threads, e-mail, etc., web browser, and learning management system).	Never 1	Sometimes 4	Often 0
6.	Including online students on the teacher's class list and as such follow-up on absences from class as would be the case with other students in that class whom the m-teacher instructs directly.	Never 1	Sometimes 2	Often 2
7.	Meeting, as requested, with the e-teacher, web-based initiatives facilitator, high school program specialist.	Never 0	Sometimes 4	Often 1
8.	In consultation with the CDLI, Virtual Teachers Centre of the NLTA and the School District, assisting staff colleagues in acquiring skills necessary for accessing web-based professional development opportunities.	Never 2	Sometimes 2	Often 0
9.	Participating in district pilot course implementation team meetings upon request.	Never 3	Sometimes 3	Often 0
10.	Participating in provincial in-services and forums upon request.	Never 0	Sometimes 5	Often 0

As should be expected, the m-teachers indicated that they were responsible for most duties "sometimes." These duties were the ones that were initially outlined for m-teachers and it was assumed that none of these duties would place an onerous task upon any of these mediating teachers. The fact the mediating teachers responded that they were responsible for particular duties "often" in so few instances was a positive indication.

However, when asked about specific tasks, some of which were stated as not being the mediating teachers' duties, a slightly clearer picture emerges. Table 3 provides both the number of teachers who stated that they undertook specific duties and the amount of time that these duties took on a weekly basis.

Table 3 - Time Spent per Week on M-Teacher Duties

Duty	Number of M-Teachers	Time Spent per Week
Supervising tests/exams	5	10 minutes 15 minutes when needed 60 minutes, 5 times/year
Tracking down missing assignments/homework	2	10 minutes 60 minutes
Recording attendance or other administrative data	3	5 minutes 10 minutes 30 minutes
Providing content-based tutoring	1	
Providing technology-based tutoring	2	30 minutes 30-60 minutes
Providing technical trouble-shooting	3	10 minutes 20 minutes 30-60 minutes 60 minutes
[Other] Administering surveys and questionnaires	1	
[Other] Contacting someone about computer troubles	1	
[Other] Checking and responding to e-mail & surveys		30 minutes

This is a greater indication of the work involved in being a mediating teacher, particularly during the implementation year. By considering only the lowest values indicated for each duty, the m-teachers report approximately 1 hour and 45 minutes of direct involvement in the CDLI course in the span of one week. Over a 38 week period this would be 60 hours and 10 minutes or approximately the amount of time allocated to a one credit course at the senior high school level. By considering the highest values, the m-teacher spent 4 hours and 15 minutes per week or 161 hours and 30 minutes for the school year. This is the amount of time that a regular teacher would have allocated for three credits.

This amount of time becomes even more onerous at schools during the CDLI implementation during the course of the 2001-02 school year when other teachers,

beyond the mediating teacher, is considered. When asked how many schools had other staff members who undertook certain duties in relation to the CDLI and how much time they spent on a weekly basis, the mediating teachers responded as indicated in Table 4.

Table 4 - Time Spent per Week on M-Teacher Duties by Other Staff Members

Duty	Number of School	Time Spent per Week
Providing content-based tutoring	0	
Providing technology-based tutoring	2	10 minutes 30 minutes
Providing technical trouble-shooting	4	10 minutes 15 minutes 60 minutes

By adding this to the amount of time spent by the m-teachers themselves, a considerable amount of time was expended during the 2001-02 school year without any course relief or additional remuneration. It also appears that the mediating teachers with stronger backgrounds in technology spent the most time in mediating teacher related duties.

It should be noted that this feedback was provided by m-teachers who were only responsible for one course and one to seven students (most being responsible for four or five). As one of the teachers stated in their response to the final open-ended question, "I teach a full course load and then some. I don't have the time in my schedule to spend with Centre for Distance Learning and Innovation students. With more courses being added, such as math, physics, chemistry, biology, etc., students need a teacher they can depend on for help with computer trouble-shooting, checking on assignments, etc.". An idea that has been proposed is to have mediating teams or a group of teachers who share responsibility for the CDLI students, equipment and administration in the school. While this would alleviate the time commitment upon a single teacher, it doesn't negate the fact that there is still a considerable investment of teacher time involved in ensuring that this program is a success. This teacher time needs to be considered when teachers are given their teaching duties or teachers should receive some form of financial incentive for assuming these additional responsibilities.

Conclusion

The 2001-02 school year, which has been used as an implementation year for the Centre for Distance Learning and Innovation, have seen many changes in the way that distance education is delivered in the province of Newfoundland and Labrador. One of the most dramatic of these changes has been the creation of a position known as the mediating teacher. This mediating or school-based teacher is responsible for all non-technical, non-instructional aspects of distance education in

their own school. At present, this position does not provide teachers with additional time to perform these duties, nor is there a financial incentive attached to the position.

As has been illustrated through this example, during the 2001-02 school year the mediating teachers had quite a burden placed upon them due to the wide range of duties and time commitment associated with these new responsibilities. In addition to the time associated with the position, in many cases the mediating teachers responsibilities did include technical and instruction aspects. As has been well known, but rarely documented, in the legacy distance education system the success of distance education in the province of Newfoundland and Labrador has been in large part due to the assistance provided by teachers in our rural schools above and beyond their contractual obligations to the school or the school district. It appears, at least in the first year of this new model for distance education, that this aspect of distance education (i.e., teachers providing additional time and performing voluntary duties) will not change.

However, it should also be noted that this study was completed during the first or implementation year of the Centre for Distance Learning and Innovation. As with any new model, there are bound to be growing pains in the relationship between the Centre and its client schools. These growing pains may have been further complication by a legal computer technicians' work action that occurred in seven of the ten school districts (including the one considered in this study). It is clear from this study that more quantitative data needs to be collected on the duties and time commitment required by m-teachers as the Centre for Distance Learning and Innovation continues to grow.

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Appendix A

CDLI —Teacher Survey

The courses offered by the Centre for Distance Learning and Innovation (CDLI) are new to the Vista School District. As these courses are taught over the Internet, the CDLI has asked schools to create the position of a mediating teacher or m-teacher. In order to determine the roles, responsibilities and time commitment associated with this position, you are asked to take a few minutes to complete this survey. All results will be kept confidential.

1. How would you describe your area of teaching responsibilities in relation to the CDLI pilot course in the Vista School District?

Technology-based _____
Content-based (i.e., Social Studies) _____
None of the above _____

Please indicate how often you have been responsible for the following activities

2. Supervising distance learning students while they engage in online activities.

Never _____
Sometimes _____
Often _____

3. Monitoring the progress of distance learning students, including accepting e-mail notification from the e-teacher which express concern regarding the failure of a student to submit assignments, exams, etc. on time.

Never _____
Sometimes _____
Often _____

4. Following-up with such students to ensure future compliance.

Never _____
Sometimes _____
Often _____

5. Accepting grades and reports from the e-teacher and ensure that these get entered in the students term/end of year report cards.

Never _____
Sometimes _____
Often _____

6. Providing limited assistance to students who encounter difficulty in using asynchronous communication tools (chat, discussion threads, e-mail, etc., web browser, and learning management system).

Never _____
Sometimes _____
Often _____

7. Including online students on the teacher's class list and as such follow-up on absences from class as would be the case with other students in that class whom the m-teacher instructs directly.

Never _____
Sometimes _____
Often _____

8. Meeting, as requested, with the e-teacher, web-based initiatives facilitator, high school program specialist.

Never _____
Sometimes _____
Often _____

9. In consultation with the CDLI, Virtual Teachers Centre of the NLTA and the School District, assisting staff colleagues in acquiring skills necessary for accessing web-based professional development opportunities.

Never _____
Sometimes _____
Often _____

10. Participating in district pilot course implementation team meetings upon request.

Never _____
Sometimes _____
Often _____

11. Participating in provincial in-services and forums upon request.

Never _____
Sometimes _____
Often _____

12. What are some of the things that you are responsible for during the time you spend with the CDLI students? Check all that apply.

Supervising tests/exams _____
Tracking down missing assignments/homework _____
Recording attendance or other administrative data _____
Providing content-based tutoring _____
Providing technology-based tutoring _____
Providing technical trouble-shooting _____
Other _____

13. Please indicate how much time (in minutes) do you spend on a weekly basis providing the following activities.

Supervising tests/exams _____
Tracking down missing assignments/homework _____
Recording attendance or other administrative data _____
Providing content-based tutoring _____
Providing technology-based tutoring _____
Providing technical trouble-shooting _____
Other _____

14. Do other members of your staff provide any of the following activities to CDLI students? If so, please indicate the amount of time, in minutes, these individuals spend on a weekly basis.

Providing content-based tutoring _____ (minutes)
Providing technology-based tutoring _____ (minutes)
Providing technical trouble-shooting _____ (minutes)
Other _____ (minutes)

THE RELATIONSHIP OF STARTING TIME AND CUMULATIVE TIME TO SECOND LANGUAGE ACQUISITION AND PROFICIENCY

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A qualifier often used to characterize differences between types of French programs is that of time. Immersion and Core programs are frequently defined by the type of method they employ but, more often, by either the amount of instructional time they allow for or by the time or age at which the program begins for the child. This emphasis on time in relation to programs is based on certain prior assumptions concerning the relationship between time and proficiency. Several studies, (see Carroll, 1963; Stern, 1976; Smythe, Stennet & Gardner, 1974) have postulated a positive relationship between time spent studying a language and proficiency attained and posit that language acquisition and proficiency are largely a function of time. Smythe et al. (1974) argue that "... there is strong support for the position that the more time spent studying a second language, the greater the probability that the individual will achieve a high level of sophistication in the language...(p.21). The Report of the Ministerial Committee on the Teaching of French (Gillin, 1974) directly relates achievement to time and proposes three levels of proficiency in French attainable after X number of hours; the basic level - 1380 hours; the middle level - 2400 hours; the top level - 5310 hours.

School boards and districts continue to establish policies and programs on these aforementioned assumptions and seek to improve French programs by increasing the number of instructional hours for French available to their students. Yet, as McNab (1976) reminds us: "time is not only the scarcest resource in the school system, it is also the most expensive" (p.265). In the 1976 report, *French programs: Some major issues*, authors Stern, Swain and McLean articulate some concerns regarding time and costs:

Throughout the last decade, French programs in the Ottawa elementary schools were considerably expanded in the expectation that a small daily dose of French would be educationally and financially acceptable. When this expectation was not fulfilled, it was thought that the answer lay in increasing the amount of time devoted to the teaching of French. However, the demand for the extension of French gives rise to several considerations. An extension of time for French entails a rise in cost: is this additional expenditure commensurate with the increase in French achievement? (p. 43)

Because time is at a premium and comes, not only at an economical cost, but a human one as well, it is important that we understand the relationship between time and proficiency. The purpose of this paper is to consider the relationship between the two through a synthesis of the various research findings concerning the relationship of time to second language proficiency. More specifically, this paper considers the following two questions:

1. How accurately does starting time (the age or grade level at which the individual begins a course of study), independent of cumulative time (the adding up of the instruction time), predict level of proficiency?

2. Is there a linear relationship between the amount of cumulative time and level of proficiency? How accurately does the amount of cumulative time independent of starting time, predict the level of proficiency?

Starting Time as a Predictor of Proficiency Levels

There has been considerable research conducted regarding the relationship between age or grade at which learning begins, and the ultimate level of proficiency. In fact, not only has it been one of the most debated issues in language teaching theory, it is far from being resolved (Stern, 1983:361). The findings on this issue can be grouped into three categories; those that support the 'optimal' or 'critical age' hypothesis of a positive relationship between an early (child) starting age or grade and eventual achievement in French; those that refute the hypothesis of an 'optimum age' or 'critical period'; and those that support the hypothesis regarding a positive relationship between an older (adult) starting age or grade and level of achievement.

Associated with the belief in the optimal age hypothesis is the neurophysiologist W.G. Penfield (1959) who observed that complete recovery of language ability after brain damage was possible in children but not in adults. Penfield maintained that the child is at an 'optimum' age for language learning because of the neural plasticity of the child's brain which makes it receptive and well adapted to the development of speech mechanisms. The age of the learner is the most important factor in the language-learning process and, if language learning is to be successful, it must take place before the age of ten: "The brain of a child is plastic. The brain of the adult, however effective it may be in other directions, is usually inferior to that of the child as far as languages are concerned" (Penfield and Roberts, 1959:240).

This *critical period hypothesis (CPH)* was refined by Lenneberg (1967) who believed in a superiority of children over adults regarding language development and posited that the lack of specialization or lateralization of the pre-pubertal child's brain makes it more receptive to language development. Like Penfield, Lenneberg, based his observations on brain-damaged children. Although, Lenneberg's theories relating language ability to lateralization were questioned in later years, his basic hypothesis regarding the child's advantage in language development received a great deal of interest from researchers and the public alike.

Schumann (1975) argued that, because of affective factors, children are more permeable to language influences than are adults. From a cognitive rather than an affective point of view, Krashen (1981) and Rosansky (1975) maintained that the critical period of language development is before the 'Piagetian' stage of 'formal operations' at adolescence and that in older language learners, second language learning is blocked by cognitive factors. Certain empirical studies in second language learning particularly in the area of pronunciation and global comprehension are consistent with the hypothesis that children are better second language learners than adults (e.g., Asher and Garcia, 1969; Oyama, 1973, 1976, 1978; Seliger, Krashan & Ladefoged, 1975; Patkowski, 1980; Strevens, 1972; Kirch, 1956).

Many of these studies claiming the superiority of children as language learners were challenged on empirical and conceptual grounds. In relation to the studies of

Penfield and Lenneberg, Genesee (1988) argues that their evidence is based on the ability of neurologically impaired adults to relearn first language skills and is therefore not relevant to the ability of adults with healthy neurological systems to learn a second language. Other research has directly or indirectly challenged or provided an alternative basis for the critical period hypothesis (see Krashen, 1974; Molfese & Molfese, 1979; Lamendella, 1977; Seliger, 1978; Walsh & Diller, 1981; Snow & Hoefnagel-Hohle, 1978).

A number of studies have found empirical evidence contrary to the CPH. In a study by Olson and Samuels (1973) based on observations of immigrant children in natural settings, the authors concluded: "The general assumption is that younger children learn to produce foreign words with a more native like accent than older people. Not only is this assumption not supported by the test results but the trend is in a reverse direction favouring older students" (p. 267). Asher and Price (1969) compared the listening comprehension of children and adults using Russian as the L2 and found the adults to be superior to the children of any age group at $p < .0005$. Krashen, Long and Scarcella (1979) present evidence in favour of adult and older learners for age, rate of second language acquisition and generalize that: 1. adults proceed through the early stages of syntactic and morphological development faster than children. 2. Older children acquire meaning faster than younger children.

Burstall, Jamieson, Cohen, and Hargreaves, (1974) in a major longitudinal study in British primary schools, found that children exposed to a basic program of French from age eight did not reach a higher level of achievement than the children who began at age eleven and concluded that the findings did not support the view that there is an optimal age for foreign language learning. In a comparative study of the teaching of French as a foreign language in eight countries, co-author J.B. Carroll (1975) affirmed that:

There is no clear evidence that it makes any difference at what age or grade the student starts the study of French; if anything, students starting late in their educational careers make faster progress, other things being equal. That is, most of the evidence contradicted the commonly held assumption that students starting early have a special advantage.(p. 29)

Similarly, a large number of studies conducted in Canada comparing the learning efficiency of Early and Late Immersion students confirm these results and support the hypothesis that older children are more efficient language learners. Research in Montreal conducted by Genesee (1981) showed that the achievement of students after 1,400 hours or two years in the Late Immersion program beginning at age twelve was comparable to that of students after eight years or 5,000 hours in the Early Immersion program beginning at age five. It was only in the area of listening comprehension that the earlier starters appeared to achieve/demonstrate an advantage. Genesee summarizes these findings as follows:

That the two-year late immersion students achieved parity with the early immersion students despite the fact that the former had considerably less cumulative exposure to French than the latter at the time of evaluation implies relatively faster learning on the part of the older students and suggests, therefore, that beginning intensive second language instruction early in school is not necessarily

advantageous, other things being equal (...) these results corroborate those from studies of short term second language learning in conventional instructional programs in demonstrating that younger children are not necessarily more effective than older children...and, in fact, may make slower progress. (p. 125)

Swain (1987) provides an explanation for these results and argues that older learners are often more efficient than younger learners perhaps because of their cognitive maturity which may help them in the more formal aspects of language learning. Combined with this is the fact that older learners can transfer skills and knowledge already acquired from their first language to the second language context. Smythe et al. (1974), in reviewing the literature on the relationship between starting time and eventual achievement, conclude that: "it is a myth of contemporary folk-linguists that children are superior foreign language learners"(p.20). In an attempt to summarize the state of knowledge on this issue Stern (1983) concludes that

Learning may occur at different maturity levels from the early years into adult life. No age or stage stands out as optimal or critical for all aspects of second language learning (...) There are differences in the acquisition of different aspects of language (phonology, vocabulary, syntax, etc.). (p. 366)

In summary, although the debate on this issue is not yet over, we can affirm that the bulk of the empirical evidence does not support the hypothesis that an earlier starting time correlates with a higher level of proficiency than a later starting time. Recent evidence has refuted initial claims of a neural superiority of the brain of children with regard to language learning. In fact, a substantial amount of evidence suggests that, because older learners are more efficient learners, they may have an advantage over younger learners with regard to language learning. The results are not conclusive, however, and it is still not clear if this advantage (if it exists) holds true for all or only some aspects of language learning. It would seem then, that starting time, independent of cumulative time, is not an accurate predictor of the eventual level of proficiency in L2. It is quite possible that starting time could be an accurate predictor if there were more specific knowledge about this variable, and in particular about how it interacts with other variables. More research needs to be conducted in this area specifically in order to clear some of the confusion of the contradictory results of some studies and, in general, in order to further the understanding of the relationship of age to L2 acquisition.

Cumulative Time as a Predictor of Proficiency Levels

The second question posed in this paper seeks to identify the relationship between the amount of cumulative time and level of proficiency and to determine how well cumulative time correlates with level of proficiency. We can organize the findings pertaining to this question into four models; those which show a direct linear relationship between time and level of proficiency (an incremental model); those which suggest that cumulative time independent of starting time does not accurately predict the ultimate level of proficiency (older-age sensitivity model); those which suggest that there is not a strong correlation between cumulative time and level of proficiency (nonlinear model), and those which suggest that there are diminishing returns in the relationship of time to level of proficiency (diminishing returns or learning plateau model).

Smythe et al. (1974) in reviewing the literature on the relationship between starting time and eventual attainment conclude that: "... there is strong support for the position that the more time spent studying a second language the greater the probability that the individual will achieve a high level of sophistication in the language" (p.21). Lazaruk (1977) reported that the principal finding of the Ottawa-Carlton experiments on the study of French as a second language is "... that the more instructional time that is available, the more learning is likely to occur"(p.8). Based on the findings of the longitudinal study in British primary schools, Burstall (1974) concluded that the longer the period of learning, the higher the educational level of achievement. In relation to the findings of a study of English teaching in the Philippines, Tucker (1977), reported that: "The results indicated that English proficiency was directly related to the number of years English had been used as the medium of instruction" (p.34). In a report of a two-year research study evaluating the effectiveness and costs of different ways of teaching French, co-author Halpern (1976) found that two groups of second grade students with similar aptitude but differing amounts of classroom exposure to French learned different amounts of French. Those with the greater number of hours learned more than the other group leading the author to conclude that "when more time is provided for learning, more learning occurs" (p. 165). These findings clearly indicate a positive correlation between the amount of cumulative time and level of second language proficiency. There would appear to be a linear relationship whereby incremental increases in time result in incremental increases in proficiency.

In the Burstall (1974) study mentioned previously in this paper, it was reported that, with the exception of listening comprehension, regardless of whether or not the child learned French for five or eight years, comparable levels of proficiency were reached. The children exposed to French for five years from age eight reached equivalent levels of proficiency as the children exposed to French for eight years who began at age eleven. The Genesee (1981) study also referred to in the previous section of this paper reported results comparable to those of the Burstall study in that those with only 1,400 hours of study in French achieved comparable levels of proficiency with those students who had been immersed in French for more than 5,000 hours. Again the results favoured the older learners.

Dunkel and Pillet (1962) used standardized tests of formal grammar to compare two groups of American school children and found that the older group with only one year of study outperformed the younger group with five years of study. Oller and Nagato (1974) found similar results in a study in Japan. These findings show that, although time is an important factor with regard to the level of proficiency, it is very often not an accurate predictor of level of proficiency except perhaps if it is considered in conjunction with the factor of age or starting time. We should note, however, that these studies are not conclusive about what ages produce what levels; they simply distinguish between older or adult learners and younger learners.

Spilka (1976) conducted a study of the speech of a group of 20 early French immersion students' second language proficiency in grades five and six after six and seven years in immersion respectively. She taped their speech and compared it to the speech of classes of Francophone children of the same age. The immersion students had undergone the same evaluation procedure in the first four to five grades

so that Spilka was able to report the findings relative to a period of six and seven years. Mean scores were computed for both the control and experimental group for each grade on such items as the percentage of incomplete and incorrect sentences, the percentage of gender, verb, preposition, pronoun, and reflexive pronoun errors. An analysis of the results show that, with the exception of the two items, verbs and pronouns, the experimental group made a higher percentage of errors in grade six than they did in grade one. In almost all cases, the number of errors made by the control group decreased from grades one through six. If the results of this study are significant and not a result of errors in the evaluation procedures or the design of the study then they clearly indicate that the level of proficiency did not improve with time.

In a report on French programs in the Carleton and Ottawa School Boards, Stern et al. (1976b) concluded from the findings that "... the different time variations within the core programs have not led to any outstanding differences in language performance"(p.48). These findings and those of Spilka would suggest a nonlinear relation between time and proficiency. The results of other studies indicate that, although there may initially be a linear relationship between time and level of proficiency, eventually, diminishing returns begin to set in whereby there cease to be incremental gains. Studies by Cummins (1981), Oyama (1976, 1978), and Patkowski (1980) have shown that, beyond a five-year term of exposure in a natural setting, the relationship of time to level of proficiency becomes minimal.

Walberg, Hase and Rasher (1978) confirmed these results and postulated that the rate of acquisition of L2 diminishes with time. The sample for their study were 350 children of Japanese businessmen, university faculty and graduate students who had lived in the United States from zero to twelve years. The students completed self ratings and were also given ratings by their teachers. The first question which the results attempted to answer was whether or not the students gain in English language fluency in equal or diminishing increments with each additional USA month. An analysis of the results revealed that the gains in fluency and competency are made rapidly at first and more slowly as time goes on. The progression is equal for the first two months, five months, one year, the next two years and the next eight years. After this time, gains the same size as the initial ones take increasingly longer to reach. The acquisition rate is fast initially but the amounts of gain diminish with time. The authors depict this relationship between acquisition and time in a model which they refer to as the diminishing returns model and which they explain in the following way:

It seems unreasonable that children can continue making equal language strides if adults can learn a foreign language reasonably well in 1,300 intensive hours. Whether or not one subscribes to the early age sensitivity hypothesis, there would seem to be diminishing returns for children of all ages to exposure or experience in natural language environments and possibly the contributed environment of the school. It is well known that a very small number of different words comprise most of the oral and written discourse of all languages that have been studied. The word *the* comprises about 7% of the 5 million words in a large sample of school textbooks passages and shows this nearly constant percentage across grades 3 through 9; (...) Repeated exposure in such texts and even greater repetition in oral discourse would eventually lead to learning plateaus with respect to vocabulary and probably syntax. Rarer words by definition are repeated less often; and it is difficult to imagine how

steady, constant rates of vocabulary acquisition would be maintained in natural environments of learning. (p. 429)

These studies by Walberg et al. estimate that it is after eight years that diminishing returns begin to occur; however, this conclusion is on the basis of teacher and self ratings, and we must question whether or not ratings are accurate estimates of level of proficiency. Furthermore, these results are based on minority language learners in a majority language environment which leads us to question whether or not the results would be similar for English majority language learners studying French, the language of the minority. This is not to suggest that the results are not valid; rather it points to the need for more studies to see if the results can be replicated and to determine if they can be generalized to the study of French as a second language. There is also a need for further definition of the point at which the diminishing returns actually occur. Is it after five years as studies of Cummins (1981), Oyama (1976,1978), Patkowski (1980) suggest or is it, according to Walberg et al. (1978), after eight years?

These four models present somewhat contradictory representations of the relationship between time and L2 acquisition. It would be imprudent to choose one more than any other as being more representative of the relationship since no one category of findings is more conclusive than the other. The linear, incremental model suggests that, by computing the amount of time that a student spends studying a language, we will be able to predict the level of proficiency which he or she might eventually achieve. If this is true, then, why did the amount of time not predict level of proficiency for those students in the studies of Brustall (1974), Genesee (1981), Spilka (1976) ? Obviously, this model alone does not account for the differences in achievement in relation to time for the groups studied. If we combined this linear model with the age sensitivity model we could account for the differences in the findings of the first two groups of studies. By considering the interaction of age at which the person began the study of French combined with the amount of time of exposure, we could predict the eventual level of proficiency that the student might be expected to achieve. However, combining these two models would still not account for the differences between the first two sets of studies and the third set which found diminishing returns. If we were to combine the three models, then we could suggest that there is a linear relationship between starting time plus cumulative time and the student's eventual level of proficiency up to the point where there is a plateau or diminishing returns. However, even by combining the three models, we are not accounting for the results of the studies of Spilka (1976) and those reported by Stern (1976) which depicted a nonlinear relationship.

We are forced to conclude, therefore, that based on the review of the studies cited in this paper, we cannot clearly or definitively conclude that there is a linear relationship between the amount of cumulative time and level of proficiency or whether the amount of cumulative time can predict the level of proficiency.

Conclusion

The relationship of time to achievement is an essential issue which needs to be clearly understood in order to establish a foundation on which to base policy, programs and curriculum. Research has provided many answers to questions on this topic and has shown that starting age is not in itself an accurate predictor of level of achievement. It now seems that the optimum or critical age hypothesis favouring young children is not valid and that older children require less cumulative learning time because they are more efficient learners. Cumulative time does not appear to be an accurate predictor of achievement and, depending on the studies considered, there may be a linear or incremental relationship, a diminishing returns relationship, a nonlinear relationship, or a linear relationship which includes the variable of starting time as well as cumulative time.

Research might provide some answers to the remaining questions. Concerning the relationship between starting time and level of proficiency, research could attempt to define systematically the effect of different ages (not only younger/older, child/adult, or pre/post pubertal learners) on rate of acquisition and level of proficiency. Studies could be conducted on the effect of starting time and cumulative time on the different aspects of language in isolation and together (i.e., grammar, vocabulary, listening skills, speaking skills, writing skills, pronunciation, etc.). Longitudinal studies (at for example grades 1, 6, 9, 12) which estimate for each grade the rates of acquisition and the level of proficiency of the different skills might indicate how learning progresses and whether or not a plateau is actually reached and if so at what grades. Certainly, one of the most important questions needing to be answered is how time interacts with other factors such as cognitive maturity, attitude, motivation, teaching methods, aptitude, class size, etc. It would be beneficial to conduct research on the other aspects of time, such as time on task and time spent learning the L2 outside the classroom. This research could take into consideration general theories relating time to learning such as those elaborated by Carroll (1963); Bloom (1974, 1981); Frederick and Walberg (1980). Understanding the entire issue of time and its relationship to second language acquisition is central to understanding the entire process of language acquisition in general. It is a complex relationship which we are only beginning to understand.

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Intelligence and Education

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This belief was not constrained to a small group of propagandists but was a widely held belief advocated by prominent politicians and scientists. For example, in the Lincoln - Douglas debate, Lincoln stated:

There is a physical difference between the white and black races which I believe will forever forbid the two races living together on terms of social and political equality. And in as much as they cannot so live, while they do remain together there must be the position of superior and inferior, and I as much as any other man am in favor of having the superior position assigned to the white race (1).

Thomas Jefferson wrote "I advance it, therefore, as a suspicion only, that the blacks, whether originally a distinct race, or made distinct by time and circumstance, are inferior to the whites in the endowment of both body and mind." He contended that although blacks were inferior, their deprivation in intelligence was no measure of their rights. David Hume, the prominent English philosopher, advocated the separate creation and innate inferiority of non-white races and Charles Darwin wrote about a future time when the gap between human and ape will increase by the anticipated extinction of intermediates such as chimpanzees and Hottentots(2).

Prior to the turn of the 19th century, America lived in the shadow of European scholars, and subscribed to European theories and philosophies. The first great theory to be advanced in America was that of polygeny - the basic premise that blacks and Indians are separate species and inferior to whites. The first of the great polygenist was Louis Agassiz, a Swiss born naturalist who immigrated to America in the 1840's. There he became a professor at Harvard where he founded and directed the Museum of Comparative Zoology.

Agassiz's theory of polygeny argued that races were created as separate species. The Bible does not speak about parts of the world unknown to the ancients. The tale of Adam refers only to the origin of Caucasians. Negroes and Caucasians are as distinct in the mummified remains of Egypt as they are today. If human races were the product of climatic influence, then the passage of three thousand years would have engendered substantial changes. But modern races occupy definite, non-overlapping, geographic areas - even though some ranges have been blurred by migration. Agassiz wrote:

There are upon earth different races of men, inhabiting different parts of its surface, which have different physical characters, and this fact presses upon us the obligation to settle the relative rank among these races, the relative value of the characters peculiar to each, in a scientific point of view. The indomitable, courageous, proud Indian - in how very different a light he stands by the side of the submissive, obsequious, imitative negro, or by the side of the tricky, cunning, and cowardly

Mongolian! Are not these facts indications that the different races do not rank upon one level in nature. Social equality I deem at all time impracticable. It is a natural impossibility flowing from the very character of the negro race. For blacks are indolent, playful, sensuous, imitative, subservient, good natured, versatile, unsteady in their purpose, devoted, affectionate, in everything unlike other races, they may but be compared to children, grown in the stature of adults while retaining a childlike mind. Therefore, I hold that they are incapable of living on a footing of social equality with the whites, in one and the same community, without being an element of social disorder. Blacks must be regulated and limited, lest an injudicious award of social privilege sow later discord(3).

Samuel Morton was a distinguished scientist and physician in Philadelphia and was also the owner of a collection of some 1000 skulls. His goal was to test a hypothesis - that a ranking of races could be established objectively by physical characteristics of the brain, particularly by its size. His methodology consisted of collecting skulls, filling the cranial cavity with sifted mustard seed, pouring it back into a graduated cylinder and reading the skull's capacity in cubic inches. Later on, he became dissatisfied with mustard seed and used 1/8 inch diameter lead shot to achieve more consistent results.

Needless to say, Morton's findings confirmed American beliefs - whites have the largest brain capacity, Indians are in the middle, and blacks are on the bottom. Furthermore, among caucasians, Teutons and Anglo-saxons are on top, Jews in the middle, and Hindus on the bottom(4).

Gould reanalyzed some of Morton's findings and reported that Morton's summaries were a patchwork of fudging, finagling and miscalculation. In calculating averages for Indians, Morton included an extremely high proportion of small skulled Peruvians which had the effect of lowering the mean for that group. On the other hand, in calculating the average for caucasians, he omitted small-brained Hindus from his sample which had the effect of raising the average for Caucasians. Furthermore, half the skulls in the caucasian group belong to males, while in the negroid group, only 1/3 of the skulls belong to males. Caucasians also tend to be bigger people, and bigger people tend to have larger skulls. This does not imply that they are smarter. When Gould recalculated the averages, correcting for sampling and omissions, he found no differences between the races.

Following the ground breaking research of Agassiz and Morton, a new fever swept across America in the second half of the 19th century. This fervor was fueled by two trends - the development of craniometry, and the allure of numbers. The science of craniometry involved measuring heads (and later, bodies) with the goal of objectively ranking the races. Indeed, much effort was spent measuring heads and bodies of people from various races, and comparing them to each other and to apes. The conclusion was that blacks and other races, and women were inferior to white males, and that such differences were innate. This research was lead by notables such as Francis Galton.

Galton, in addition to being a scientist, was an accomplished mathematician. He had a passion for measurement, and it was under his guidance that the notion of quantification came to play an important role in the assessment of intelligence. Another of the prominent craniologists was Paul Broca. Broca was noted for his enormous care in generating data and his precise measurements. Broca began a search for means of measuring skulls to rank races. It should be noted, that such endeavours were often undertaken with a priori convictions that races could be ranked, and that the outcome of such ranking was really never in doubt. To this end they developed a series of measures on the skull.

First, they started by measuring cranial capacity - the volume of the skull. However, at one point, Broca became dissatisfied with the measure of capacity. He conceded that brain size and intelligence were not correlated for groups of superior intelligence but that the correlation was still strong for groups of inferior intelligence(5).

This was followed by the development of two more refined measures - the cranial index and the facial angle. The cranial index was defined as the maximum width to the maximum length of the skull. Relatively long skulls were thought to be indicative of superior intelligence and relatively shorter skulls were thought to be indicative of inferior intelligence. This belief was held with such conviction that Anders Retzius constructed a theory of civilization based upon the cranial index. Retzius believed that Stone Age people possessed relatively shorter skulls while the more progressive Bronze Age people who invaded and replaced them possessed longer skulls. This theory was supported by the fact that people in Sweden, England, America and Germany were found to have relatively long skulls. However, imagine the problem when it was discovered that African blacks and Australian aborigines turned out to be the world's longest headed people! Broca argued that the lengthening of the skulls in blacks occurred at the rear of the skull whereas for whites the lengthening of the skull occurred at the front. The front of the brain was thought to be responsible for higher order thinking, while the rear was responsible for more mundane functions such as involuntary muscle movement, sensation, and emotion. Hence, Broca constructed a neat little argument demonstrating the superiority of whites(6).

Another measure Broca adopted was the position of the foramen magnum. The foramen magnum is the hole in the base of the skull where the spinal cord passes through. In mammals, the hole begins at the base of the skull and moves to a position at the back of the skull by birth. In humans, it moves very little. In apes it moves more, so that it is further back on the skull. The general consensus was that the higher the race, the more forward the foramen magnum. Again, imagine Broca's discomfort when it was discovered that the distance from the back of the skull to the foramen magnum was the same for blacks and whites. And furthermore, since blacks tended to have longer faces, the foramen magnum of whites was relatively more anterior than that of blacks. The solution was to subtract out the influence of the longer faces, a sort of statistical correction. Having done that, Broca then found that the hole for blacks was relatively more to the rear than for whites and the problem was solved(7).

The work of these men has been very influential upon social policy and still carries weight within contemporary thinking. What we must keep in mind is the time period in which they were working - the late 19th century. These ideas are only 100 years old. Indeed, Hooten was still talking about measuring head circumference as a measure of intelligence as late as 1939! In fact, one of the variables Rushton measured in his famous paper of the mid-1980's, which created an uproar, was head circumference. These ideas are not that far behind us. The second point that we must keep in mind, is that these ideas represent influential and pervasive beliefs within the culture that we live. The idea of an innate entity called intelligence is a very dominant force within our society. And it can be traced back to the ideas of these researchers and their views. And it was from these men that intelligence testing was born.

Alfred Binet was initially interested in measuring intelligence, and he, like his contemporaries, began measuring intelligence by measuring heads. However, Binet became dissatisfied with the procedure - he recognized its inconsistencies and lack of real differences. Thus he was led to abandon the use of head circumference as a means of measuring intelligence. He turned to psychological methods and began to develop a set of tasks that would enable him to measure reasoning. He declined to give an exact meaning to the number that emerged on his test, and he recognized that it could become a number indicating something that could be labelled and perverted by misuse, teacher expectancy and the self-fulfilling prophesy. The ultimate purpose of the test was to identify those children who needed special help, and even cautioned teachers against hereditarian assumptions. The test was meant to identify students who needed help, and not for labelling(8).

Binet developed three principles for his tests:

1. The scores are a practical device; they do not support any theory of intelligence. They do not define anything innate. We may not designate what they measure as "intelligence".
2. The scale is rough, empirical guide for identifying mildly retarded and learning-disabled children who need special help. It is not a device for ranking normal children.
3. Whatever the cause of difficulty, emphasis shall be placed upon improvement through special education. Low scores shall not be used to mark children as innately incapable.

Unfortunately, American psychologists took Binet's test and used it to measure a single, innate, immutable entity called intelligence. The first of these was Goddard. Goddard translated Binet's test and articles into English and began to use the test to identify in order to recognize limits, segregate, and curtail breeding to prevent further deterioration of an endangered American stock, threatened by immigration from without and by prolific reproduction of its feeble-minded within. An unabashed hereditarian, Goddard wrote that "the chief determiner of human conduct is ... intelligence: that this process is conditioned by a nervous mechanism which is inborn ... that it is but little affected by any later influences except such serious accidents as may destroy part of the mechanism." This led Goddard to form such opinions such as preventing feeble-minded people from bearing children, and preventing the immigration of feeble-minded people. Given the nature of the test, this amounted to

the exclusion of almost any non-English speaking immigrant! (It should be noted that Goddard did back down on many of his views later in life)(9).

Lois Terman developed the Stanford-Binet test by engaging in statistical analysis to refine the items on the Binet test. However, Terman's major influence came about as an advocate for universal testing. Terman hoped to establish a gradation of innate ability by which people could be assigned to their proper stations in life. Testing soon became, and still is, a multi-million dollar industry. Terman decided that we must first restrain or eliminate those whose intelligence is too low for an effective or moral life. Next, Terman hoped that his testers would determine the minimum IQ necessary for success in various occupations. Substantial success, he suggested, would require an IQ of 115 or 120, which would effectively eliminate $\frac{3}{4}$ of the population from any opportunities for substantial success. An IQ of 75 or below would be an unskilled labourer. 75 to 85 would be a semi-skilled labourer.

Interestingly enough, Terman measured the IQ of 47 courier employees and found the average IQ to be 95. This low achievement in life, Terman suggested, was probably due to certain emotional, moral, or other desirable qualities. Some may have even been prematurely forced out of school due to economic pressures. What is noteworthy is that although he was hereditarian in his assumptions, he appealed to social and environmental factors as predictors of intelligence when evidence did not match predictions! As well, he found the average IQ of 256 hobos and unemployed to be 89, higher than that he advocated for firemen and policemen, a finding which seemed to refute his ideas(10).

But IQ testing really took off in a big way with R. Yerkes from Harvard University. As the first World War approached, Yerkes persuaded the Army to submit its personnel to IQ testing. Working with Goddard and other colleagues, Yerkes developed forms of the IQ test to be administered to the 1.75 million men in the army. While Gould suspected that the army never really made much use of the tests, the tests did have significant impact. The Army began to use tests as a pre-screening for officer training, perhaps one of the first instances of institutionalized screening of intelligence. Probably the most significant impact of his work was the development of methods for mass testing everyone.

With the development of mass testing came the development of standardized testing including the Scholastic Aptitude Test (SAT). With the advent of mass testing and the proliferation of the SAT, higher education began to adopt an appearance bearing remarkable similarity to the vision of Goddard, Terman, and Yerkes. In the 1950's American colleges began a process of screening applicants for selection based upon intelligence. For example, in 1952 the average SAT score for first year students at Harvard was 583, but by 1960 it was 687, a gain of more than 100 points. The trend, starting in the 1950's, was to identify the brightest and most talented individuals for admission into college with a doubling in the number of individuals from the top quartile of IQ attending college from 1950 to 1960(11). Furthermore, as more of the top students began going to college and university, the colleges began to sort themselves out to create a stratification within higher education.

The trends in American education suggest that the vision of Goddard, Terman, and Yerkes has come, in a very quiet and subtle way, to fruition. The identification

and selection of individuals with the highest IQ scores has led to the formation of a 'cognitive elite' in America which has come to, and is continuing to, separate itself from the masses, who are shaping American society, and are reaping the social and economic benefits of their intelligence. "The upper end of the cognitive ability distribution has been increasingly channeled into higher education, ..., thence into high-IQ occupations and senior management positions ... forming a new class.(12)" Members of this class have become, and will become, leaders in business, medicine, law, science, media, government, think tanks, and special interest groups while enjoying the privileges that accompany such status. Concomitantly, with the emergence of a cognitive elite is the development of an underclass whose members suffer from economic and social hardships such as high unemployment, high crime, and high illegitimacy. Membership in this class is defined by low IQ, and offspring of members of this class will, statistically speaking, continue as members of the underclass(13). The education system serves the function of identifying and nurturing highly intelligent children.

That the education system should come to be used to identify the most highly intelligent is the result of economic and social policy which is founded upon a strictly materialistic psychology. As a materialistic psychology has come to assert itself education has become a natural battlefield from which such a way of thinking can exert its influence. While certain groups seek to establish a basis of education in epistemology, (e.g., Paul Hirst), epistemological theories ``are neither necessary nor sufficient to establish conclusions about education. Epistemology may provide relevant considerations in determining answers to educational questions, but education is, at the bottom, based on ethics and politics, and even the content is politically determined(14). That is, currently the practice of education is a ideological mechanism that "encompasses and is built upon a particular theory or view of man and the world(15)" and seeks to instill in people that particular way of seeing the world. In constructing an education system and devising a curriculum, there is an implied concept of man and what is good for man. Education serves as an ideological mechanism which ``everyone is compelled to live through for a long period of time.(16)" The question that emerges is what sorts of views of humanity are embedded in the education system, and is it a view that has at its foundations a degraded notion of being human and the propagation of a materialistic psychology?

The power of education to deliver the will of the political elite has been taken for granted by those in authority, and this political will has come define education in a strictly materialistic sense by proposing that education is the pivotal means of wealth generation. "Indeed, there is now a new 'consensus' on both the left and right of the political spectrum which has defined education as the key to economic prosperity.(17)" For example, a report by the Science Council of Canada stated that in "an age when international economic success increasingly depends upon knowledge and technological innovation, universities need to engage more actively in economic renewal in Canada. ... Ways must be found to strengthen the role universities play in the economy. Universities must reorient some of their activities to provide the teaching and research required by the private sector ... they are the primary source of people and knowledge so urgently needed for industrial revitalization.(18)" These sentiments are echoed by the American President in a major address:

The key to our economic strength in America today is productivity growth. ... In the 1990's and beyond, the universal spread of education, computers and high-speed communications means that what we earn will depend on what we learn and how well we can apply what we learn to the workplaces of America. (19)

Consequently, education has come to be viewed as knowledge acquisition which is no longer an end in itself, nor is necessary for human growth, but a commodity for exchange. "The old principle that the acquisition of knowledge is indissociable from the training (Bildung) of minds, or even of individuals, is becoming obsolete and will become ever more so.(20)" But more importantly, there is a shift in the purpose and activity of education. Education is no longer about who we are, life, and the world in which we live. Acquiring the good through reason and understanding (e.g. Plato) has been replaced by using knowledge to attain materialistic ends. Traditionally, it is through education that we come to know who we are, where we came from, and our place in the world. Education is a distinctly human endeavour about the nature of our humanity. We have conferred upon us a unique dignity as beings. As humans we possess unique characteristics; we are moral, rational and free beings. Education is "the process by which man becomes man. ... The peculiarity of truly human life is that man has to create himself by his own voluntary efforts; he has to make himself a truly moral, rational, and free being" through the process of education(21). However, in a contemporary materialistic view education is a means of acquiring knowledge to generate wealth. Technique replaces self-awareness and education is no longer about who we are but how well we can manipulate the world.

Yet within a materialistic view, economic efficiency demands getting the most talented people into the most important and technically demanding jobs, regardless of social circumstances. If individuals had the ability to succeed, they would ascend the social ladder. The key to this ascent lay in the notion of intelligence. "It was assumed that in society there was a limited pool of individuals with high intelligence who were required to run the engines of industrial growth. This pool of talent needed to be selected and promoted through the education system because, as Halsey and Floud (1961) noted, 'education is a critical type of investment for the exploitation of modern technology(22).'" Intelligence was also the critical factor in Goddard's and Terman's social engineering. Goddard, for example, argued that democracy "means that the people rule by selecting the wisest, most intelligent and most human to tell them what to do to be happy.(23)" "In our society there is a pervasive tendency to equate accomplishment [or perceived accomplishment] with human value, or simply put, individuals are thought to be only as worthy as their accomplishments.(24)" Consequently, in a materialistic psychology intelligence is the most critical feature of education and the task in education is to search out the brightest, most capable students and train them for positions within society for the betterment of that society with the result that such students would reap the benefits and rewards of their talents.

The unfortunate repercussions of such a materialist way of thinking is a degraded notion of being human and a loss of our dignity. While it is a traditional American belief that one should achieve according to one's potential and be rewarded for one's accomplishments, the result of the reification of intelligence is a necessary degradation of the human. Those students who are viewed as less intelligent come to believe as though that they are less worthy than the smarter

students. They experience failure and feel considerable shame and humiliation in the process. If a person is not deemed intelligent, that person cannot enter into the cognitive elite and will be socially powerless and worthless. Once a man feels that he has no worth or that " I-have-no-significance. [and] I am unable to influence others. The next step is apathy. And the step following that is violence. For no human being can stand the perpetually numbing experience of his own powerlessness.(25)"

An education system which is built around the principal of identification and rewarding of intelligence is a system perpetuating the belief that intelligence is the cause of success and failure. Whether true or not, the belief that success and failure is due solely to ability is a belief that is psychologically crippling. Such a belief leaves students feeling worthless, because they are not valued either for who they are or worthless because they can't perform, and powerless because they are unable to effect any change(26).

The psychological constructs of worthlessness and powerlessness are crucial to understanding the modern condition and the social consequences that emerge. In feeling worthless the individual feels that he has no value, that he is not respected and has no sense of dignity. Such a person feels unloved. Yet, feelings of self-worth are critical for the healthy functioning of the human. Feelings of worthlessness are strongly associated with depression, personality and behaviour disorders, and suicide. On the other hand, feelings of worth are strongly associated with healthy behaviours such coping with difficulty, forming healthy relationships, and achieving success. In feeling helpless the individual feels and believes that he has little or no control over events that happen. His life is no longer in his control and the individual is powerless to effect any change in his life. Helplessness is strongly associated with worthlessness, depression, passivity, aggression and anger. Modern man loses his sense of self.

The loss of sense of self resulting from powerlessness and worthlessness cultivates a way of thinking and being that is symptomatic of this crisis, a way of being that the American psychologist Martin Seligman has called victimology. Individuals no longer accept responsibility for themselves. Rather, the trend is to adopt an 'external explanatory style' in which events are explained by external forces. If things go wrong, "it's not my fault!" In this way of thinking, the individual stops being an agent, indeed stops knowing he is an agent, and becomes a victim who feels helpless and worthless, with tragic results. "The psychological changes [that have occurred in the last 40 years] are even more frightening [than the physical changes]. Traditional American child-rearing in individual responsibility has been replaced by a self-esteem movement ... [and] our kids are imbued with victimology, which today has become the American way of blame. It is too routine for adults and their kids to explain all their problems as victimization. When a boy in trouble sees himself as the victim, this festers into seething anger. With easy availability of guns, it can explode as murder.(27)" Recent events in American schools seem to support, at least in part, this hypothesis.

Defining people by intelligence, then, has serious consequences. Yet, a more fundamental question remains to be asked: "What is intelligence?" Psychologists in the last century have been preoccupied with measuring intelligence at the expense of figuring out what it is they are measuring. To this end, the most recent theories of

intelligence emerging have a different view of intelligence than their predecessors. These are Gardner's theory of multiple intelligences(28), and Sternberg's triarchic theory of intelligence(29). Both have implications for the way we view intelligence, intelligence testing, and how we view ourselves.

Gardner's view of intelligence postulates that intelligence involves manipulating symbols. There are, at least seven different symbol systems, and thus seven different symbol systems - mathematics, language, music, bodily-kinesthetic, interpersonal, and intrapersonal. Furthermore, Gardner points out that ability or intelligence in one domain does not necessarily correlate with intelligence in another domain. Right away we can see this has implications for education. If Gardner is right, then we see that intelligence tests as currently designed are not testing all possible intelligences, but are just focussing on the mathematical and linguistic intelligences. Second, this theory has motivational consequences. If a person lacks one intelligence, it need not be the case that the person will lack intelligence in another domain. Hence, the opportunity exists for students to develop segregated and differentiated aspects of self and foster compensatory strategies to maintain self-worth. That is, a person can be a dummy in one area, but be competent in another. Opportunities exist for developing one's skills.

Sternberg's theory postulates that intelligence is comprised of three components: (1) a meta-cognitive component for planning, evaluating, and monitoring; (2) performance component in which tasks or skills are executed; and, (3) a knowledge-acquisition component in which students use various means for acquiring new knowledge. Sternberg's theory has implications for the way in which we view intelligence. Most importantly, Sternberg's view suggests that intelligence is not a fixed, innate entity. Intelligence can be improved with training. By teaching students to use strategies, such as comprehension monitoring strategies, self-instruction strategies, or various study strategies, students can increase their repertoire of cognitive processes comprising any one of the three components that make up the intelligence.

Gardner maintains the same view, although implicitly. Gardner describes tasks that measure intelligence as things like writing/telling a story, playing a song, or drawing a picture. The quality of the product in each one of these tasks can be improved by instruction - teaching students strategies for producing the product. For example, teaching students the rudiments of story grammars - that stories have a setting, theme, and plot, can improve their writing immensely. Given such conditions, Gardner's theory implies that intelligence is not only multi-faceted, but changeable as well.

Angoff argued that the question of the innateness of intelligence is irrelevant. What is noteworthy that intelligence, or certain aspects of intelligence, can be changed. Barrow argued for an educationally relevant definition of intelligence. Such a definition in his view constitutes reasoning logically, thinking critically, recognising relationships, discriminating concepts, and interpreting situations and people well. In looking at this definition, we see that the capacity to engage in each one of these behaviours is something that requires knowledge and strategies. What is more important, though, is recognizing that through effort and knowledge acquisition students can achieve success. This recognition leads students to form attributions to internal, controllable causes. Students stop feeling worthless and helpless and start

recognizing that they are agents and research has consistently shown that feeling of control and competency are predictive of healthy, adaptive behaviour(30). Research also shows that the most important factor influencing students feelings of competency and control is a caring and nurturing teacher. In other words, teaching has as its foundation a human interaction based upon respect and dignity, and not upon intelligence.

Endnotes

- (1), (2), (3), (4), (5), (6), (7), (8), (9) & (10) Gould, S. (1981) *The mismeasure of man*. New York: Norton & Company.
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THE NATURE OF STUDENT-TUTOR INTERACTIONS: A LOOK INSIDE A MATH HELP CENTRE

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Why and how do students attend the math help centre and what sort of learning and teaching takes place there?" This question guided the research that is to be discussed in this paper. The math help centre served as the focal point for the research. The setting is a room at a university campus in western New York. Its principal role is to serve the student population of three first year mathematics courses. These courses are designed for students who require some form of basic skills development in mathematics or, alternatively, precalculus preparation. Students in other courses are welcome to make use of the services offered. However, priority is given to students in any of the three courses.

The help centre is staffed from 10 a.m. to 4 p.m. (Monday - Friday) by tutors. The tutors include graduate students who serve as instructors for the three aforementioned courses as well as undergraduate students. The instructors are present in the math help centre two hours weekly. Most undergraduate tutors spend anywhere from three to five hours weekly in the math help centre.

Initially, the research was restricted to participant observation and informal conversations with some students and tutors. The observations allowed me to develop a sense of the help centre as an environment. Paraphrasing Taylor and Bogdan (1984), as an observer my intent was to establish open relationships with informants. "Working with informants is the hallmark of ethnographic fieldwork. It involves an ongoing relationship" (Spradley & McCurdy, 1972). The desire for such a relationship led me to visit the help centre regularly (about twice weekly for 1-2 hours on average per visit) over a six week period.

A total of 6 in-depth interviews were conducted. Five students and a tutor were interviewed. These students (Ann, Cliff, Ellen, Pam, and Shelley) all visited the math help centre 3 or 4 times weekly. The tutor, Carla, spends 10 hours weekly in the help centre. The transcripts of these interviews combine with my field notes from observations and informal conversations to provide the data for this research. It is this data that lays the foundation from which themes may develop. The spirit of the research experience is captured by the following quotation: "Our advice is to not hold too tightly to any theoretical interest, but to explore phenomena as they emerge during observations (Taylor & Bogdan, 1984)."

This spirit was exemplified by an early experience in the course of the study. While exploring the possibility of doing research at the help centre, I engaged in conversations with some tutors and the coordinator of the centre. It was suggested by them that a core group of students visited at regular hours because they had developed bonds with specific tutors. The tutors adhere to a weekly schedule that remains constant throughout the semester, thus making it feasible for such routines to establish themselves. In fact, I expected to be observing such relationships.

However, this expectation was contradicted by my early experiences in the context of the study. It appears that students have preferences but it is not so common for strictly one-to-one relationships to develop. Quoting Heidi, a tutor at the help centre:

There are some people I may see more of because they drop in when I'm here but it's not specifically to see me.

The matching seems to be more random than I had initially anticipated. The following excerpt from my field notes echoes this sentiment. The conversation was between a student named Bob (B) and me (J):

- J: Do you use the Math Place much?
B: Quite a bit.
J: Do you work with a specific tutor?
B: No, whoever is here but some are better.

This message was reiterated throughout the course of the study. The idea of random matching is expanded upon further along in the paper.

Let us return to the umbrella question: "Why and how do students attend a math help centre and what sort of learning and teaching takes place there?" Themes have been extracted from the data in an effort to address this question.

Three themes are discussed in this paper. The first of these concerns the random matching of students and tutors. The second deals with the routine nature of attendance. It is to be argued that these two themes are overshadowed by a notion of convenience. By this, I mean that what is convenient to the student takes precedence over their desires to work with particular tutors or to be present at specific times.

The crux of the paper rests with the third theme: the help centre as a crutch. We shall examine this theme in greater detail than the others. Data will be presented that suggests that students become dependent upon the help centre as a means of coping with mathematics.

Let us begin to address the research question through the medium of the data. The idea of random matching provides a starting point for our discussion. The following conversation with Pam, a student, suggests that preferences are tempered by convenience. That is, the timing of the visit to the math help centre takes precedence over the desire to work with particular tutors:

- J: Do you find yourself drawn to particular tutors or particular people that you try to work with when you are there?
P: Yes. I work better with some than others.
J: Does that in any way affect the timing - the times that you come to the help centre?
P: Oh that I come at certain times.
J: Knowing that certain people will be there.
P: Yeah I mean I come when it's good for me but you know yeah I like to look for certain people.

- J: So you wouldn't say that it influences the time. It's more that when you're there.
- P: Yeah (as I speak).
- J: You sort of will look for certain people.
- P: Yeah but I realize that certain people I work better with but it's just basically the one-on-one. It could be anyone.

A similar story is narrated by Ellen:

- J: Do you find yourself bonding with any particular tutors?
- E: Yeah - a couple of them that I know that they just help me more than the others do.
- J: In what way?
- E: Well two of them - their explanations, just the way they explain the problem to me - just it comes out a lot better. It almost seems like they know math a little bit more than the other ones, in my opinion. I don't really know if they do or not, but.
- J: So, now with these tutors has the bond developed a bit randomly also?
- E: Probably, yeah. I think so. It's just something that I notice just in that I mean I don't think it's a mutual one. You know what I mean. I'll notice that I'll be looking for a specific one and I'll wait for her if she is with someone else versus asking someone who I don't think really explains it as well.
- J: Would you say that you attend the help centre at certain times because these people are there?
- E: No, only when it's convenient for me. It just so happens that they're usually there - like I know one isn't there on Monday, Wednesday and Friday when I'm there but then two times I've been there on Tuesday she's been there.

The voices of students indicated that they indeed exhibited preferences. However, these preferences were secondary to their desire to be present in the help centre at times which were convenient to them. The following excerpts from interviews with two students, Shelley and Cliff, lend further support to this idea:

Excerpt 1

- J: Have you been developing a bond with particular tutors?
- S: Going to certain ones?
- J: Uh-huh.
- S: Yeah, I guess so. I think that some do explain things better. They just are better teachers. People get things across easier than other people do. Yeah there is a difference but I don't say get away if they come up or scram if I don't like the way they explain something.
- J: You don't fix your schedule based upon who will be there.
- S: No.
- J: You work with whoever is there.
- S: (laughing) I'm not that organized to fix my schedule like that.

Excerpt 2

- J: Have you found that in going to the help centre that you have developed any sort of special bonds with particular tutors?
- C: Yeah. Sometimes you know you find certain tutors can explain pretty good and certain tutors can relate to you better than other ones, you know, which is common.
- J: How do you attend the help centre? Do you attend pretty randomly or do you tend to have a routine that you follow?
- C: Mainly I'd say in between routine and random. Usually I come whenever like after class, like after my math class, or early in the morning. Like if I have an hour break I'll come in between. Or sometimes I'll just come if I get the chance to come.
- J: So when you come to the help centre it's not really determined then by who the tutor is - or do you find yourself coming because so and so will be there?
- C: No, I just come because I have a break or if I am available to come but I'm under no obligations. Or if I really just need to learn a problem, I'll come. So it depends on the person. [OC: Cliff meant that the timing of the visit would determine the person with whom he'd work.]

Recall that one element of the research question concerned itself with "how" students attend the math help centre. That is, do students attend in some random manner or do they integrate regular visits into their schedules in some form of routine? Again, the bells of convenience rang loud and clear through the data. The convenience that affected the nature of student-tutor relationships also exhibited itself through the students' descriptions of routine visiting patterns.

In the preceding conversation with Cliff, he described his somewhat routine attendance. In doing so, he clearly stated "I'm under no obligations." The emphasis was on convenience. Consider the following excerpts from conversations with two other students, Ellen and Shelley respectively:

Excerpt 1

- J: How do you attend the help centre? By that I mean do you make it part of a routine for you or is it some place that you just go to randomly?
- E: It's a routine according to my time schedule. I commute so I don't want to come up here unless I absolutely have to. So when I have free time usually 11-12 or whatever Mondays, Wednesdays, and Fridays. That's usually when I come. Only once in awhile if I'm really having trouble or if we're having a quiz or a test coming up, then I'll come in specially.

Excerpt 2

- J: How do you attend the help centre? By that I mean do you attend it in a sort of routine as part of your schedule or is it pretty random?
- S: I'd say it's more routine now. Well I don't have a set schedule. I'm trying to do that but I can't say I do. It's just try to get in a couple of days a week.

Probably I've been in more now than I ever have because it gets harder and harder.

Another student, Ann, explained that she attended the help centre in a routine manner:

- J: How often do you tend to use the help centre?
A: Every day or sometimes I'll skip a day if I really understand the assignment well.
J: Do you use it at a particular time each day?
A: Usually at the end of the day when my classes are over. I'll spend maybe a half hour to an hour there.

As a tutor, Carla observed the preferences of students. She describes her observations:

- J: Is there generally consistent use of the help centre Monday to Friday?
C: It seems like Mondays, Wednesdays, and Fridays are more busy.
J: Is that do you think because they have math on those days?
C: Yeah. It's all to do with their schedules.

My own observations did not pick up on the strong bias towards routine that has been expressed through the comments. Although the observation times varied somewhat, I did not tend to see the same people each week on a Monday morning between 10:30 and 11:30 or on a Wednesday afternoon between 2 and 3 o'clock, for example. I was usually present at those times during the course of the study. In fact, four students failed to show up for interviews at agreed upon times. (One of these interviews was conducted when we met another day at the help centre). These students selected times at which they would meet me in the help centre. Quoting one student:

Let's meet at the help centre because then if I forget about the interview, I'll be there anyhow. I'm usually there at that time.

Why were these people unreliable? I can only conjecture that they planned to be there but something else came up that was more important to them.

A self-centredness expressed itself through convenient selection. It is like having a routine but...or wanting to work with a particular tutor but... The help centre certainly played an important role in the day to day academic life of many students. Some spent as many hours in the centre as they did in class (three and a half hours weekly). The question "What brings you to the help centre?" produced responses such as:

Shelley: Well I need extra help. It's hard to do it on my own and I think it's just easier when you know you have somebody there to work with. It sort of disciplines. For myself it's hard for me to just do it at home and it's better if I come into a separate place - I don't know how to explain it but a place where it's quiet and everyone is doing the same thing more

or less and obviously if I have a question, I can have it answered. I can't answer my own question at home.

Ellen: Basically to help me with my homework because there is no point in me sitting at home you know wasting time for like 2 or 3 hours or whatever when there's people there who are qualified to help me work through the problems.

Jeanette: I don't get stuck as much.

The comments of Shelley and Ellen reflect a dependency of sorts. In reviewing my field notes, I came across an informal conversation between Carla and myself. This took place at the outset of the study. The following few lines are quite telling:

- C: People who come by regularly tend to do less work.
J: Do they become dependent on you?
C: Yes. I'm interested to see what you find.

Could it be that students utilize the math help centre as a crutch? Consider the following scenario. Two students, Patsy and Lloyd, are both visiting the help centre for the first time. There is a copy of a take home test on the bulletin board. An attached note informs tutors that they may assist students with the test. A conversation transpired among the three of us:

- J: Why did you come to the help centre today?
P: We had a take home test. I have some questions. I want to get the correct answers but I also want to understand how to do them. They will be tested again in the final.
J: Is that why you're here, Lloyd?
L: Yes. The take home test.
P: I usually go to my teacher for help. But I didn't think it was fair to ask her lots of questions about the take home test.

Philip regularly visited the help centre. As he was preparing to leave one morning, he shared these comments:

- J: You use the help centre a lot.
P: Me and math don't get along. I work better here.
J: Do you come here as a form of discipline - so that you'll work more effectively?
P: No. I can't do the math on my own. I can do it here but when tests come, I can't do it.

My final interview was with Carla. At the time of the interview, I had no recollection of her earlier comment about regular students not working as hard. However, the issue of dependency surfaced. She identified students' need for confirmation as a reason for coming to the help centre. The issue of self esteem was raised:

- J: What's your perspective on the students that use the help centre in terms of their backgrounds or what's bringing them here?
- C: Well it seems like lots of different people come in here but a lot of the people who come in regularly have lots of trouble with math - like it really scares the heck out of them. They are the ones who show up all of the time and they are the ones that don't have so much problems with the math. Just their self esteem I think. They just need to be told, yeah you're doing it right. That's what I think.
- J: How would you describe the learning that takes place in the help centre?
- C: Learning to trust themselves. I mean there's personal things like trusting you're going to get the right answer. Or that when the answer in the back of the book is wrong often, to be able to trust yourself that you did it right...

Further along in the interview...

- J: How many students would you say, in the afternoons, that you see, come in here 3 or 4 days a week?
- C: I'd say about 12 that come in a lot. I'd say half of them don't really need to be in here. I'm glad they are but it's not for math. It's just for getting their confidence up.
- J: Yeah. If you were able to change something about the set up here, in terms of the way students interact with tutors, is there something that you'd like to change/see changed?
- C: I'd like to see more, as I was talking about, more interaction of the students instead of just talking to them. I would like them to get more involved in the process of what they're doing. That's hard because it would be so easy for us to sit down and just do one of these problems and say here's the answer but then it does absolutely nothing for them. So I'd like to see more of that, I think. But some of it is going on so I don't know what I would change exactly.

Carla's depiction of students as passive learners seems to be reasonable. Ann used the phrase "they'll show you how to do it" in an interview. When asked to explain what she meant, Ann replied:

They'll actually sit down with a piece of paper and look at the problem you're doing and tell you exactly what you're doing wrong for each individual problem which the teacher obviously doesn't have time to do in a classroom situation.

One day I found myself observing a student, Barbara, and a tutor, Marsha, who happened to also be Barbara's instructor. Barbara seemed confused. The following dialogue ensued:

- M: If you believe me that this is standard form, you would erase everything you wrote.
- B: (no response)
- M: Erase everything on the page.[OC: Barbara erases the work and Marsha proceeds to instruct her on how to do the question.]
- B: I see now.

- M: Is that completely factored?
B: Yes.
M: Set it equal to 0. Is it fully factored?
B: Yes.
M: No, it isn't. [OC: Barbara smirks and completes the factoring.]
M: Are you trying to do things too fast. People that take more time and write neatly tend to make less errors.

It seemed like the help centre offered a reliable source of support to these students. However, its real function may be to act as a coping mechanism - a crutch on which one could rest. With respect to tutors, Ellen had this to say:

...you know they're not the replacement of a teacher over there but I mean it's a lot better than struggling by myself.

When Ellen was invited to add any final comments at the conclusion of her interview, this is what she said about the help centre:

They've been doing their own surveys I guess about having it continue and I think it definitely should. It definitely has helped me because there have been some homeworks (sic) that I mean I've had no clue as to what to do. Then I'll go in and they'll help me through it and then I'll see how it's done and then I can do it myself and then you know it's done.

Carla spoke about the learning objectives of students who used the help centre:

- C: Other people they seem like they want it as a crutch. There are a lot of people who do their homework in here. They want to be able to have it checked in case they come up with problems. I'd say most of them are that kind. They have a difficult subject to get through and they just want someone here.
J: Do many of the students come in here with the intent of saying "Look at I don't understand a topic (e.g., inequalities). Can you help me with inequalities?" or is the help they want generally geared to specific question?
C: Most want help with a question in the book but sometimes it will turn out that they actually do want help with a subject but they'll never come out and say it - hardly ever.
J: So that you're saying as the tutor you would pick up that they're looking for help beyond that question.
C: Right.

Here we have evidence that places the responsibility on the tutor to root out the question that the student may really want to ask. The student is playing a passive role in his/her own learning process. The metaphor of the passive student leaning on a crutch seems to categorize much of the learning that is taking place in the help centre.

Conclusions

Initially I set out to shed insight on the following question: "Why and how do students attend the math help centre and what sort of learning takes place there?" In developing the question, it was the learning and teaching aspects which interested me most. However, this paper may not reflect that. Why?

Insight into the nature of learning and teaching has been gained through the discussion of each of the themes; however, the paper has taken a different flavour the one I might have anticipated before delving into the data. The dependent nature of the student population raises concerns about mathematics education. My experiences as a mathematics educator have led me to believe that the teaching of mathematics as a product oriented subject leads to increased levels of dependency. In contrast, teaching which places greater emphasis on process provides students with greater potential to adapt their knowledge. This conceptual basis reduces the dependency upon others for ideas and insight.

What are the implications for the help centre? If dependency upon the centre is perceived to be undesirable, then tutors and instructors may consider shifting the emphasis of teaching and testing from product towards process. I have seen various examples of tests. In my opinion, these tests have been extremely product oriented. The name of the game appears to be getting the answer through the use of algorithmic procedures. If this is the gist of the game, then students have seemingly learned a strategy that allows them to work effectively within the rules.

While chatting with Cliff about the nature of questions and learning in the help centre, he provided further insight into the role of the help centre in his own academic pursuits. His assessment of the situation indicates that his personal strategy is in place:

...O.K. when I'm going for a test or a test is coming around, and I realize a certain section I was weak in, 'cause a lot of times you try 'cause we get a lot of homework and it's like you got to keep up with the homework trying the homework you get, you know. I tend to worry more about the homework and the grade. It's like I have to finish my homework. But when it comes test time and she, the teacher, kind of slows down on the homework you know you have to think about what subject, you know what chapter you were weak on and then you go back and tell them "Could you teach, you know help me with this chapter all over because I think a lot of things I didn't understand but I had to go by it to keep up you know?"...

It is not my desire, nor is it my place, to judge the math help centre. Though I must confess that it disappoints me to see more students who perceive mathematics as a discipline defined by right and wrong answers. The need to be right brings out a body of students who rely heavily upon the help centre.

I wonder if the instructors would be open to placing greater emphasis on process in their teaching? Or are they people who excelled in the same game? Are mathematics teachers open to exposing their weaknesses? Excellent teaching of

mathematics requires a strong conceptual basis. Outstanding performance on product oriented tests commonly does not demand such understanding. The dependency level of the students suggests to me that they have not been encouraged to develop a conceptual knowledge in their mathematical experiences at university or other levels of education.

I would like to close with a challenge to take risks and experiment with a process oriented emphasis. When that "I can't do this" becomes "Wow! I got it!", students feel proud of their accomplishment. That is how self confidence can grow!

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SECONDARY AND TERTIARY SCHOOL CONSTRUCTIONS OF ENGLISH STUDIES IN ATLANTIC CANADA

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A sign over a door in the Arts and Administration Building at Memorial University of Newfoundland announces the Department of English Language and Literature. There is a tacit understanding about both the nature of courses and the structure of debates that take place within the department. Literature, in any of its many contested forms, provides the backbone for departmental calendar entries; the English language, its structures and nuances, round out the department's academic parameters. Baccalaureate programs are devised based upon this traditional liberal understanding of the discipline. Until very recently in Atlantic Canada, this constructed definition of English is what high school students, parents, school officials, and teachers of English understood to be the boundaries of the discipline.

Starting in the early 1990s, a significant change began to take place in how secondary English language arts curricula were constructed and taught. Classroom teachers began to be guided by theories of language and literacy that were linked to the social sciences and to social learning in particular. University notions of English, that is as a discrete subject, no longer guided the building of Atlantic Canada's secondary school English programs. Efforts to dovetail objectives with tertiary English department requirements and regulations were severed and new links forged with computer technology, genre, and media studies. This silent coup left new and veteran secondary teachers of English scurrying to prepared materials that supported the objectives of the new curriculum.

The teaching of English as a discipline, when compared to history, mathematics, religion, and some of the sciences, is relatively new. Applebee (1974) traces the subject's traditions back about 130 years. In the United States, English (the study of literatures and language) evolved out of the 1873-74 Harvard University entrance examinations. States Applebee, students were to write a composition on

one of the following works: Shakespeare's *Tempest*, *Julius Caesar*, and *Merchant of Venice*; Goldsmith's *Vicar of Wakefield*; Scott's *Ivanhoe*, and *Lay of the Last Minstrel*. This requirement institutionalized the study of standard authors and set in motion a process which eventually forced English to consolidate its position within the schools (p. 30).

The writing of university set entrance examinations structured the content and form of the discipline within secondary preparatory schools and imposed upon those involved in the discipline a clearly understood purpose for its continued study.

The teaching of English in Britain evolved from different roots. The genesis of English studies began in various colonies as a form of indoctrination and subjugation. Morgan (1990) documents that English in Ontario used language practices at the level of theory to set language and literature cultural policy for the province. Yeoman (1990) reports that the Department of English at the University of Nigeria is being closed because of its links to past colonial oppression. The British literary canon and

the teaching of written and spoken English worked its way back to the schools and universities of the British Isles around the middle of the 1800s. The setting of Oxbridge entrance examinations required grammar and public schools to teach a literary canon and appropriate composition skills to allow students to pass examinations and gain entrance to various tertiary institutions.

This traditional understanding of what is at the core of an English program lives on in the universities of Atlantic Canada. Regional electronic university calendars invariably describe English courses as either the study of various European, Irish, or North American literatures, or the study of composition and/or language. An analysis of the English degree requirements in the calendars of the University of New Brunswick, the University of Prince Edward Island, Acadia University, and Memorial University of Newfoundland reveals the preparation future teachers of English acquire as they work toward graduation. In general, students are required to complete between twelve (MUN) and fifteen (UNB) courses chosen from various periods in the history of the western literary canon. All four universities require a course in Shakespeare. UPEI requires a course in Old or Middle English while others require a course chosen from amongst the literature of the 15th, 16th, or 17th centuries. Two universities, UNB and MUN, require a course in English language and rhetoric. Acadia requires students to select two courses from amongst 20th century British, American, or Canadian literature. UPEI requires either an American or a Canadian literature course while UNB and MUN have no requirement in these areas. On average, half of a student's program is made up of electives. Typically, English majors have a diverse collection of courses and might have built a program that shares little with other matriculating students. Striking is the lack of a degree requirement in any Canadian or Atlantic literatures. Thus, the only course that future teachers of English can be said to have in common is a course in Shakespeare. No negative judgment is intended or leveled at this approach to the study of English language and literature. Indeed, a cursory examination of English programs in the universities of western and central Canada (Universities of British Columbia, Alberta, Saskatchewan, Western Ontario, and Brandon University) indicates the above description to be quite representative of degree requirements. What is consistent within English degrees is the structure of the literary theory and text analysis that students experience. Since the 1970s different literary theories have been added to New criticism. Structuralism, post-structuralism, Marxist, feminist, deconstructionist, and constructionist theories of text analysis are the tools English majors now use to examine the canon.

University conceptions of English and hence literacy, what Myers (1994) calls decoding/analytic literacy, is typically marked by generic concepts delivered to passive learners through textbooks or anthologies. In turn, students studied the material individually and reproduced it by demonstrating their understanding through pencil and paper tests, analytical papers, or tutorials. The century long dovetailing of university and secondary school conceptions of English studies, and associated notions of literacy, lasted until the 1980s. In this decade teachers of secondary English started to use other theories to examine texts with their students and to accept reader response and other forms for students to demonstrate the depth of their textual engagements.

This new way of teaching and learning led decoding/analytic literacy to give ground to transactional/critical forms of literacy and was spurred on by such scholars as Rosenblatt (1978), Iser (1980), Crossman (1982), and Sholes (1985). Individual learning succumbed to collaborative learning in schools, preconstructed learning outcomes gave way to student constructed meaning, the quest for the ultimate literary criticism gave ground to confirming and deconstructing personal and aesthetic readings of texts. The 1980s also began to see the inclusion and use of a variety of nonprint texts (music, film, television, photojournalism, etc.) in the secondary English classroom. Viewing was added in numerous constituencies to the discipline's traditional secondary school strands of reading, writing, listening, and speaking.

The 1990s have seen the inclusion of representing (multimedia presentations, web pages, 3-D constructions, models, etc.) within the parameters of secondary English language arts. Representing has brought the discipline's core strands to six. More recently, a seventh strand has appeared. Information manipulation through computer connections is appearing in various revised English language arts documents (see for example the high school documents of the Western Canadian Protocol-Common Curriculum Framework and the Atlantic Provinces Education Foundation).

Thus alongside traditional liberal university English department conceptions of what it means to be literate, have been added visual, media, electronic and information literacies. Canadian secondary school students are now expected to ?read? not only books, but also the world and to evaluate and respond to an ever expanding variety of texts. These texts appear in a cacophony of Englishes that are marked by variances in register, accent, subcultural style, origin, and technical nuances. Kalantzis and Cope (1997) and the New London Group coined the word 'Multiliteracies' to explain the negotiations students engage in as they navigate through interconnected community, entertainment, and working lives. While secondary students are still expected to respond to their readings in traditional ways, new curricula objectives would have them responding to texts in an infinite number of constructed multimodal forms.

The new parameters of English language arts in Atlantic Canada's secondary schools are marked by the four traditional core strands from an earlier time and three additional strands. It is important to understand that for instructional time purposes listening, speaking, reading, writing, viewing, representing, and technological information manipulation are all treated as equals in the curriculum. While the core strands of the discipline have been increased by 75%, what is to be read has greatly expanded into media and computer accessed information and texts. By including viewing and representing strands, the ways students of English are expected to demonstrate their understanding of texts has experientially increased. In this reconstruction of the discipline, various literatures are having to share space with, and surrender ground to, what the Atlantic Provinces Education Foundation (1997) documents call 'communications'. Indeed, the fictive world of literature is no longer central to senior secondary English education. The new vision challenges tacit academic conceptions of the workings of the discipline. It is a conception that has broken sharply away from the university's notions of what it means to study English by including postmodern, commercial, entertainment, technotainment, and networked discourses. This new vision relies greatly on technology to both find and create the

texts used in instruction. It is a vision that will force teachers in Atlantic Canada to notice the fracturing of English as a clearly delineated subject.

Clearly, what is emerging is a new conception of English that is much broader, more inclusive of a variety of texts, and radically different from past or university conceptions of the discipline. With its goal of balancing more traditional works with more contemporary ones, including works which bring new or previously neglected voices into the classroom, and its call for alternative ways of knowing and being, a secondary curriculum emerges that is broad in both scope and vision. How university English departments adjust to the English education that secondary students have experienced remains to be seen.

Meanwhile, the difficulties of teaching traditional English programs is becoming apparent at the end of the century. Goodwyn, Adams and Clarke (1997) use the following quotation from a British teacher with eight years' experience to demonstrate both the cultural forces at play and the difficulties of teaching traditional book-based English as media and technologies impact classroom discourse:

We are moving away from a literary, book-based culture. It's a general move, shift in youth towards television, video, computer games in their own life ? out of school you're fighting a society that is moving away from literature towards a leisure-based, easier culture, and the reading and literature themes look too hard ? we are between the generations, sort of juggling both reading and writing alongside IT (p. 54)

The growing gap between tertiary and secondary conceptions of English is not a minor one. Peel and Hargreaves (1995) found in their interviews with experienced teachers of English in Australia, England, and the United States that many of them "believed the gulf between secondary and high education to be even greater than the gulf between primary and secondary" (p. 41). This new vision brings into question the appropriate prerequisites new teachers of English should have if they are to successfully teach the various parts of the new regional English curriculum. A minor in cultural, media, and/or computer studies could become a requisite for entry into Atlantic faculties of education.

English methods professors who are aware of changing curricula and the gradual change in secondary constructions of English may understand the work English departments are doing but they do not necessarily vision English the way their colleagues do in the Arts faculty. Dillworth and McCracken's (1997), in a survey of United States English and English education professors, state that many students arrive at college to "quickly discover major differences in outlook among their English and English education professors, differences not only about what is significant in the discipline but also about the fundamental procedures for constructing significance" (p. 14). For Atlantic Canadian students who enter consecutive degree programs it is key for them to be able to spot and understand the divergence of the two discourses and understand how new regional curriculum documents conceptualize English education.

In this decade, English language arts, probably more than any other school subject, is being buffeted by a variety of forces that are questioning received culture

and linguistic forms. Some English language arts educators are beginning to ask who will be drawn to major in English and subsequently go on to become its teachers? There is a call from poets and authors to maintain the distinctiveness, the separateness of English from other disciplines; to not lose sight of the textual experiences first found with poems and in books. A widening gap exists between those who feel English is about a liberating aesthetic engagement with fictive texts, those who feel it is about ideas and patterns of literacy and reading, and those who see it incorporating the digitalized worlds of cyberspace.

Until tertiary and secondary constructions of English come more into line it is important that English methods professors and their students understand the gap between the two worlds and explain the different constructions of those worlds. Dillworth and McCracken (1997) use the following quotation from an English education student as an exemplar of the various competing ideologies an English education student faces in trying to develop a personal philosophy toward English education and bridge the gaps between worlds:

At nine o'clock on Monday morning I hear that Shakespeare was the greatest writer of all time; at ten o'clock I laugh along with my professor about the obvious limitations of a canon of dead white men; at noon I revise my essay in accord with Professor Smith's directions; at two o'clock I listen to my methods professor tell us not to appropriate our future students' texts. On Tuesday, I visit the schools where they tell me to pay no attention to what they say at the U, since anyone not in the schools every day has no idea what's going on in the real world (p. 7).

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Career Guidance: A Shot in the Dark

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Abstract

This paper examines briefly the sociopolitical and philosophical bases of career guidance. It identifies its pragmatic roots in a political era that has passed and is characterized by discrete, decontextualized activities aimed broadly at fostering development. I maintain that specific elements of career guidance erroneously assumes a transcendent view of self that is knowable through objective means. This dominant discourse of career guidance is prescriptive and, it is argued, only one among many possible discourses of the self. While specific alternatives are not proffered, the constructivist view is highlighted as one way of furthering the conversation about career guidance, though it too engages in a self-contradictory language game characteristic of the epistemological world-view.

Systematic career guidance, and more recent views labelled "constructivist" approaches (Peavy, 1994), certainly do not comprise the final vocabulary on the topic. This paper examines the nature and place of career guidance within the culture of education. It does not offer alternatives; rather it serves as an expression of "curiosity about possible alternatives" (Rorty, 1989). Engaging in an alternative discourse entails a sort of leveling of the dominant systematic approach. Specifically, the incommensurability of systematic career guidance with the cultural psychology perspective will be proposed by focusing on two points:

1. Career guidance continues largely to ignore its sociopolitical and cultural roots.
2. The philosophical basis for career guidance assumes the existence of a core, unified self capable of self-knowledge.

The dominant discourse of career guidance in Canada may be described as a "systematic" view. It proceeds along three broad strategies of engagement with students: (1) Providing students with information, as opposed to stimulating active searching; (2) Utilizing tests as objective measures of student abilities and aspirations; (3) Assuming the student as a discontinuous, discrete knower of self. It is characterized by coordinated programs that commence with elementary school-aged children and continue throughout the educational lifetime of the individual. This planned approach is outcome based, relying on clearly stated objectives and evaluative procedures. Systematic, or comprehensive, approaches "endeavour to specify clearly the results sought and the specific methods by which such results will be obtained" (Herr & Cramer, 1996, p. 46). It should be noted that not all school career guidance is conceived as a systematic approach. And there are specific elements of career guidance that do not or cannot adhere to programming.

The philosophical traditions underlying the systematic approach to career guidance illustrate a view of humankind that asserts the existence of a core self, an essence, and implies the possibility that we can be knowers of the truth about ourselves and the world by engaging in structured and objective inquiry based on

epistemologically-centred philosophy and positivist traditions. It also possesses an ethic: it proposes a moral obligation to engage in guidance activities since gaining self-knowledge will allow us to be better citizens.

It would be tempting merely to describe this view as paternalistic, but this would inadequately reflect the deeper issue inherent in such a view. A basic assumption is that there is a knowable human essence, a self that exists and that can be identified in its objective core. Further, individuals can achieve self-knowledge with the assistance of another who possesses the necessary tools for uncovering this truth about the self and the world. The view also ignores the significant cultural bias that links self-knowledge with happiness and that ignores the plight of millions of children in the non-Western world who have more pressing concerns such as food, shelter, basic human rights, and a clean environment (See Apple, 1996).

Contemporary conceptualizations of career guidance appear to be linked to the economic and political decisions taken by the American government in response to the threat posed by the then Soviet Union, i.e. the space race, the arms race, and the perceived decline in American superiority in maths and science (Shertzer & Stone, 1981; Vanzandt & Hayslip, 1994; Stone & Bradley, 1994). Historical accounts of the American guidance movement have noted earlier important events in its chronology. However, formal funding, widespread training, and articulated programs of career guidance counselling proliferated in the U.S. following the events culminating in the Cold War. Of course, the appeal to democratic virtues is linked to modernist notions that value individualism, empiricism, and competition. As Davis (1996) notes, "the desire for progress lies at the core of all modern educational philosophies" (p. 141).

While progress itself is not inherently a bad thing, contextualizing career guidance within an ideological drive toward political hegemony and cultural dominance, where the parameters constituting progress are ill-defined and unpredictable, casts it in the guise of social Darwinism. Notwithstanding the recent geo-political changes that preempt such a system, the questionable effectiveness of career guidance programs demands critical inquiry into the "privileged sets of descriptions" (Rorty, 1996) employed by contemporary guidance counsellors. For example, how does career guidance counselling confront the inequities apparent between the rich and the poor in Western democracies? It is ironic that a popular textbook on the topic of career guidance documents the need for more systematic career guidance services based on the results of surveys conducted by business organizations citing the "growing problem of alienated, disadvantaged, disconnected, and other at-risk youth" (Herr & Cramer, 1996, p. 414). Having institutionalized a system that perpetuates the uneven distribution of wealth, the architects of systematic guidance counselling criticize the results and call for more of the same. In reality, this succeeds only to reproduce the cultural status quo (Bruner, 1996).

Vanzandt and Hayslip (1994, p. 3), in a textbook focusing on programmatic elements of guidance counselling, pose a series of questions to encourage the counsellor to think about their own philosophy of guidance: "Why are teachers so reluctant to let counsellors in their classrooms? Why don't administrators provide more support to guidance programs? Why are guidance positions some of the first to be cut when there is a budget crisis?" Similarly, another text by Stone and Bradley (1994) includes a section at the beginning of the book that "could help schools

articulate why a guidance counsellor is needed". Obviously, we live in times where every profession is susceptible to marginalization through economics, but the guidance profession seems particularly prone to self-scrutiny and repeated public justifications of its continued existence. Perhaps this sense of vulnerability and angst results from the awareness that career guidance counselling clearly needs students, but students do not of necessity require career guidance. Guidance may be construed as a "privileged representation of essences", invoking Rorty's (1979) terminology to suggest the presupposition of what is good for students.

A fundamental contradiction is apparent between the philosophical traditions of systematic guidance counselling and its pragmatic ties to the educational system. The freedom and dignity of the individual that is the centrepiece of the principles of systematic guidance, is located within a pedagogy that continues to foster dependence and decontextualized learning. Shertzer and Stone (1981) reflect this commonplace belief held by the practitioners of systematic guidance when they suggest that, "Guidance is concerned primarily and systematically with the personal development of the individual". The phrase "facilitating development" is ubiquitous amongst statements of philosophical belief for school guidance programs, yet development (moral, cognitive, social) occurs without the aid of facilitation. More importantly, it assumes knowledge of some universal principles to aid the development of students regardless of culture, socioeconomics, family background, or personal readiness. Using standardized assessments, surveys, and aptitude tests to pronounce that student X is socially isolated, vocationally immature, and underachieving might sound like objective grounds for intervention. However, it is presumptuous to assume that student X perceives the situation in this light, and self-deceiving to believe that such a program can provide the proper path for student X's development. Systematic guidance programming is one from amongst many vocabularies that can describe and assist the career development of student X. It presents student X with the description of herself when there is a multiplicity of potential descriptors. It seems more appropriate for guidance counselling to foster the choosing of these alternative vocabularies of being.

The self is conceived as a cohering unity in the systematic approach to guidance counselling. Few textbooks on guidance fail to declare its focus on strategies, activities, and interventions aiding the development of the individual. Typically, career guidance programs concern themselves with the broad concept of identity and interventions that will assist the work identity of students. The theoretical bases for identity development generally conceive of the self as internally localized and knowable through objective means. Structured activities are devised that will lead to a changed, more "developed" self. The concept of the self constitutes a significant body of work in disparate fields of academic endeavour, with most contemporary conceptualizations being incommensurate with systematic career guidance.

Rorty (1979, 1989) proposes that a conscious departure from the established norm of systematic philosophy be undertaken. Departing from traditional views of self is accomplished through the creation of new metaphors of the self, adopting another language from the multitude of possible languages used to describe the world. Philosophers in Rorty's tradition do not propose to have found any objective truth, or to offer any accurate representations of how the world is. It is a tricky task since it involves having "to decry the very notion of having a view, while avoiding having a

view about having a view" (Rorty, 1979, p. 371). This vision concerning what philosophy should attend to may be applied to the entire field of career guidance. As it is currently conceived, career guidance attempts to present a permanent framework for the development of the student, a framework that relies upon a world of myriad aptitude, achievement, and interest tests that presume to mirror the nature of the student and provide a point of departure for further career exploration. Further, it ignores the individual student as the organizer of personal meaning by providing both the path for stimulating career awareness and the information in a manner that is decontextualized and fosters passivity. To take a less critical view of systematic guidance would be to suggest that it is merely the best approach, the most effective vocabulary that we have of aiding the developing career identity of students. Unfortunately, the pragmatics of the approach have taken on a life of their own and have become intertwined with notions of personal freedom. To engage in career guidance activities is seen as a liberating practice, as contributing to the optimal development of the self. But the self can more accurately be seen as a mirroring of language. The self is a "tissue of contingencies" (Rorty, 1989), and as such, cannot be objectively known through enunciating a set of "facts" that may be gleaned at any particular moment in time. Yet, this is precisely what the vocabulary of the career guidance program proposes: to present the student with an objective portrayal of herself and prescribe the route to change via selected activities. This amounts to no more than a shot in dark.

Constructivist notions of career counselling advanced by Peavey (1993) attempt to advance another way of approaching career counselling, but even these speculations are offered by invoking the tone of a privileged set of descriptions. There is a sense that this discourse of systematic guidance has already acquired privileged status, and one must ask, have we learned anything, or are we still making the same mistakes? Peavey, unintentionally I believe, has engaged in a self-contradictory language game. To pose such a transformation of approaches is to invoke another theory of knowledge about the nature of reality, but there is nothing to validate this particular vocabulary. One might speculate on the course of this theory by simply referring to Bruner's (1996) observation that, "Eventually new genres become old banalities" (p. 139). However, Peavey should be commended for his attempt to continue the conversation, to break with traditional conceptualizations and dare to challenge the dominant discourse. As he suggests, "distinctions between different kinds of career counselling are becoming more artificial. Such distinctions are more a function of bureaucratic turf than of a realistic knowledge of client need and counselling process" (Peavey, 1993, p. 136). It is worthy to note that his views occupy a scant three columns in a 724-page textbook (Herr & Cramer, 1996) that is widely regarded as the standard in the field of career guidance counselling.

As indicated near the start of this paper, it is not the intention of the author to articulate an alternative view of systematic career guidance. Rather, its goal is to explore the world of possibility by examining the origins of contemporary career guidance in the traditional epistemological view, and urge a continuation of the dialogue that is occurring across disciplines concerning the nature of the self. The ensuing conversation should not be construed as a denigration of worthy efforts by career guidance counsellors. It is, however, an attempt to spark a questioning of the old paradigms. There should not be any danger in such questioning, for as Rorty contends, "Professions can survive the paradigms which gave them birth" (Rorty,

1979, p. 393). Without resorting to self-contradictory language games myself, I propose that Freud's suggestion (cited in Rorty, 1989), that we let chance be "worthy of determining our fate", is as rational an approach as any.

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EFFECTIVE TEACHING

DON'T SMILE UNTIL CHRISTMAS: AN HISTORICAL LOOK AT EFFECTIVE TEACHING

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What can student teachers expect to make of courses in effective teaching? Can they expect to glean from the epistemological cream of distilled knowledge anything that is scientifically solid, reapplicable, or movable from class to class or from school to school? Are there markers which will emerge for students which give a good sense of what is effective in teaching? One would hope so, but Gary Thomas's (1997) recent article, "What's the Use of Theory?", made me wonder if the whole notion of effective teaching isn't a bit of a shame. Indeed, I am never really sure what has been effective in my own classroom practice. Inner feelings that I have been particularly effective in class have often been dashed by an overheard conversation in the hall just after class. Conversely, I have been told that, what I thought was a minor point, mentioned only in passing, radically changed someone's thinking about a topic. Thus, I am led to wonder how much we say about effective classroom practice is often a vague romanticism in which a pedagogical moment is turned into a nostalgic idealistic ghost. It would seem that any rules for best practice based on such romantic notions as "teachable moments" need further study and explanation about what is going on in the teacher's mind in these instances. To test Thomas's provocative arguments against the continued use of theory in education, I decided to look at the field of effective teaching to see if there are any rules that could be sifted from the literature on effective teaching to help guide the novice towards what might be considered best practice.

The Research on Effective Teaching

First off, Borich (1992) warns that there are no tests of personality traits, attitudes, aptitudes, or psychological characteristics that can be used to single out prospective effective teachers. Borich sees too many variables in classroom practice for such tests or lists of characteristics to emerge.

In the past, classroom teaching has been studied from a number of vantage points and empirical studies have focused on a variety of research areas, e.g., the cognitive and intellectual behaviour of students, classroom communications, the emotional and social climate of the school, and the various teaching techniques and instructional strategies. Traditionally, and especially since the early 1950s, methods of educational inquiry have generally been empirically based and scientifically oriented. They have often tried to generate data that could be transferred into an easily accessible and quantifiable format. Terms like "knowledge delivery systems," "assessment strategies," "peer tutoring and evaluation," "growth schemes," "discovery based learning," "supervision for growth," and "the six-day cycle" foster the idea of teaching as being both technical and scientific. However, whether teaching is viewed and studied from a behavioural, sociological, psychological, or anthropological perspective, our understanding has frequently seemed incomplete or unsatisfactory.

In the 1960s and 1970s preservice teacher education was dominated by both an applied science or technical view of teaching and by a craft conception of practice. States Zeichner (1983),

...the most influential of the general approaches to the education of teachers rests upon the foundations of a positivistic epistemology and behaviouristic psychology and emphasizes the development of special and observable skills of teaching which are assumed to be related to pupil learning (p.3).

These skills led to a student teacher's classroom 'performance' being evaluated along prespecified levels of proficiency. Little time was given to critical reflection on social continuity, meaning, or change. Thus, it was the acquisition and demonstration of very basic and general skills which were of central importance.

The craft conception of teacher education is viewed as a process of apprenticeship and/or internship. Tom (1980) traced this approach toward teacher education back over a period of one hundred years, but points out that because of the dominance of the behaviouristic approach to teacher education and because of attempts to 'professionalise,' teaching the craft conception of teacher education has had few proponents since the normal school era.

Behaviourism, in one form or another, came to dominate the research into effective teaching in the 1970s. Its preeminence can be demonstrated by the influence it has had on teacher preparation in the United States. Various states have legislatively mandated teacher education and/or evaluation programmes¹ that rely heavily upon behavioural research. Indeed, a review of the sections that cover tests of 'professional knowledge' in a number of preparatory study guides for the National Teachers Examination (NTE) reveals a preponderance for behavioural related questions (see for example Weinlander). What is emphasised in these texts is the acquisition of special and specific skills. Speaking to this point, Zeichner states,

the knowledge, skills, and competencies to be taught to prospective teachers are those that are felt to be the most relevant to the teaching role as currently defined and are specified in advance. Furthermore, the criteria by which success is to be measured are made explicit and *performance* at a prespecified level of mastery is assumed to be the most valid measure of teacher competence (p.4).

He goes on to say in the next paragraph that underlying this view of teacher education and competence,

is a metaphor of "production"...a view of teaching as an "applied science" and a view of the teacher as primarily an "executor" of the laws and principles of effective teaching...which they are to master is limited in scope (e.g., to a body of professional content knowledge and teaching skills) and is fully determined in advance by others often on the basis of research on teaching effectiveness (p.4).

Hence, the means of producing and distributing knowledge about teaching can be controlled by those who set the parameters for performance and the criteria for competence. Zeichner recognised a behaviouristic view of teaching as falling within the technical tradition of teacher education which allows little room for the teacher's own practical knowledge.

An Historical View

Although research about reflective teaching is relatively new, research about teacher effectiveness has a long history (see Charters, 1918; A.S. Barr, 1929; Gage, 1970). Historically, teacher effectiveness studies have grown in numbers over the past fifty years. Indeed, by 1974 over 10,000 published studies were available. Dunkin and Biddle (1974) quote Gage's 1960 report in which he states, "not only is the literature on this subject overwhelming, but even the bibliographies on the subject have become unmanageable" (pp.12-13). However, the results essentially have been ineffective and disappointing.

In 1952, the American Educational Research Association's Committee on the Criteria of Teacher Effectiveness reported a list of discouraging findings:

The simple fact of the matter is that, after 40 years of research on teacher effectiveness during which a vast number of studies have been carried out, one can point to few outcomes that a superintendent of schools can safely employ in hiring a teacher or granting him [sic] tenure, that an agency can employ in certifying teachers, or that a teacher-education faculty can employ in planning or improving teacher-education programs (p. 657).

In 1976, Shavelson and Dempsey reported that, so far, none of the research results into teacher effectiveness had "identified consistent, reapplicable features of...teaching that lead directly--or even indirectly---to valued student outcomes " (p. 553). In 1978, Doyle reported that his analysis of nine studies on teaching produced "few consistent relationships between teacher variables and effectiveness criteria..." (p. 161). In his 1989 address at the annual meeting of AERA, Gage (1989) quoted the work of both Tom (1984) and Barrows (1984) to sum up his own review of the research conducted on teaching during the sixties, seventies, and eighties by saying that such research had been characterised as "at best, inconclusive, at worst, barren" and "inadequate to tell us anything secure and important about how teachers should proceed in the classroom" (p. 135). To quote Tom directly, "even a cursory historical review of the meagre research results from this tradition should cause teacher effectiveness researchers to consider abandoning their approach" (p. 53).

Given the negative results of these studies, something seems dramatically askew with the research about effective teaching or with its premise. Indeed, in the 1980s researchers began to recognise problems with the scientific or quasi-scientific approaches to the study of teaching. Kagan (1988), writing in a paper reviewing a multitude of studies on how teachers have conceptualised and ordered their instruction in both the United States and Europe since 1974, concluded her findings by saying that the model for studying teacher cognition is showing teaching to be a more complex and dynamic activity than originally thought. She states that because

teaching involves the weaving together of various intellectual structures, and because so much of a teacher's lesson is improvised once it has begun, recent results of studies into teacher cognition (Leinhardt and Greeno, 1986; Brown, McIntyre, and McAlpine 1988; Krabbe, McAdams, and Tullgren 1988) have "effectively moved teaching further from science and closer to art" (p.497). Though Kagan does not specifically delineate what she means by 'art' she is essentially suggesting that research on teaching needed to shift away from the scientific and technical ways of perceiving and analysing the teaching act and to move closer to an artistic position similar to that suggested by Eisner (1968, 1982).

It has often been common practice for educational researchers, whenever they reach an impasse in their definition of teaching, to allude to the art or the artistry of teaching to explain any enigma. What is significant about Kagan's analysis is that she has tried to go beyond affixing the label 'art' to that which is difficult to scientifically delineate and is calling for an abandonment of effective teaching research and for an analysis of teaching with artistic principles in mind.

Eisner's Thoughts

In 1982, Eisner, as one of the few proponents of an aesthetic conception of teaching, encapsulated the numerous problems associated with prescriptive models of teaching. Among his arguments are what he calls the four fallacies of the scientific view of teaching.

The Fallacy of Additivity. Eisner states that it cannot be assumed that the various parts of a teaching behaviour can be afforded equal weight nor can the frequency counts of 'good' teacher behaviour be totalled to determine a teacher's competency. Eisner argues that the quality and depth of each of the various teaching behaviours must be accounted for within the context of the teaching activity. Thus, the tone and the quality of a teacher's remarks take on significant, but varying, importance to each individual student within a particular class. As Kagan observes, the false but "implicit assumption of the scientific knowledge base provided by process-product research is that the whole is equal to the sum of its parts...." (p.4 97).

The Fallacy of Concreteness. It is falsely assumed that all the act of teaching encompasses is observable in the behaviour of the students and teacher. This fallacy shows a disregard for perceived meanings and intentions of students and teachers.

The Fallacy of the Act. Here Eisner points out the assumption that teaching can be evaluated in a single detached event. Inherent in this fallacy is the belief that perception can be increased by controlling the variables within the teaching act. When evaluators go into classrooms to observe and record questioning techniques, verbal rewarding systems, probing methods, or other phenomena, there is the conviction that their frequency counts or noted data can be used in exclusion of other classroom events or teacher-directed activity.

The Fallacy of Method. Importantly, Eisner questions the methodologies used by those who advocate a scientific view of teaching. He says that teachers assume classroom behaviour can be validated by using multiple observers to record classroom teaching activities. However, by using inter-rater reliability counts or

tabulations from observed behavioural check lists and other 'objective' measurements, all a teacher's subjective views as to why he or she proceeded to create meaning within a given context are removed. The observers' perceptions are all that count in gathering data and drawing conclusions in the methodology.

Additional Problems

At the heart of any analysis of effective teaching are the conflicting conceptions of what exactly should be observed and considered when viewing classroom action, and precisely what it is that constitutes teaching proper within that action. We are again forced to consider how teachers think about their work as opposed to how researchers traditionally conceptualised it.

Additional problems arise with the prescriptive views of teaching which need to be articulated. First, in many cases there is an attempt to 'teacher-proof' the curriculum. This phrase highlights the current practice of manipulating and controlling the end results of classroom instruction. (Ontario's recent move into Outcomes Based Education epitomises this conception). The view of teaching as a precise technical activity has been used as a model for framing restrictive educational goals and objectives. This preordination of the curriculum in behavioural terminology then allows for preselected objectives to be tested and evaluated once the teaching act has taken place. The effect of this positivistic oriented process/product conception of education is that for both teacher and student there are built-in pathways constructed for thinking about and arriving at prescribed curriculum destinations.

This view of teaching fosters control by managerial evaluation. When enough students do not arrive at their prescribed 'destination,' the school management team can be brought in to trace back along the 'instructional' route and find out where things became derailed. Subsequently, teacher's instructional techniques can be assessed, modified, and brought back on line. The 'product' can be manipulated to flow more easily and more directly to its predetermined destination. Future tests can then be run to examine if the preset behavioural objectives are being met. Assuming they are, the teacher can be told that he or she is doing a satisfactory teaching job. Since the 'product' is now classified as satisfactory, the teacher need only to monitor his or her process (teaching) to keep production on line. Any deviations, digressions, or alternative methods of teaching the prescribed curriculum run the risk of negatively affecting the preselected goals as outlined by the systems management team. The result of any experimentation or digression by the teacher could cause a future visit by the bureaucracy to assess what has gone 'wrong'. Obviously, when teaching is conceptualised in this manner, there is a desire to gain exacting control over all the dimensions of the teaching act, to insist on the mastery of a series of effective teacher behaviours, and to limit direct teacher input. Hence the new phrase 'teacher-proofing the curriculum' can only be seen as an effort to downplay the human interaction side of teaching. This seriously limits the effects that teachers can have on curriculum outcomes.

A second problem with the scientific view of teaching is the failure to recognise that teaching phenomena are fabricated and that teaching problems have a variety of possible solutions (solutions which may be unknown prior to the start of the teaching act itself). Hence, any generalities or patterns thought to be found are likely to shift or

be lost over time with the arrival of new or different classes of students. The effective teacher could indeed turn out to be a person who is able to choose the 'right' course of action from a diverse teaching repertoire, which has been assembled over a long and varied teaching career, and apply it situationally.

A third problem with the prescriptive view of teaching is that at its base is the notion of manipulation and control. It starts from the assumption that teachers can be viewed as technicians who are hired to apply prescribed curricula. A teacher's (or student's) own agenda is given little weight and seen as an addendum in curriculum planning. As Apple (1979) has pointed out, the systems managers, in their quest for certainty and regularity in human behaviour, must be manipulative if they are to achieve their goals (pp. 110-111). To admit individual teacher goals into subject planning would require giving up some authority.

A fourth problem with the scientific or technical approach to teaching, is the belief that pervasive educational problems can be solved by outside specialists and experts. It is believed that when the specialist finds a 'solution' to a particular problem, the teacher need only apply the right technique or remedy to the problem and it will be solved. Often the individual teacher is totally removed from the equation (or is questioned on the periphery for specific pieces of information) because answers are seen and assumed to be 'technical' in nature. Hence, resolution can only be achieved by the specialists--the ones who have the appropriate 'technical' knowledge and know how.

The process/product way of looking at educational planning is, by its very nature, a simplistic approach and methodology. It seldom takes into account the realities, the diversity, nor the complexity of classroom life. Teachers who have taught the same elementary grade for a number of years reach a point where they can look back on past years and extract the elements that made a particular year go well or pinpoint the worst experience they have ever had with a mathematics group, or detail the willingness of a particular class to stretch their investigation skills and sweep the awards in a local science fair. Whatever elements made those classes good or difficult or exciting came together at a particular time and in a particular room for those involved and could not be preplanned or predicted nor repeated. A technical view of teaching has difficulty accepting the transience or randomness of these factors.

A fifth problem is the quest by some to transplant systems management techniques into educational institutions, it is believed that certitude, regularity, and efficiency will be established. However, as Apple has tried to make clear in *Ideology and Curriculum*, this is based on an assumption that systems management is neutral:

The problem of drawing upon reconstructed logic is further compounded by our belief in the inherent neutrality of systems management. There seems to be a tacit assumption that systems management procedures are merely 'scientific' techniques; they are interest-free and can be applied to 'engineer' nearly any problem one faces (p. 110).

This assumption is grounded, not only in the supposed neutrality of science, but also in its supposed efficiency and crisp effectiveness. Additionally, it is taking into

account only the skills involved in practice. But as Kuhn (1970) has quite clearly demonstrated, science can be a very messy business. Indeed, good science allows for and works with ambiguity, uncertainty, and suspicion; paradigms compete against one another, wrestle with each other's theories and notions, pulling apart and reconstructing various ideas. Good science, it can be said, seeks out conflict and ambiguity in its effort to make new discoveries and explain phenomena. It also can be said that 'failure' is far more often the case in science than 'success'. Setbacks are all part of thoughtful experimentation and exploration; they are all part of the risk taking, the leap of faith, the creative processes involved in good experimentation and laboratory work.

Critical theorists (Apple, 1970; Giroux, 1981; Beck, 1990) have shown that scientific investigations into the nature of teaching are often not scientifically neutral or without cultural bias. They have linked the political, economic, and social powers in society to the overall structure within educational institutions. They stress the view that the present conception of education is serving the dominant social classes and perpetuates this dominance by controlling certified knowledge, curriculum materials and content, and teacher actions. Because research into teaching has consistently focused most of its attention on the technical aspects of the profession, the critical theorists accuse educational researchers of having avoided any political commitment regarding educational research design, questioning, or classroom relationships. Furthermore, critical theorists accuse the educational researchers of having, more or less, ended up serving the dominant classes by reproducing existing inequality and perpetuating dominant class interests and agenda. Thus, the aims of such positivistic research approaches are seen as trivial in light of the need to restructure society more equitably.

While focusing on the qualitative, holistic, and interpretive approach to classroom instruction, qualitative researchers reject, as Eisner does, the notion that teaching can be studied as individual pieces of behaviour, or that classroom activities can be viewed and quantified without regard for the subjective or inside view of classroom phenomena. They also reject the assumption of uniformity in nature. Hence, observed educational events cannot be expected to occur similarly in different places or under different classroom circumstances. To pin down objective causality in the shifting moods and nuances of the classroom is seen as fruitless from their perspective.

Thus, to conclude this analysis of the scientific and technical conception of teaching, we must place alongside the historical documentation for the failings of the scientific and technical approaches to the study of effective teaching over the past fifty or sixty years, the more recent issues raised by the critical theorists and the qualitative researchers.

Conclusion

If it can be assumed that the educational research community has continued to generate (at a modest rate) additional studies on effective teaching during the three decades since Gage identified the 10,000 studies in 1960, a staggering figure begins to emerge. Something is dramatically wrong with research that consistently fails to produce any significant findings or results. Surely by now we should have a sound

body of codified knowledge derived from the empirical findings of the discipline from which to add to or branch out from. Observers (e.g., Barrow, Tom, Eisner, Kagan, Gage, Raven) offer a number of detailed reasons for the failure of the research. Whatever the reasons for this failure both here and abroad, not every one of the thousands of researchers can be doing bad science. The fact remains that, because so many studies have failed to document any significant findings on effective teaching, the underlying assumptions upon which this research has been based must be questioned.

It has been the quest for efficiency and certitude that has governed a prescribed and technical approach to the study of teaching. The underlying metaphors are of production and measurable outcomes. Thus, hard binary improvements are sought in the products of students. But what of the other competencies we wish students to possess which are not easily measured or quantified? These competencies include communicating, observing, finding information needed to achieve a particular goal (collected by observation or by talking to people rather than by reading books), inventing, persuading, or showing leadership. How do we quantify a student's ability to take what was read and to think laterally about it or to discard what is irrelevant and to reformulate required information? Indeed, Raven (1992) has argued that "learning" has invariably been referred to as a mastering of the content areas. Yet he sees no reason why learning should not be conceptualised as including an ability to do

such things as persuade, muster arguments, judge, make good decisions, initiate hunched-based action and use one's feelings to monitor its effects, put others at ease,...make one's own observations, develop better ways of thinking about things, or build up one's own understanding of how society works and the willingness and the ability to influence it (p. 347).

To include these types of learning outcomes and others like them muddies the waters for those wishing to quantify the results of effective teaching. The items on Raven's list, after all, are difficult to measure and need large amounts of time to penetrate and assess.

It is time for researchers to look to other metaphors of teaching to explain the actions of the thoughtful teacher. Teaching might better be thought of as 'a work in progress' for it does not seem to get any easier of time.

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NOTES

1. The National Teachers Examination is administered by Educational Testing Services of Princeton, New Jersey, and is made up of a core battery and speciality area tests. These tests are administered several times a year throughout the United States. Test scores are sent from Princeton to the various state departments of education. Each state is responsible for setting the minimum passing score it will accept for teacher certification.
2. In the United States, where even some individual school districts ask for a prospective teacher's NTE test results in addition to their state certification, a case can be made that faculties of education are limited in the amount of control they have over the content of their own curriculum. Since their students are required to take an external examination, there is pressure, if not an obligation, for education faculties to 'cover' material thought to be on such teacher examinations.

ONE MAN'S PERSPECTIVE OF DISCIPLINE IN THE SCHOOLS: PART I

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Introduction

Teaching is one of the most important jobs in our society, yet teachers are often overworked, underpaid, and under appreciated. There is a common bond which unites all teachers, and this is the desire to help our students reach their maximum potentials as human beings. When we achieve this goal, when we see students grow as a result of our teaching, we know that all the training and hard work have been worth the effort. Unfortunately, the realization of this goal is sometimes thwarted by the attitudes and misbehavior of students.

The purpose of this paper is to provide a framework for analyzing and assessing the many facets of student misbehavior in the schools. It consists of two parts. Part I contains a chronological narrative describing the evolution of my thinking about discipline; I think it provides a realistic and sober assessment of discipline in the schools. Part II consists of a fairly comprehensive outline of those ideas which I think have made a significant or relevant contribution to the discussion about discipline in our schools. It provides some specific and practical suggestions for improving teaching effectiveness. Hopefully, the reader can use some of the ideas to reflect upon as potential strategies to improve teaching.

PART I: REFLECTIONS ON CLASSROOM DISCIPLINE

The Beginning

I began my teaching career in California in 1961 as a high school mathematics teacher. It was a great time to be a teacher for, although some students were not highly motivated to learn, there was still a general respect for most teachers. I would estimate that fewer than ten percent of all teachers had serious discipline problems in those days. I believe this was because teachers had real authority over what happened at school, and this authority translated into calm and orderly classrooms. To illustrate how this authority worked, let me describe an incident which occurred on the first day of school in 1963.

The bell rang, and Fred entered my room and sat in the last row of seats near the door. After taking roll, I started explaining my expectations for the class. "Big deal!" muttered Fred, just loud enough to be heard across the classroom. I looked in his direction, made firm eye contact with him, and warned the entire class that I would not tolerate any further disrespect. Minutes later, in response to one of my comments, Fred muttered "Jee-sus Kee-ryste!" I immediately stopped instruction, scribbled a note to the principal on a piece of paper, and instructed Fred to take the note to the office. Which he did. After school, I found a note from the principal in my mailbox. I met with the principal and he asked me to readmit Fred into my class. "If Fred gets away with this," I explained, "it will be open season on me for the rest of the year."

The principal stood behind me, and Fred was not readmitted to my class, and, as a result, I had a very good year with my students.

That's the way it was in the early 1960s; the teacher had authority, and because of this, there were few discipline problems. Today, many educators probably think that I was too harsh with Fred, that I should have given him another chance. I disagree.

In 1966 I left the classroom to attend graduate school. After three years of study, I received my doctorate degree and was hired by the College of Education at the University of Hawaii where I ran a number of research and curriculum projects. After sitting behind a desk for eleven years in that position, I decided to switch to the Division of Field Services where I served as a college coordinator supervising student teachers. Thus, when I entered my first classroom to observe a student teacher in 1980, it had been fourteen years since I had been in a regular public school classroom. And boy, was I in for a big surprise!

The Rude Awakening

I was assigned student teachers at almost every grade level from kindergarten through the twelfth grade in my first year of supervising student teachers, and in classroom after classroom I saw rude and disrespectful student behavior. In a third-grade classroom, children would not cooperate or obey the simplest of commands. The teacher had four time-out locations in the room where she sent disobedient children, but she needed many more. In an intermediate school Physical Education class, I witnessed students slap the student teacher on the back of the head at the beginning of each period. When I asked him why he permitted this, he pretended he was unaware of it. In a high school English class, a glassy-eyed boy, wreaking of alcohol, arrived ten minutes tardy. When the student teacher moved towards her desk to mark the attendance book, the boy kicked over a desk and shouted obscenities at her. And so it went.

To be sure, there were classrooms in which students were orderly and attentive. Even so, I would estimate that fewer than ten percent of the teachers were without discipline problems. Teachers had lost their authority, and teaching had become a very stressful occupation.

For a number of years I tried to find someone to blame for these conditions. At first I blamed teachers for not cracking down on students. Then I blamed principals for not backing teachers when they referred students to the office. Then I blamed the Board of Education and the State Legislature for enacting legislation and rules which granted rights to students which made it difficult to maintain order in the schools. Then parents for not raising their children properly. Then Education professors for ignoring the discipline problems in the schools. Finally, I realized it did little good to place blame: everyone, including myself, was to blame. The situation in the schools was very complicated. And so I decided to study the problem.

Looking for Solutions

The student teachers I supervised had been exposed to three approaches to discipline: **Discipline Without Tears** (Dreikurs and Cassel, 1972), **T. E. T. : Teacher Effectiveness Training** (Gordon, 1974), and **Schools Without Failure** (Glasser, 1969). Each of these approaches might be described as student centered in that they are based on the belief that students will behave if they are treated humanely. However, I observed that students frequently (indeed, usually) took advantage of teachers who tried to be kind and democratic; it was usually the strict teachers who had control of their classes. Of course, I must admit that many teachers who tried to be strict were also suffering from serious student misbehavior.

In 1983 I had a stroke of good fortune. I supervised two student teachers in the same school, one in English and the other in Health and the same seventh grade students were in both classes. On my first visit to the school both classes were still in the hands of the regular classroom teacher. In the English class, the students were rowdy, used four-letter words, and generally sabotaged the efforts of the teacher. The following period I visited those same students in a Health class, and to my surprise, they were polite and respectful of the teacher. I asked the Health teacher for an explanation of his success with students. He had no secret system, he assured me, he was just being himself. He simply refused to let students misbehave because it was his job to teach them to be polite and considerate of other people, including the teacher. Although this did not provide me with a system which I could share with other teachers, it did show me that teachers can and do make a tremendous difference in how students behave. There was hope.

During my travels about the schools I had come across a small number of teachers who were consistently outstanding in developing polite and productive students. I decided to revisit these teachers in search of answers, and I videotaped each of them in the hopes of discovering their common techniques. At first glance, the outstanding teachers were different from one another: Some were loud and aggressive, others were quiet; some were large, others were small; some were friendly, some were cool and distant; some appeared democratic, others authoritarian; some were Caucasian, others were Oriental. Yet as different as they were, they all had very cooperative students. But why? I could see no common thread.

Gradually, the interplay of my classroom experiences and my reading began to reveal some common characteristics of these effective teachers. From the works of Canter and Canter (1976, 1989) I came to realize that effective teachers were assertive teachers who believed it was their job to teach values and who insisted upon polite behavior. From the works of Charles (1981) I learned that effective teachers prevented most problems through their planning and organization. From Jones (1987) I learned that effective teachers used body language, especially their facial expressions, to convey that they meant business when confronting student misconduct of any kind. From French and Raven (1960) I learned that teachers gain the cooperation of students through the exercise of five different forms of power. And from Harry and Rosemary Wong (1991) I realized that effective teachers set the proper tone in the first few minutes and days of the school year.

There was, after all, some common characteristics of effective teachers. In the remainder of this paper I shall share with you what I consider to be some of the more useful ideas I have discovered about discipline in the schools.

The Issue of Who is in Charge

Table 1 presents a continuum along which are placed some of the leading theorists on classroom discipline (adapted from Tauber, 1995). The descriptors at each end of the continuum are self-explanatory: To the right are theories which believe the teacher must exert control in the classroom, and to the left are theories which believe students can manage themselves if given the chance. Most teachers fall somewhere between the two extremes. However, I think it is a mistake for teachers to think of themselves as being in a fixed spot on the continuum. The most effective teachers I know adjust their management style to fit the situation. For example, a friend of mine, Alfred, has a group of Advanced Placement Calculus students with whom he is a very student centered teacher. They are bright and highly motivated, and Alfred gives them a great deal of freedom. He can afford to ignore an occasional transgression, and even smile at it, because he knows the students will get back on task. During another period, Alfred has a group of Pre-Algebra students with whom he is a highly teacher centered teacher. Experience has taught him that he must provide them with strict guidelines and

Table 1
Continuum for Discipline Theories

Student Centered						Teacher Centered	
Noninterventionist						Interventionist	
Humanistic						Behavioristic	
Influence						Control	
Gordon	Glasser	Dreikurs	Kounin	Redl	Jones	Canter	Skinner

constant surveillance. If he smiles at a minor transgression, students frequently perceive this as weakness or approval, and things worsen. Alfred does not prefer being strict, but he has found this is the most effective way to handle the group. Hence, a teacher's position on the continuum is not fixed and can vary depending on

the maturity of the students. A teacher's position on the continuum can even change with the same group of students during the school year.

I believe a teacher should start the school year being highly teacher centered. As the year progresses, and as students demonstrate their maturity, the teacher can slowly relinquish more and more control to them. Perhaps you have heard the old saying "Don't smile until Thanksgiving." I do not personally follow this advice, for I smile and laugh throughout the year. There is, nonetheless, a bit of wisdom in the saying. It is based upon the knowledge that if you begin the year by being in tight control of the class, you can gradually relinquish control and establish a student centered classroom. However, if you begin the year by being permissive and letting students dictate the mood of the classroom, and if things get out of control, it is extremely difficult to regain control of the classroom. This means it is possible to go from the right to the left on the discipline continuum as the year progresses, but it is difficult to go from the left to right.

The authors with whom I agree the most, authors such as Jones, the Wongs, and the Canters, fall towards the teacher centered side of the continuum. These authors have their roots in the classroom and I find their ideas about teaching to be the most practical. Those authors who fall on the student centered end of the continuum, men such as Glasser, Gordon, and Dreikurs, are psychologists or psychiatrists who have their roots in private practice dealing with individuals rather than large groups of children. For the most part, I find their ideas to be idealistic and less applicable to the real world of kids in classrooms. An example will illustrate the differences between the two positions.

Dreikurs and Cassel (1972) recommend that the teacher ignore a student who is misbehaving to get attention. They reason that by responding to the misbehavior, the teacher is unwittingly giving the student what he wants, attention, thus reinforcing the bad behavior and increasing the likelihood that the behavior will be repeated. Jones (1987) points out that this might work with a child at home, but it backfires on the teacher in the classroom with 25 other students. If a teacher ignores a student's blatant misbehavior, these students will get the idea that they can do the same thing. And so, instead of extinguishing the misbehavior of one student, by ignoring the infraction the teacher is reinforcing the notion, in the minds of 25 other students, that misbehavior will be tolerated by the teacher. And things will get worse. My experiences tell me that Jones is right.

The Three Faces of Discipline

Charles (1981; 1985) has defined three faces of classroom discipline which provide a useful framework for examining discipline. *Preventive discipline* are those things a teacher does to prevent student misconduct. *Supportive discipline* consists of the techniques the teacher uses to help students maintain self-control and to get back on track when they start to misbehave. *Corrective discipline* consists of the consequences or punishment a teacher administers following student misbehavior. In the following pages, I shall indicate how the leading theories of discipline fit into this framework.

As they read this, teachers might think about developing their own written discipline plan. Using the headings of preventive discipline, supportive discipline, and corrective discipline, they might select ideas for each category which are consistent with their personality and outlook on schooling, keeping in mind that there is no right or wrong approach to discipline. If something works for them, they should use it.

Preventive Discipline. *Preventive discipline* consists primarily of those things a teacher does before students enter the room. Jones (1987), Emmer and Everton (1984), and Sprick (1985) emphasize the importance of classroom structure, and this topic is a major component of preventive discipline. Structure refers to a broad range of topics from the arrangement of the furniture in the room on the one hand to how teachers plan and teach their classroom rules and procedures on the other. It includes room arrangement, walls and bulletin boards, storage space and supplies, teaching style, rules and procedures, the content of the curriculum, the teachers' uniqueness as a person, their skills in motivating student interest, lesson plans, and their own physical and mental preparation are all vitally important parts of their preparation for teaching. Structure provides a framework for everything that happens in the room. According to Jones, "Adequate structure is the cheapest form of behavioral management, since once you establish a routine you can produce needed cooperation and rule-following thereafter at relatively little effort." (1987, p. 41)

If students clearly understand the rules, routines, and standards for the class, student misconduct can be minimized. Jones (1987) believes classroom discipline problems can almost always be traced, at least in part, to inadequate structure. Therefore, it is important that teachers plan a clearly defined classroom structure before the students arrive. Many authors, including Chernow and Chernow (1981), Emmer and Everton (1984), the Wongs (1991), and Sprick (1985) agree with Jones that classroom rules and procedures must be clearly taught on the first day of school and retaught throughout the school year.

The Wongs (1991) provide a wealth of suggestions for improving a teacher's preventive discipline arsenal. Their approach emphasizes the positive: having positive expectations, helping students experience success, inviting students to learn, dressing for success, and being mentally prepared for teaching. They also provide many practical suggestions, such as how to take roll, how to keep a grade book, and how to introduce oneself to the class.

There is more to preventive discipline than being organized and prepared. Jones (1987, p. 8) defines classroom discipline as "the business of enforcing classroom standards and building patterns of cooperation in order to maximize learning and minimize disruptions." Hence, discipline is a two-edged sword: on one edge is enforcing standards, on the other is gaining the cooperating of your students. Jones believes cooperation to be the more important of the two. But how do we get cooperation? How do we get students to do what we want them to do?

An understanding of the difference between authority and power can be very useful in gaining student cooperation (Froyen, 1988). *Authority* is the right to decide what happens in the classroom. The teacher is granted that authority by the school board. *Power*, on the other hand, is teachers' ability to get students to do what they want them to do. While all teachers are vested with authority, not all teachers have

power. There are five forms of power that can be used to get an individual to act in ways the teacher deems appropriate: legitimate power; coercive power; reward power; attractive power; and expert power (French & Raven, 1959; Froyen, 1988; Shrigley, 1986).

To some extent, teachers have always had *legitimate power*. This power emanates from the students' belief that the teacher has the right to determine what happens in the classroom. Students behave because they recognize and accept the right of the teacher to be in charge. To a large extent it was legitimate power which enabled me to remove Fred from my class in 1963. The students, as well as the administrators, acknowledged the legitimate power of the teacher. While teachers still have legitimate power, in recent years many forces are eroding this form of power.

In the past, teachers usually combined their legitimate power with *coercive power*, the threat and use of punishment to gain student cooperation. In today's schools, the continued use of coercive power, especially in the absence of other forms of power, alienates students and often has detrimental side effects. Nonetheless, coercive power has a legitimate role in the classroom, and when used in conjunction with other forms of power, can contribute to a productive classroom.

Teachers can also use *reward power*. In this case, students behave in anticipation of receiving some kind of reward from the teacher. The outline in Part II below lists many types of rewards, but recognition, praise, and appreciation are probably the most effective rewards a teacher can give, especially if the teacher is also using attractive power.

Attractive, or referent power is relationship power, the power teachers have because they are likable and know how to develop good relationships with students. Teachers who rely upon attractive power go out of their way to make students feel good about themselves, and they work hard at developing good relationships with all students. I know of teachers who proudly state that they do not care if their students like them so long as they respect them. To some extent this attitude is based upon the belief that popular teachers buy the good will of their students by being lenient with them. But this need not be the case. Many popular teachers are strict; yet, at the same time, they treat students in a friendly and respectful manner, they make their classes as interesting as possible, and they try to make every student feel a part of the class. Such teachers are both liked and respected, and they wield a great deal of power with students.

The final type of power identified by French and Raven (1960) is *expert power*, the power teachers have because they possess superior knowledge. Teachers who rely upon expert power take pride in their command of the subject matter, are enthusiastic about the subject, prepare interesting lessons, and derive great pleasure in transmitting this enthusiasm and knowledge to their students. When students respect the teacher for the knowledge she possesses, when they master significant knowledge and skills, and when they feel good about themselves because they are achieving, they are less likely to misbehave.

A generation ago, when I began my teaching career, a teacher could reply upon legitimate power, supported with coercive power, to maintain control in the

classroom. This will not work in most classrooms today: many students do not automatically respect their teachers, and the arsenal of available punishments is so small and ineffectual that the most disruptive students are unafraid. Therefore, all teachers would be well-advised to develop other sources of power. By consciously developing and combining various forms of power, a teacher can geometrically increase his or her influence with students (Fairholm & Fairholm, 1984). If a teacher is liked by students (attractive power), is admired for his knowledge of the subject (expert power), and gives authentic praise to his students (reward power), then the teacher truly has power to influence learning in the classroom. The challenge to any teacher is to find that combination of power which is compatible with his or her basic beliefs, abilities, and personality.

Jones (1987) has also made a significant contribution to the discussion of power in the classroom. In a sense, his discussion of power is more relevant to teachers than are the other theories, for he deals with the most common of classroom experiences, confrontations between student and teacher. In such situations, the person who get his way wields the power. Many authors are uncomfortable discussing confrontation, and some recommend that teachers withdraw from power struggles (e.g., Dreikurs and Cassel, 1972). Jones does not. He suggests that the teacher use gentle yet firm techniques (which he refers to as "limit setting") which enables the teacher to prevail in interpersonal power struggles between student and teacher. I refer to this as *personal power*, and it will be discussed more fully in the next section of this paper.

No discussion of preventive discipline would be complete without discussing the importance on the first day of school. In the outline in Part II below, I have included the suggestions offered by the Wongs (1991) for getting off to a good start with students. The most important lesson plan of the year is the one teachers prepare for that first day of school. If they do it well, and they greatly increase their chances for a successful year.

Supportive Discipline. The outline of Part II of this paper describes the theories of eight approaches to discipline, including the works of the Canters, Dreikurs and Cassell, Glasser, Gordon, Jones, Kounin, Skinner, Redl and Wattenberg, and the Wongs. While there are good ideas in each of these approaches, I find the work of Jones (1987) to be the most relevant for teachers. Let me explain.

In my efforts to help student teachers with their discipline problems, I would listen to their situations, then suggest ways for remedying the problems. In some cases it worked, but in many cases it did not. After reading Jones, I have come to realize it is not what you do, but how you do it, that makes the difference. Unlike other writers, Jones (1987) tells us precisely how to deal with a student who is misbehaving, he tells us how to do it. He calls this process "limit setting" and I refer to this as exerting *personal power*.

When I first read Jones' description of limit setting, I realized that this was what the effective teachers I know actually do. I had known that a certain seriousness characterized their actions, but I had not translated that seriousness into more definable terms. Jones does. He calls it "body language."

The body language of teaching is different from the body language of discipline. When in a discipline mode, Jones recommends that you move very deliberately and more slowly than normal; keep a relaxed, non-smiling, non-angry face; look the student in the eyes; face your entire body towards the potentially disruptive student; have your arms at your side, in your pockets, or behind your back, and not on your hips or folded across your chests; avoid speaking unless absolutely necessary, and then in a unemotional, calm tone; and wait until the student complies. If the student refuses to comply, you must eventually apply a consequence. Since this is not natural for most persons, Jones has teachers practice these techniques until they look and feel natural performing them. For persons who can do it well, the calm, firm, and patient use of body language is a powerful yet caring way to get your way in the classroom. A more detailed account of limit setting is contained in outline in Part II of this paper.

I have found that some teachers are not comfortable in facing a student down with limit setting. Others are not very adept at establishing warm and friendly relationships with students. Still others dislike the use of coercive power. However, if one is to be a successful teacher, one must find a style of teaching with which one is comfortable and which gives the ability to get students to do what one wants them to do. An awareness of the forms of power can help the teacher to reach this goal.

Corrective Discipline. Corrective discipline refers to the actions a teacher takes when preventive and supportive discipline fail, when in spite of our best efforts, students continue to misbehave. Jones refers to this as the backup system. It is *coercive power*, the application of punishment. The most extreme form of punishment in schools is corporal punishment (such as spankings), and Dobson (1970; 1992) is one of the few authors who advocate it. While this is appealing to many teachers, corporal punishment is not allowed in most schools and is generally frowned upon as a measure to be applied in schools (Orenlicher, 1992; Kessler, 1985; Kohn, 1991; Tauber, 1990).

Since corporal punishment is not an option for most teachers, it is sometimes difficult to find a consequence which will deter misbehavior. When an effective deterrent is found, parents often object to it. For example, one high school initiated a lockout in which teachers locked their doors when the tardy bell rang. Security guards then corralled the tardy students and made them remove graffiti from walls and sidewalks with scrub brushes. The policy was very effective, and tardiness was all but eliminated from the school. But when several parents complained about the policy, the scrubbing stopped, and tardiness became a serious problem once again. It is for such reasons that preventive and supportive discipline must be the main lines of defense for most teachers.

To help eliminate the adversarial relationship created by corrective discipline, Dreikurs and Grey (1968) suggest that teachers make a distinction between "punishment" and "consequences." Punishment is often viewed by students as being arbitrary and delivered by a vindictive teacher who wishes to inflict pain into a student's life. Consequences, on the other hand, follow logically from the behavior of the students. If students act in appropriate ways, there will be positive consequences; if students act in inappropriate ways, there will be negative consequences. By making students aware of both positive and negative consequences before misbehavior

occurs, the teacher can avoid the perception of being vindictive. By misbehaving, a student chooses the consequence. A fuller description of consequences appear in Part II below.

School wide Discipline

There were two episodes in my professional experience which shocked my sensibilities and convinced me that it is not sufficient to deal with discipline solely at the classroom level, that discipline is in fact a school wide problem. The first episode involved a student teacher who was visibly pregnant. She taught in a high school, and during the lunch hour she and her cooperating teacher would allow students into the classroom to eat their lunches. One day a boy approached the pregnant student teacher and told her, in the crudest of street talk, that he would like to make love to her. She ran from the room to find her cooperating teacher. The teacher, in following the school's policy of trying to settle things at the classroom level before referring an offender to the office, talked to the boy. She then assured the pregnant teacher that it would not happen again. Several days later the boy returned to her classroom, grabbed her by the arms, and tried to pull her body into his, all the while muttering his passion for her (in words unsuitable for print). She ran in terror to the principal's office to report the incident. After school, the principal talked with the student teacher, stating "Don't worry. He'll never do that again. I told him if he ever touches you again, I'll kick him out of school." In both instances the student should have been referred to the police; for assault and sexual harassment in the first case, for battery in the second. Yet the school administrator chose to merely warn the boy. The message was clear: A student can sexually harass and assault a teacher without serious consequences.

The second episode affected me personally. During a seminar a student teacher came up to me to explain that her sixth-grade students were doing something awful, and since I was going to visit her the following day, she wanted me to know that the students did the same thing to their regular teacher. It seems that Robert, a difficult lad, would repeat everything she said. The entire class would then repeat it in unison. Sometimes, she said, this would continue all day long.

I reassured the student teacher that I understood, and the following day I arrived at the school during the lunch hour to find eight teams of students playing basketball on the outdoor court. The class that I was to visit was playing, and Robert and four of his friends were sitting in the shade of a building watching the game. I wandered over and watched the remainder of the game with them. When the game was over, the teams gave a cheer for one another.

"Two-four-six-eight, who do we appreciate? Mrs. Nakamura's team! Mrs. Nakamura's team! Mrs. Nakamura's team!" And so on.

Suddenly Robert and his four friends shouted, "Two-four-six-eight, who do we appreciate? Mr. Bald Head! Mr. Bald Head! Mr. Bald Head!"

Oh, did I forget to mention that I am bald headed? Well I am, and being the true professional that I am, I ignored their rudeness, smiled at them, and walked back towards the classroom.

"Two-four-six-eight, who do we appreciate? Mr. Bald Head! Mr. Bald Head! Mr. Bald Head!" they yelled at an even louder pitch.

This time I couldn't ignore it, and being the true professional that I am, I said, "Geez thanks boys, that's the first time I've ever received a cheer for being bald headed!"

And Robert said, "Geez thanks boys, that's the first time I've ever received a cheer for being bald headed!"

And his four friends shouted, "**Geez thanks boys, that's the first time I've ever received a cheer for being bald headed!**"

Now there were about a hundred kids and ten teachers walking nearby, watching the gathering storm. Being the true professional that I am, I said, "Come on, boys, that's not very nice!"

And Robert said, "Come on, boys, that's not very nice!"

And the four boys shouted, "**Come on, boys, that's not very nice!**"

And being the true professional that I am, I walked away quickly, ignoring the boys. Suddenly, one of the boys ran up and slapped me on the back of my bald head, very hard. Whap! And being the true professional that I am, I turned and shouted, "**You little b-st-rds!**"

And Robert gleefully shouted, "**You little b-st-rds!**"

And the four boys, juking theirs heads back and forth, arms extended, as if enticing me to chase them, laughingly shouted, "**You little b-st-rds!**" Things went downhill from there.

This episode was a turning point for me. For the first time, I understood at the emotional level what it was like to be teacher when students are being rude and disrespectful. I recalled the student teacher who had let his students slap him on the back of the head, and suddenly I was less critical of him. I was less critical, too, of other teachers who, from time to time, had performed an unprofessional act towards students. If I could lose my temper, then anyone could!

In retrospect, it is rather funny episode. But at the time, I was so humiliated by the incident that I did not mention it to anyone for more than a year. Then, one afternoon while addressing a group of teachers, I spoke of my experience with Robert and his friends, I spoke of my embarrassment and humiliation. After the meeting, several teachers waited around to speak to me in private. One by one they confessed to me stories they had never shared with anyone else, stories, similar to mine, of their humiliation by students in classrooms, stories of reprisals by students, stories of years of silent suffering.

One teacher caught two boys smoking marijuana outside her classroom and turned them into the principal. The following day students started throwing rocks at

her from behind bushes. When she reported this to the principal, she was told that it would be impossible to catch the kids since they hid behind bushes. Long after those students had graduated, other students still carried on the tradition of throwing rocks at her.

Another teacher's small children came home from school from time to time with gum in their hair, placed there by older students who told the children their mother was a witch. Since it occurred on the bus, the school administration could do nothing about it.

Yet another teacher was tormented by a group of sixth-grade boys who would get behind her and run their hands up her legs to her panties. She scolded the boys, but they continued to do it. Finally, she told her story to the principal. He reasoned that since she was an attractive young woman, and since she wore dresses and skirts, she was partly to blame for the problem. He advised her to wear jeans or slacks.

Over the past several years many other teachers have told me of the daily abuse they silently suffer at the hands of children. Gradually, piece by piece, a rather disturbing picture began to emerge. Rather than just a few isolated incidents, there appeared to be a general pattern of teacher suffering at the hands of children. But more disturbing was the fact that teachers suffered in silence, not knowing what to do about the humiliation they suffered each day. Just as many battered wives blame themselves for the abuse their husbands' unleash upon them, so, too, do many battered teachers blame themselves for the troubles they have in class. They are ashamed of their situation, and they suffer in silence. My message to such teachers is clear: I tell them they are not alone, that many other teachers suffer similar insult. I also tell them it is not their fault, that there is no excuse for rude and disrespectful behavior, regardless of the teacher's shortcomings.

Teachers need to support and help one another far more than is currently the case. I believe an assault on one teacher is an assault on all teachers. As a community of professional teachers, everyone needs to be more aware of the conditions in the schools and be willing to help each other in times of need. Strong teachers should not criticize teachers who are having discipline problems. Instead, they should be willing to help them. Teachers having problems with students should seek help. It might be embarrassing at first, but in the long run such individuals will become stronger teachers.

Many educators believe that teachers will not have serious discipline problems if they have good lesson plans, or are democratic teachers, or genuinely love their students, or whatever. The implication, though perhaps not intended, is that if students misbehave, it is the teacher's fault. I wish it were true that good teaching would end all discipline problems. But it won't. To be sure, the suggestions offered in this paper will help teachers become more effective, and teachers should continuously strive for improvement. But the problem of discipline in our schools today far transcend the individual teacher's ability to cope with them. Problems such as that encountered by the pregnant student teacher, as well as many of the other situations I have described in this paper, are caused by school policies which do not

hold students accountable for their actions. Until we do hold students strictly accountable, we will continue to have serious problems.

For this reason, I now believe it is absolutely essential for all schools to develop a school wide discipline plan which everyone will support and enforce. This is not as easy as it may sound, for it is often difficult to get an entire faculty to agree upon and enforce the rules and procedures in the school. Nonetheless, if we are to create schools which are places of respect and learning, we must make the effort. The last section of the outline in Part II of this paper contains some ideas on school wide discipline.

Concluding Remarks

I began this paper by stating that all teachers had the common goal of wanting to see their students learn and grow as a result of their teaching. Today, more than ever before, that goal includes the development of character as well as academic and cognitive skills. If our culture is to survive, we must first produce decent people. I hope I have not sounded pessimistic in my remarks, for I am optimistic about the future. This is a great time to be a teacher, for both the community and the teaching profession are beginning to acknowledge the seriousness of the problems which face our schools. I view these problems as opportunities, and opportunities abound.

Your Discipline Plan?

As the culminating assignment for the course I teach on classroom discipline, I require each student to develop a written discipline plan. The outline of discipline which follows in Part II presents many practical ideas for the classroom teacher. Readers might search for ideas which they think might be useful to them. If they do not have a written discipline plan, and if they need one, why not try to develop one? Using the categories of preventive, supportive, and corrective discipline, they might put down those things which they think might work for them. They might determine which kinds of power they can most reasonably develop, and list ideas which might enhance this power.

**PART II: SOME IMPORTANT ASPECTS
OF CLASSROOM DISCIPLINE**

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Definitions

- I. *Classroom Discipline* is the business of enforcing classroom standards and building patterns of cooperation in order to minimize disruptions and maximize learning.
 - A. *Preventive Discipline* consists of those things a teacher can do to prevent discipline problems from occurring.
 - B. *Supportive Discipline* consists of those things a teacher can do while teaching to support the student's ability to behave appropriately.
 - C. *Corrective Discipline* consists of the consequences we apply for student misbehavior.
- II. *Power* is the ability to get students to do what you want them to do.
 - A. *Attractive Power* is derived from the teacher's relationships with students. Students do what the teacher wants because they like the teacher.
 - B. *Expert Power* is derived from the teacher's superior knowledge. Students do what the teacher wants because of the teacher's enthusiasm for and knowledge of the subject.
 - C. *Reward Power* is derived from the teacher's ability to dispense rewards, especially approval and praise. Students do what the teacher wants because they want to receive a reward from the teacher.
 - D. *Coercive Power* is derived from the teacher's ability to punish. Students do what the teacher wants to avoid punishment.
 - E. *Legitimate Power* is derived from the students' belief that the teacher has the right to decide what to do in the classroom. Students do what the teacher wants because they think they should follow the directions of the teacher.
 - F. *Personal Power* is derived from the teacher's ability to use effective body language while setting limits. Students do what the teacher wants because they see the teacher as being personally powerful.

**PREVENTIVE DISCIPLINE:
ORGANIZATION, PREPARATION AND GETTING A GOOD START**

- I. Preparing and Organizing Your Classroom.
 - A. Room Arrangement.
 1. Keep high traffic areas free of congestion.
 2. Be sure you can see all of the students.
 3. Keep frequently used supplies readily accessible.
 4. Be certain students can easily see instruction.
 5. Use seating arrangement to manage student behavior.
 6. Arrange furniture so that you can move easily about the room.
 7. Have a strategic location ready for disruptive students.
 8. Place your desk away from the door to deter would-be thieves.
 - B. Walls and Bulletin Boards.
 1. Have a clock, calendar, and school schedule posted.
 2. Have a specific place for posting student assignments.
 3. Have space for decorative displays.
 4. Post classroom rules.
 5. Post a sample of the format for written work.
 - C. Storage Space and Supplies.
 1. Have a system for handling all supplies and materials - books, materials, supplies, student belongings, etc.
 2. Teach and reteach the procedures for using these materials.
 3. Make sure you have enough textbooks and materials.
 4. Test all audiovisual material, etc., to make sure it works properly.
- II. Preparing and Organizing Your Instruction. (Expert Power)
 - A. Work on Improving Your Teaching Style.
 1. Use the four elements of effective public speaking.
 - a. Stand so that you are above the students.
 - b. Move about as you teach.
 - c. Make eye contact to include students in the lesson.
 - d. Vary the volume and intensity of your voice.
 2. Establish a defining (unique) characteristic for your teaching style.
 - a. Share your hobbies or interests with the students.
 - b. Use jokes, cartoons, newsletters, or humor in your teaching.
 - c. Play your favorite music during the last five minutes of class and between periods.
 - d. Have a saying of the day, or a problem of the week.

- e. Challenge students to learn a variety of information - acronyms, names of athletic teams, the names of classical or popular music, famous paintings, etc.
 - f. Have a student challenge you in shooting free throws once a week.
3. Establish structure in your classroom.
 - a. Students feel secure when they know what to expect from a teacher.
 - b. Make a list of all the procedures you use in your classroom.
 - c. Teach and reteach these procedures meticulously to the students.
 - d. If properly taught, the class can run by itself once routines are learned.
- B. Making Your Curriculum Worthwhile and Meaningful.
1. Plan your lessons carefully.
 - a. Plan your lessons around the maturity level of your students.
 - b. Have variety in each lesson. Make frequent changes in activities. No more than 20 minutes on any one activity for most students.
 - c. Break the instruction into small, easy-to-follow steps. Check often for understanding.
 2. Continually strive to motivate students.
 - a. Have motivational sayings posted on the wall.
 - b. Admit that learning is not always easy, but stress that the fun comes when a difficult skill or concept has been mastered. Challenge them to try harder.
 - c. Praise students when they do a good job.
 - d. Correct and return work as quickly as possible to provide feedback.
 - e. Keep current on what interests students - even Beavis and Butthead.
 - f. Keep students informed of their progress (and current standing).
 - g. Expect all students to succeed.
- C. Components of an effective lesson.
1. Lesson Design and Presentation.
 - a. Lesson plans and Performance models.
 - b. Trimodal teaching: Hear, See, Do.
 - c. Cooperative Learning.
 - d. Provide incentives for diligence and excellence.
 2. Avoid The Universal Helping Interaction.
 - a. Spending too much time with one student.
 - b. It creates patterns of helplessness, dependency, failure, and discipline problems.

3. Corrective Feedback during guided practice.
 - a. Spend less than a minute with a student needing help.
 - b. Praise something he has done correctly, prompt him on the next step, and leave.
 - D. Prepare Yourself.
 1. Dress professionally.
 2. Maintain good hygiene (watch for body odor and bad breath).
 3. Pump yourself up. Come to school each day with a positive attitude.
 4. Accept the training of student character as an important part of your job.
- III. The First Day of School (Wong, H., & Wong, R., 1991).
- A. The Seven Things Students Want to Know the First Day of School.
 1. Am I in the right room?
 2. Where am I supposed to sit?
 3. What are the rules in this classroom?
 4. Who is the teacher as a person? [e.g., Is she nice? How tough is he?]
 5. What will I be doing this year?
 6. How will I be graded?
 7. Will the teacher treat me as a human being?
 - B. How to greet the students on the first day.
 1. Post your name, room number, section or period, grade level or subject, and an appropriate welcome next to the door.
 2. Stand at the door with a friendly demeanor.
 3. Tell them your name, room number, etc.
 4. Check to see that each student is in the right place. If not, help them.
 5. Tell them where to sit and to do the assignment at their desks.
 6. Have your name, room number, section or period, grade level or subject, and an appropriate welcome written on the board.
 - C. How students are to enter the room.
 1. Observe how each student enters the room.
 2. Ask any student who enters inappropriately to return to the door and enter appropriately. Do not have them go "out of the room," but merely to the door.
 3. Avoid sarcastic remarks.
 4. Calmly but firmly do the following:
 - a. If a student enters inappropriately, ask the student to return to the door.
 - b. Tell the student why.

- c. Give specific directions.
 - d. Check for understanding and acknowledge it.
- 5. Tell students where they are to sit.
 - a. Have their names on cards on their desks (elementary school).
 - b. If possible, have their names written on a seating chart transparency that is projected onto a screen (secondary level).
- 6. The first assignment to do upon entering the room the first day.
 - a. "When you find your seat, you will find an assignment at your desk. Please start to work on it right away."
 - b. Have a short and easy assignment on each desk or on the board.
 - c. It could be something fun like a puzzle.
 - d. It could be an information form for your files.
- D. How to introduce yourself to the class.
 - 1. Write your name on the board and pronounce it for them.
 - 2. Express optimism about having them as your students.
 - 3. Tell them a little about your expectations and your commitment to be a good teacher.
 - 4. Give a very brief overview of the year or course.
 - 5. If you wish, tell them a little about yourself.
- E. Teach your discipline plan.
 - 1. Introduce the need for a discipline plan.
 - 2. Rules should be written and posted in the classroom.
 - 3. Students should have a copy in their notebook.
 - 4. Do not involve students in a lengthy formulation of rules. Instead, spend the time explaining why the rules are needed (to help us learn).
 - 5. Have specific consequences for both good and inappropriate behavior.
 - 6. Have both students and parents sign a copy of your discipline plan.
 - 7. Emphasize, model, and practice good manners, courtesy, and responsibility.
- F. Teach your classroom procedures.
 - 1. Every time a teacher wants something done, there must be a procedure for it.
 - 2. Make a list of all the procedures you will have. Be thorough.
 - 3. Three steps to teaching procedures: Explain, Practice, Reinforce.
 - 4. Introduce the procedures as they are needed. Do not do all on the first day.
 - 5. Verbally remind students of the procedure each time it is to be used.

- G. Be a teacher, be a leader, establish your authority the first day of school.
 - 1. BE PROACTIVE, not REACTIVE. Know what to do in any situation.
 - 2. Do not ignore minor violations of your rules.
 - 3. Correct misbehavior in a CALM but firm manner.
 - 4. Assign students chores to do to keep the room clean and orderly.

- IV. The First Weeks of School.
 - A. Continue to be calm, poised, and firm when dealing with off-task behavior.
 - B. Repeat your basic classroom rules every day for the first week.
 - C. Introduce classroom procedures as they are needed. For several weeks, repeat each procedure orally each time you need to do them. Take time to do it right.
 - D. Show an interest in your students. Laugh a little.
 - E. Show enthusiasm for the lessons. Be positive.
 - F. Set high expectations, praise them at the end of the day or period if they do a good job.
 - G. Hang in there.

- V. Some Suggestions for Building Relationships with Students (Attractive Power).
 - A. Call each student by name each day. Learn names quickly.
 - B. Establish a relationship with the child's parents and family.
 - C. Take an interest in each child. Does he like football? Art?
 - D. Have something interesting or unusual about your class that students like.
 - E. Be fair. Apply consequences consistently.
 - F. Watch the bulletin for the names of students involved in activities. Mention their involvement. Let them know you care.
 - G. Use humor. Laugh at yourself. Students enjoy a good laugh. Put cartoon characters on worksheets and test papers.
 - H. Take photographs of each child. Use on bulletin boards.
 - I. Use the computer to make a class newsletter each month.
 - J. Try to make all students feel a part of the class.
 - K. Assign leadership roles. Rotate these among the students.

**SUPPORTIVE DISCIPLINE: PART I
ENFORCING RULES THROUGH LIMITING SETTING - PERSONAL POWER
(Jones, 1987)**

- I. The Emotional and Psychological Aspects of Discipline.
 - A. Typical disruptions - 80% is talking to neighbors and 15% is out of seat.
 - B. Cost of disruption - Teacher stress and Time on Task.
 - C. "Meaning Business". How to deliver an effective message on discipline.

1. You must believe that teaching students to be polite is YOUR JOB.
 2. Effective teachers tell students when they are rude, disrespectful, or immature.
 3. Effective teachers use body language - eyes, facial expression, arms, hands, etc.
- D. The "Fight-Flight" reflex.
1. Our natural reflex is to prepare for confrontation.
 2. Neuromuscular (muscles tense) and Biochemical (adrenaline flows).
 3. Under pressure, we shift naturally downward in the brain. In the jungle this was necessary for survival; in social settings this can be disastrous. Social situations are best managed by the cortex (gray matter), not the brain stem (Reptilian brain).
 4. The "natural" responses in social settings are wrong. We need to learn to control ourselves and remain in the cortex, not the brain stem.
 5. CALM IS STRENGTH and UPSET IS WEAKNESS.
 6. In the classroom, when confronted with a serious discipline problem, the fight reflex tends to be VERBAL and the flight reflex tends to ignore it.
 7. Relaxing helps control the Fight-Flight Reflex.
 8. We must learn to do neither and stay calm.
- II. Relaxation and Body Language while in the Discipline Mode.
- A. Kids read your body language. Therefore, the discipline mode must be very different from your teaching mode.
 - B. Breathe slowly and shallowly - about an 8 second cycle.
 - C. The face should be relaxed, lips together, jaw not tensed.
 - D. Move head and body very slowly (Go ahead, Make my day!).
 - E. Relaxation is important in many human endeavors, from athletic competition to gun fighting.
- III. Limit Setting - Part I: The Look and Turn (Personal Power).
- A. Respond immediately but move very slowly.
 1. You see the disruption.
 2. Stop instruction.
 3. Excuse yourself.
 4. Stay down and breathe in gently.
 - B. Turn slowly, look, relax and wait.
 1. Turn in a regal fashion. Meaning business is always slow. Turn from head to shoulders to waist to feet.
 2. Point your toes squarely in direction of the disrupter.

- C. Get a focal point. Do not shift eyes. You do not have to look them directly in the eyes.
 - D. Hands down. Behind your back or in your pockets is okay. Do not fold them across chest or put them on your hips.
 - E. Facial expression during discipline.
 - 1. Facial expression indicates dominance or submission.
 - 2. A set or tense jaw indicates fear or anger. A relaxed face indicates confidence and control.
 - 3. A smile is part of the submission behavior of both monkeys and humans.
 - 4. A smile indicates a desire to avoid conflict, a desire to be liked.
 - 5. A student's smile is designed to make you smile. If you respond, your discipline will be shattered. Stay relaxed. You can smile later when things are going well.
- IV. Limit Setting - Part II: Moving in on the Student (Personal Power).
- A. Walk slowly.
 - 1. Look beneath table to check feet and body positions. If their feet are still facing one another, they intend to keep fooling around.
 - 2. Walk slowly to desk of main disrupter, stand and wait. Take two relaxing breaths.
 - 3. Stand close to desk and wait. Take several relaxing breaths. They will usually comply to get rid of you.
 - 4. Don't force them, and don't talk immediately. Let them decide to comply.
 - B. If this doesn't work, use the PROMPT.
 - 1. Beware of pseudo-compliance, of acting like they are back to work when they are not.
 - 2. Ease down on one palm and give prompt. Verbal, hand, and eye prompts.
 - 3. Do not touch the student.
 - 4. Wait. Take two more relaxing breaths.
 - C. If this doesn't work, go to PALMS.
 - 1. Place both palms flat on the desk. Lock elbows. Take two relaxing breaths.
 - 2. Avoid weak gestures such as fingertips on the desk. This indicates you are eager to leave.
 - 3. Flat palms indicates you have the time to wait until you get exactly what you want - the student to return to work.

- V. Limit Setting - Part III: Moving Out (Personal Power).
 - A. When the student complies, wait several moments, relax.
 - B. Thank the student quietly.
 - C. Move to second student (if there is one) and repeat the process.
 - D. When he complies, thank him and wait.
 - E. Walk slowly back to your original position.
 - F. Before resuming, turn fully around and look once more at the disruptive students.
 - G. Resume teaching.

- VI. Types of Back Talk.
 - A. Helplessness - "I don't get this!" or "I'm so stupid!"
 - B. Denial - "I didn't do anything. Why are you picking on me!"
 - C. Blaming others - "John started it!" or "He asked me how to do it!"
 - D. Blaming the teacher - "You went too fast!" or "You don't explain things."
 - E. Excusing the teacher to leave - "OK, you can leave now!"
 - F. Crying.
 - G. Compliments - "Geez, that dress really is becoming on you, Miss Arakaki!"
 - H. Change the subject - "When is our term paper due?"
 - I. Pushing your hand or arm aside.
 - J. Romantic comments or gestures - The student tells you he loves you.

- VII. Nasty Back Talk.
 - A. Insult.
 - 1. Dress. "Where'd you get that dress, the Salvation Army?"
 - 2. Grooming. "Geez, your hair really has gray roots."
 - 3. Hygiene. "Not so close. You have bad breath!"
 - 4. Physical characteristics. "Move back, the reflection off your bald head is blinding me!"
 - B. Profanity.
 - 1. The small stuff: the H-LLS, SH-TS, and D-MNS.
 - 2. The big stuff: the F-CK YOUs, and so on.
 - C. Sexual (occurs more often than most people think).

- VIII. Putting Back Talk in Proper Perspective.
 - A. The objective of back talk is to get the teacher off the track of discipline.
 - B. Do not respond. Relax, keep quiet.
 - C. Remember, in our species, TALK is a natural part of the fight-flight reflex.
 - D. The short-term goal is to remain calm. The first five seconds are crucial.
 - E. In the long-term, if this doesn't work, you can do anything you want. You have a backup system if you need it. So remain calm and wait as long as you can.

- F. If the back talk is truly outrageous or persists, use the backup system. described below.
 - G. If the student ends the disruptive behavior, continue the class.
 - H. As the period ends, quietly ask the student to stay. "John, I'd like to see you for a minute after class." Be in a helping rather than a vindictive role.
 - I. Reconciliation. "That wasn't like you today. Is there anything wrong? Is there any way I can help?" Let the student know you are BIG enough to take his insults yet strong enough to deal with them. You do both by remaining calm.
 - J. If the student is still nasty, use the backup system. And follow school policies.
- IX. Limit Setting on the Wing: What effective teachers actually do.
- A. Never go public (verbally) if you can help it.
 - B. Move towards student unobtrusively (making eye contact).
 - C. Break your train of thought to get attention (make eye contact). Be serious, stop talking.
 - D. Physical prompt, a nonverbal signal to stop the behavior.
 - E. Taking an object (with your hand cupped to receive the object). Do not grab the object.
 - F. Calling the offending student's name. "John, what is the answer to question 6?"
 - G. Calling the student's name with a mild desist. "John, no one should be talking during a test!"
 - H. Reminding the student that he is not following a rule or procedure.
- X. When Limit Setting Might Fail.
- A. When the teacher is angry or upset.
 - B. When the teacher goes too rapidly through the steps of Limit Setting.
 - C. When the teacher does not move about the classroom.
 - D. In open field situations.
 - E. With repeat disruptions. Use it once, maybe twice. Then use the backup system.
 - F. With an explosive or agitated student.
 - G. When the teacher is afraid of the students.
 - H. When the teacher does not have good body language.

SUPPORTIVE DISCIPLINE: PART II

OTHER THEORIES

- I. GROUP DYNAMICS (Redl & Wattenberg, 1951).
 - A. People in groups behave differently than they do individually.
 1. Group expectations influence individual behavior.
 2. Individual behavior can influence the group.

- B. Teacher awareness of *group dynamics* is important to effective classroom control.
 - C. Group behavior is influenced by how students perceive the teacher.
 - D. Use diagnostic thinking to deal with classroom conflict.
 - 1. Form a hunch.
 - 2. Gather facts.
 - 3. Apply hidden factors.
 - 4. Take action.
 - 5. Be flexible.
 - E. Use influence techniques to control group behavior.
 - 1. Help students maintain self-control.
 - a. Eye contact.
 - b. Move closer to the student.
 - c. Give encouragement.
 - d. Use humor.
 - e. Ignore the behavior.
 - 2. Provide situational assistance.
 - a. Help students over a hurdle when they get stuck.
 - b. Restructure the situation if it is too difficult.
 - c. Establish routines.
 - d. Remove a student from a situation if he cannot behave.
 - e. Remove seductive objects.
 - f. Use physical restraint if necessary.
 - 3. Help students appraise reality - Tell it like it is.
 - a. Help them understand the reasons for their misbehavior.
 - b. Help them see the consequences of their actions.
 - c. Offer encouragement.
 - d. Set limits.
 - 4. Apply Pleasure-Pain techniques of rewards and punishment.
- II. USING EFFECTIVE INSTRUCTIONAL STRATEGIES (Kounin, 1970).
- A. The teacher can minimize discipline problems with good instructional techniques.
 - B. The ripple effect.
 - 1. When a teacher corrects one student, other students also behave.
 - 2. When a teacher praises one student, other students are reminded of expectations.
 - C. Withitness, the ability to know what is going on in all parts of the room.

1. If a disturbance occurs, it is vitally important to catch the correct person.
 2. When two or more persons are misbehaving, it is important to select the most serious.
- D. Overlapping, the ability to attend to two things at one time.
1. Work with a reading group while monitoring the rest of the class.
 2. If students know the teacher is aware of them, discipline problems diminish.
- E. Movement management, the pacing, momentum, and transitions of the lesson.
1. Kounin found this to be the most important of all management techniques.
 2. Jerkiness and slowdowns interrupt the smooth flow of the lesson.
- F. Maintaining a group focus.
1. Large group format is easier to control.
 2. Hold each student accountable for the content of the lesson.
 3. Seek ways to keep everyone's attention.
 - a. "Let's see who can do this problem."
 - b. Do not call on students in a predictable order.
 - c. Vary unison responses with individual responses.
 - d. Keep your focus moving about the room.
- G. Avoid satiation (boredom)
1. Provide students with a feeling of making progress.
 2. Issue challenges: "I don't know if anyone can get this one."
 3. Use variety. Change activities frequently. Make it interesting.
- III. BEHAVIOR MODIFICATION (Adapted from B.F. Skinner, 1971, 1984).
- A. Behavior is shaped by its consequences, by what happens immediately after the act.
- B. Systematic use of reinforcement (reward) can shape a student's behavior in the desired direction.
1. Positive reinforcement is giving the student a reward.
 2. Negative reinforcement is taking away something the student doesn't like.

- C. Behavior becomes weaker if it is not followed by reinforcement.
 - 1. Ignore the behavior.
 - 2. Punish the behavior.
- D. Types of reinforcers:
 - 1. Social reinforcers such as verbal comments, facial expressions, and gestures.
 - 2. Graphic reinforcers such as marks or stars or happy faces.
 - 3. Activity reinforcers such as free time or collaborating with a friend.
 - 4. Tangible reinforcers such as prizes or printed awards.
- E. Reinforcement schedules.
 - 1. In the early stages of learning, constant reinforcement produces the best results.
 - 2. Intermittent reinforcement can be used once a behavior is learned.
- F. Systems of Behavior Modification.
 - 1. Cath 'em being good.
 - 2. Rules - Ignore - Praise.
 - a. Teach the rules.
 - b. Ignore those who do not follow rules.
 - c. Praise those who follow rules.
 - d. Works for elementary school, but not usually for secondary school.
 - 3. Rules - Reward - Punishment.
 - a. Teach the rules.
 - b. Punish those who do not follow rules.
 - c. Reward those who follow rules.
 - d. Works for secondary school.
 - 4. Token economies or contingency management.
 - a. Tokens are given for desired behavior.
 - b. Tokens may be exchanged for tangible items, desired activities, free time, etc.
 - 5. Written Contracts.
 - a. Specific work to be done or behavior to be established and a time line.
 - b. Rewards are listed for completion of the contract.

- IV. SOCIAL DISCIPLINE (Dreikurs & Cassel, 1972).
- A. Establishing discipline involves teaching the following concepts.
 - 1. Students are responsible for their own actions.
 - 2. Students must respect themselves and others.
 - 3. Students have the responsibility to influence others to behave appropriately.
 - 4. Students are responsible for knowing the rules and consequences.
 - B. The three types of teachers.
 - 1. Autocratic.
 - 2. Permissive.
 - 3. Democratic.
 - C. Why students misbehave.
 - 1. All students want to belong.
 - 2. Students choose to behave or to misbehave.
 - 3. Students misbehave to get the recognition they seek.
 - D. Mistaken Goals.
 - 1. To get attention.
 - 2. To win in a power struggle with the teacher.
 - 3. To seek revenge.
 - 4. To display their own inadequacy.
 - E. Actions which teachers can take (Always remain calm and understanding).
 - 1. The attention seeker: Ignore him or her.
 - 2. Power struggles: Refuse to fight. Admit you cannot make the student do anything. Later, try to find ways to help the student feel a sense of responsibility in the class.
 - 3. Revenge seekers: Don't retaliate. Acknowledge students feelings. Show you care. But apply consequences if necessary.
 - 4. Displays of inadequacy: Avoid criticism. Look for small success, build upon it.
 - F. Use consequences and not punishment.
 - 1. Natural consequences. If a child has body odor, others may not like him.
 - 2. Logical consequences. If a child has body odor, make him see a counselor.
 - 3. Contrived consequences. If a child has body odor, make him weed the garden.

- G. Use encouragement often and use praise sparingly.
 - 1. Not all students deserve praise, but all students need encouragement to do better.
 - 2. Praise is a reward for achievement, encouragement is an acknowledgment of effort.
 - 3. Praise is patronizing, encouragement is a message between equals.
 - 4. Praise can be withheld as punishment, encouragement can be freely given to everyone.
 - 5. Praise connects achievement with personal worth, encouragement builds confidence.

- V. MEETING STUDENT NEEDS WITHOUT COERCION (Glasser, 1969, 1985, 1990).
 - A. Reality Therapy.
 - 1. Focus on the present, not the past.
 - 2. The steps in solving behavioral problems using Reality Therapy.
 - a. Display warmth and caring to all students.
 - b. Identify the problem behavior.
 - c. Help the student make a value judgment (not a moral judgment) about the behavior.
 - d. Plan a new behavior.
 - e. Get a commitment from the student. Put it in writing.
 - f. Accept no excuses for not keeping the commitment.
 - g. Don't punish, but use natural or logical consequences agreed upon in advance.
 - h. Never give up on a student.
 - B. Control Theory.
 - 1. Basic beliefs of Control Theory.
 - a. In contrast to Stimulus/Response theory, our behavior is internally, not externally, motivated.
 - b. We have control over our actions, we choose to act as we do.
 - c. All behavior is our best attempt to satisfy one or more of five basic needs.
 - 2. Glasser's hierarchy of needs.
 - a. The need to play and have fun.
 - b. The need to be free and make choices.
 - c. The need for power and influence.
 - d. The need to belong and love others.
 - e. The need to survive.
 - 3. The Quality School.
 - a. Good schools help students satisfy all their basic needs.
 - b. Good teachers are leaders, not bosses.

- c. Bosses are coercive, leaders are non-coercive.
- d. When students rebel, a boss punishes, a leader facilitates a solution.

VI. TEACHER EFFECTIVENESS TRAINING (Gordon, 1974).

- A. Determine who owns the problem.
 - 1. The student owns the problem if the behavior does not interfere with the teacher.
 - 2. The teacher owns the problem if the behavior interferes with the teacher.
 - 3. You both own the problem if your needs are conflicting.
- B. Teachers should avoid the roadblocks to communication.
 - 1. Ordering, directing.
 - 2. Admonishing, threatening.
 - 3. Moralizing, preaching.
 - 4. Advising, giving solutions.
 - 5. Lecturing, giving logical arguments.
 - 6. Judging, criticizing.
 - 7. Praising, agreeing.
 - 8. Ridiculing, shaming.
 - 9. Analyzing, diagnosing.
 - 10. Sympathizing, consoling.
 - 11. Probing, questioning, interrogating.
 - 12. Withdrawing, humoring.
- C. Alternatives to roadblocks when the student owns the problem.
 - 1. Attentive silence. Show you care by paying attention, but remain silent.
 - 2. Noncommittal responses. "No kidding!" or "Oh my gosh!"
 - 3. Door openers. Comments such as "Do you want to talk about it?"
 - 4. Active listening. Reflect the student's message back to him. Comments such as "It sounds as if you are angry because . . ."
- D. Alternatives to roadblocks when the teacher owns the problem - Use I-Messages.
 - 1. The three parts of an I-Message.
 - a. A non-blameful description of the other person's inappropriate behavior.
 - b. A tangible effect that the behavior is having on you.
 - c. A feeling that tangible effect is having upon you.
 - 2. Example of an I-Message: "John, when you talk to Harry when I'm teaching (part 1), I'm not sure if Harry understands the lesson (part 2). As a result, I feel that I may not be teaching everyone in the class as well as I might (part 3)."

- E. Alternatives to roadblocks when you both own the problem - Conflict Resolution.
 - 1. Conflict Resolution tries to find a win-win solution.
 - 2. The six steps in Conflict Resolution.
 - a. Define the problem.
 - b. Generate possible solutions.
 - c. Evaluate solutions.
 - d. Choose a solution.
 - e. Implement the solution.
 - f. Evaluate the solution.

- VII. ASSERTIVE DISCIPLINE (Canter, L., & Canter, M., 1976, 1992).
 - A. Remove roadblocks to Assertive Discipline.
 - 1. Have positive expectations of students.
 - 2. Believe you can influence the behavior of all your students.
 - 3. If needed, seek support from other teachers, parents, administrators.

 - B. Use Assertive response styles.
 - 1. *Assertive* teachers get their needs met without violating the rights of their students.
 - 2. *Hostile* teachers get their needs met, but do not act in the best interests of their students.
 - 3. *Nonassertive* teachers do not get their needs met and do not act in the best interests of their students.

 - C. Learn to set limits.
 - 1. Identify general rules.
 - a. No one may interfere with my teaching for any reason.
 - b. No one may interfere with any students' efforts to learn for any reason.
 - c. No one may cause physical or psychological harm to herself or himself or to other students.
 - d. Good behavior will be rewarded.
 - 2. Identify specific rules.
 - 3. Steps in setting limits.
 - a. Request appropriate behavior. "Everyone should be reading silently."
 - b. Use body language and firm voice to deliver a verbal limit. "John, stop talking."
 - c. If student objects, use the Broken Record Technique, repeat your original request.
 - 4. Follow through.

- a. Make promises, not threats.
- b. Select consequences in advance.
- c. Set up a system of negative consequences you can easily enforce.
 - i. First offense: name on the board.
 - ii. Second offense: one check after name (15 minutes after school).
 - iii. Third offense: two checks after name (30 minutes after school).
 - iv. Fourth offense: three checks after name (call parents).
 - v. Fifth offense: four checks (remove from room, send to office).
- 5. Have a system of positive consequences.
 - a. Give students personal attention.
 - b. Send positive notes to parents.
 - c. Give special awards for significant improvement, etc.
 - d. Give special privileges for good behavior.
 - e. Give material rewards.
 - f. Arrange with parents for rewards at home for being good at school.
 - g. Give group rewards.

SUPPORTIVE DISCIPLINE: PART III

OTHER USEFUL THINGS TO CONSIDER

- I. A SERIES OF ESCALATING RESPONSES.
 - A. Make eye contact with offending student.
 - B. Move towards the student as you continue to teach.
 - C. Give a nonverbal signal to stop the off-task behavior.
 - D. Give a reminder to the entire class about the class rule being violated.
 - E. Praise students who are following the rule.
 - F. Call the student by name and give a short verbal instruction.
 - G. Quietly assign a punishment or consequence to the offending student.
- II. "My Action Plan" (Wong, H., & Wong, R. (1991)).
 - A. Make the student write a plan to solve the problem.
 - B. What's the problem? What's causing the problem? How will you solve the problem?
 - C. The student completes the plan with your help.
 - D. If the plan is not followed, call the parent to discuss it.
 - E. This teaches Problem Solving, Responsibility, and Self-Discipline.
- III. The Letter to Mom and Dad (Jones, 1987).
 - A. Write a letter to the parent, place it in an envelop addressed to the parent.

- B. Tell the student he can tear the letter up at the end of the week if he is good in class.
 - C. If he is not good, send the letter home; if he is good, he gets to tear it up.
- IV. Obtain Administrative Support.
- A. Ask the administrator for support in a non confrontational and friendly manner.
 - B. Present your plan in writing to the administrator. Discuss it.
 - C. Check that the plan is consistent with school, district, and state rules.
- V. Obtain Support of the Parents.
- A. Send copy of your discipline plan home for both student and parent signatures.
 - B. If an elementary teacher, call each parent before or during the first week of school. Tell them you like their child, and ask their support in teaching their child.
 - C. If it becomes necessary to call home for a problem, tell the student in advance that you are calling not to make trouble but to discuss the discipline plan.
- VI. Use Rewards to Motivate Desired Behavior (Reward Power).
- A. Social reinforcers are often the most powerful and most enduring.
 - 1. Verbal praise for the class as a group. Try to build a sense of unity in the class.
 - 2. Non-verbal praise (smiles, wink of an eye, thumbs up, etc.).
 - 3. Appeals to the student's sense of pride or accomplishment.
 - B. Grades.
 - C. Individual Recognition.
 - 1. Display of student work.
 - 2. Certificates or stickers.
 - 3. Verbal comments or praise by the teacher.
 - 4. School awards.
 - D. Group Activities.
 - 1. Free time.
 - 2. Go to the library.
 - 3. Decorate the room.
 - 4. Have a party or field trip.
 - E. Material incentives.
 - 1. Food or candy or money.

2. Toys.
3. Books.
4. Gift certificates.

VII. Responsibility Training (RT) (Jones, 1987).

- A. Limit Setting is designed to STOP disruptions, RT is designed to START learning.
- B. You must have cooperation or you cannot teach.
- C. In many classrooms, there are rewards for NON-COOPERATION (e.g., by being defiant, student can gain status with peers).
- D. In RT the teacher gives the students time each day or week. You give to receive.
- E. The time must be spent on learning related activities.
- F. The activity must be something for which the students will work.
- G. Give extra time for cooperation.
 1. Hurry-up bonuses to teach students to hustle!
 2. Automatic bonuses for everyday procedures such as being in seat when the bell rings.
- H. Take away time for violations of class rules. ["It took you 1 minute to be quiet, so ...].
- I. Everyone must be in compliance or bonuses are not won.

VIII. Omission Training, An adjustment to Responsibility Training (Jones, 1987).

- A. If a student continually sabotages the group, his conduct does not count. However, he can win extra time for the group if he can behave for a specific amount of time.
- B. Student can win time for the group, making him more acceptable to the others.

CORRECTIVE DISCIPLINE: THE BACKUP SYSTEM (Coercive Power)

APPLYING CONSEQUENCES

- I. The Backup System or Punishment (Jones, 1987).
 - A. This is the LAST option, not the FIRST.
 - B. Ideally, the punishment should be something the student wants to avoid.

- II. Small backup responses are private.
 - A. Avoid going public if at all possible.
 - B. The teacher looks sternly at the student.
 - C. The teacher tells the student privately, "We are in the backup system now and if you continue, you will pay the price."
- III. Medium backup responses are within the classroom, but public.
 - A. Give the student a verbal reprimand.
 - B. Have the student fill out a Behavior Improvement Form stating the misbehavior and the consequence if it happens again.
 - C. Time out (isolation in the classroom or send to another teacher).
 - D. Loss of privilege (such as recess).
 - E. Detention after school.
 - F. Loss of points on grade.
 - G. Call the parents. You might try the letter or the action plan approach.
- IV. Large Backup responses involves someone outside the classroom.
 - A. Send to principal or vice-principal or counselor.
 - B. Send to an in-school suspension center.
- V. Extra large backup responses involve the law.

**SCHOOL WIDE DISCIPLINE:
INVOLVEMENT OF THE ENTIRE FACULTY**

- I. The Key Players.
 - A. The Principal.
 - 1. The principal is the key leader in school and classroom discipline.
 - 2. Should be visible and walk the hallways from time to time.
 - 3. Should help create a positive school environment which welcomes students and parents.
 - 4. Should communicate policies effectively to parents.
 - 5. Should realize how difficult it is for teachers to discipline students these days.
 - 6. Must respect and be willing to back up teachers when the heat is on.
 - 7. Should periodically thank each teacher for doing a good job.
 - B. The Teachers.
 - 1. All teachers should agree on the rules and standards to be enforced.
 - 2. All teachers must enforce the rules each time they see the rule being broken.
 - 3. Teachers must be involved. Discipline cannot be left to campus security guards.

4. Every student belongs to every teacher all the time.
 5. An affront or assault on any teacher is an affront to or assault on all teachers.
 6. Teachers should help one another with discipline problems. Do yard duty in pairs.
- C. The Students.
1. Should be encouraged to take pride in the physical and social climate of the school.
 2. Should know the expectations of the school.
 3. Should help the faculty enforce school standards.
 4. Should be rewarded when significant or admirable things have been accomplished.
 5. Should be told that inappropriate behavior will not be tolerated. Bad behavior should be labeled "Bad behavior."
- D. The Staff.
1. Should be included in discussions on student behavior and school discipline.
 2. Should know and enforce school expectations.
- E. The Parents.
1. Should be informed about the need for a school discipline plan.
 2. Should be given an opportunity to contribute to or react to provisions of the plan.
 3. Should be invited to help with school activities when needed.
- II. The Rules Should Cover all Aspects of the School.
- A. Classrooms.
 - B. The cafeteria.
 - C. The hallways, including going from one location to another as a group.
 - D. The school grounds and play areas.
 - E. Assemblies.
 - F. The rest rooms.
 - G. The school bus and on field trips.
 - H. The Library and computer rooms, etc.
 - I. Before, during, and after school.
- III. School Wide Discipline Begins in the Classroom.
- A. Every teacher should receive the same training for dealing with discipline.
 - B. The tone for school wide discipline is set by having firm classroom rules.
 - C. Teachers should teach the School Rules at the same time they teach their classroom rules.
 - D. Teachers must all be willing to help enforce rules anywhere on campus.

- E. Teachers who are strong disciplinarians should be willing to help those who need help.
- F. Teachers who need help must ask for it.

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VOICES OF TEACHER INTERNS AND THE FEAR OF CLASSROOM MANAGEMENT AND DISCIPLINE

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Introduction

This paper is part of a larger study which focuses on reflective and critical aspects of teacher education and teacher internship programs (Doyle, Kennedy, Ludlow, Rose and Singh, 1994; Kennedy, Doyle, Rose and Singh, 1993; Singh, Doyle, Rose and Kennedy, 1997; Singh, Rose, Doyle and Kennedy, 1996).

In working with teacher interns during the internship semester, we found that some teacher interns were terribly concerned about the issues related to classroom discipline and management. They were spending a tremendous amount of energy and time worrying about these issues. This was stressful for some. Every day they seem to approach their classrooms preoccupied with a sense of fear which led them to believe that their students would do something uncontrollable. It seems that in some cases their fear bordered on phobia. We examined this phenomenon in a paper entitled, "Reflective Internship and the Phobia of Classroom Management" (Singh, Doyle, Rose and Kennedy, 1997). That paper describes the methodology, data collection procedures, concepts and theories we utilized in analyzing teacher interns' fear of classroom management and discipline.

There is no need to repeat the discussion of those items in this paper. Instead, this paper focuses on one need of the teacher interns which became clear while analyzing the "phobia" phenomenon. The fact was that the interns wanted to know "practical" things which would help them to manage classrooms. In a self-reflective manner they wanted to know what were the sources of their fear? What made them so fearful? What should they do to survive the Internship semester? What should not be done if teacher interns want to survive the Internship?

As internship supervisors, part of our effort was to bring the interns together for reflection. In the extended group reflective sessions (sometimes involving thirty interns and lasting for two full days), and in "mini" individual reflective sessions (involving one to two hours), we discovered another thing: in order to come to grips with their fear, some interns constantly criticized the theoretical nature of university courses and were critical of the university professors for not transmitting to them practical knowledge. This feeling, we realize, is often fostered by some cooperating teachers, as well as by many non-university individuals and some people within the university itself. When the interns were told that a good theory is more likely to be the best practical tool, they showed considerable doubt. Facing this, my colleagues and I were on many occasions tempted to subject them to a barrage of information on classroom management and discipline which has been readily available in professional journals and books, but we resisted that idea to some extent. It is not that we did not want them to know the professional literature available on this topic. In fact, on many occasions we referred them to the latest books and articles on the subject. When we did that, they often responded by saying that those things don't work anyway in real classroom situations. What is a real classroom situation, we

asked? A real classroom situation is where some students or a majority of students don't do what you expect them to do and you don't know how to make them do those things. This was generally their answer.

So, from our own theoretical perspective, and in this particular context, we decided to encourage the teacher interns to voice their own concerns about classroom management and disciplines in reflective sessions and let them struggle with their own voices, as well as with the voices of their peers. In fact, we learned that this is what they wanted to do. They wanted to hear their own voices and the voices of their peers. And they relished the whole process very much. They felt empowered in the sense that they found solutions to many problems by themselves.

The critical and reflective question we pose is how can we, as teacher educators, wean interns away from a preoccupation with technical skills toward a process where they can feel safe to try to put their own work into practice in a wider social, cultural, and political context? We encouraged them to focus on what they do and don't do in their classrooms in a larger context and asked them to identify them. In this paper, then, I report what the interns say about the sources of their fear about classroom management and discipline, and what their do's or don'ts are.

We find it very interesting to compare teacher interns' responses to issues related to classroom management and discipline with the results of studies done by the professional social and behavioral scientists and presented in the second part of Dr. King's paper in this issue of *The Morning Watch*. Our colleague, Dr. King, summarizes the results of many studies as well as various models of the classroom management and discipline. It is not that hard to note, in many cases, similarities and dissimilarities between the interns' answers and the suggestions offered to teachers by the professional researchers regarding "do's" and "don'ts". Similarly, there are many commonalities between the interns' answers and suggestions made in a recent document produced by the Department of Education outlining policies on discipline in schools (1996).

What does this mean? We concur with many others in believing that there are many ways of knowing and there is always a loose fit between different ways of knowing. Nobody knows everything. Our knowledge about and of social phenomena is always partial and limited. There are no fixed authorities in an absolute sense. The role of "expert knowledge" to come to grips with complex social issues is perhaps very modest.

Further attention should be drawn to three forms of knowledge: commonsense knowledge ("amateur" theory), professional knowledge (scientific theory) and official or state knowledge (ideology). In order to be able to make sense of complex social and educational issues, each form of knowledge should be treated, more or less, equally in any plan of action. This attitude or belief toward knowledge, however, does acknowledge the utility of one form of knowledge over the other in a particular situation. In this sense it does not ignore the hierarchical nature of knowledge in unequal (stratified) societies.

We raise one final question: how do interns, more or less, end up saying and doing the things suggested by professional researchers? Is it that the interns have

read books and articles written by professionals on their own? We really don't think so. Is it the case that professional knowledge is often used as a basis for their socialization at homes, in schools, in the work place, in media and in society at large? Is the professional knowledge hegemonic or overwhelming in this sense?

The institutions of higher learning, like the university, are involved in professional socialization of the teacher interns. Whether they realize it or not, their commonsense knowledge do seem to correspond to the professional knowledge, at least to some degree. Does this mean that we at the university do not teach anything of a practical nature to teacher interns, as some of them claim? Or is it that what we do at the university and in the Faculty of Education gets readily absorbed as commonsense knowledge, which in turn surfaces as "hidden curriculum" in the classroom interaction among professors, teachers and students? Or is it the case that commonsense, professional and official forms of knowledge overlap when we come to act on complex social policy issues? We believe the latter is the case. And it should be that way (Singh, 1991). Believe it or not, so we at university do teach students something of practical nature - by default or by design!

Below we present responses (voices) of the interns to the sources of fear about classroom management and discipline in the form of several practical points which they themselves have identified.

More Than 50 Sources of Phobia/Nature of Phobia

1. Students who don't pay attention.
2. Not totally confident in my ability to keep things under control.
3. The most anxiety comes from discipline problems.
4. I am used to silent classroom.
5. I am used to school when the teacher talked, no one else talked.
6. The kids that want to learn will get the abuse (i.e., they should be able to learn).
7. Kids do manage to be disruptive (no matter what you do).
8. To maintain control is the hard part.
9. Whether you can tell Jimmy to shut up and keep everybody else in tune.
10. How to keep them cooled down and what to do if they're not cooled down.
11. Want to learn how to be effective as a teacher.
12. What to do when things are really getting out of hand.

13. There's a lot of feelings involved in a lot of things... I have gone from being happy to ready to tear all my hair out.
14. It is a lack of respect for the teacher.
15. How to quiet them down.
16. How to make them do their work.
17. Classroom management.
18. Getting up there and actually having them listen to me.
19. I'm weak in the area of disciplining a student.
20. Grade eight students are hard to handle.
21. My first fear was that I would be put in a junior high school.
22. Teaching a wide variety of subjects, many of which I have little idea about.
23. The expectations that are built into education to teach junior high are the worst.
24. Fear that I might get thrown into a situation right out of university and right into a situation where it was going to be the hardest.
25. Adolescents do not know how to behave, how to act.
26. Don't want to experience teaching in junior high when I want to teach high school.
27. University is more idealistic. I fear that it does not prepare one for the real world situation.
28. Fear of being put off track in the classroom.
29. Fear of being disruptive four of five times a period.
30. Fear of being able to get back and to get our thoughts back on the right track after you have been disrupted several times.
31. Fear concerning not being able to take care of practical matters.
32. Classes are so big and a lot of kids don't want to learn.
33. Fear of being inadequately trained to deal with disciplinary problems in the classroom.
34. Students wandering around in the classroom.

35. Fear of cooperating teacher sometimes coming down a bit too hard.
36. Worry about confrontational aspects of classroom management.
37. Fear that I wasn't doing something right.
38. Fear of getting things done in light of disruptive behavior.
39. Fear that students may not be working to your particular teaching strategy.
40. Worry about what to do if things are really getting out of hand in the classroom.
41. Concern with how to face different techniques of control in the teaching situation.
42. Fear of not being able to establish yourself as a teacher.
43. Fear of not being able to get used to good and bad days of behavior in the classroom.
44. Concern with situation, specific discipline problems.
45. Fear of taking things too personally.
46. Fear of not being able to control my anger or stop being angry.
47. Concern with how to learn to appear angry without being angry, to put that face on you.
48. Fear of being or getting overly frustrated.
49. Worry about finding an appropriate discipline method that's going to work.
50. Fear of not being able to see myself as a professional teacher.
51. Fear of going up in front of adolescents, fear of not having confidence to stand up in front of students.
52. Fear of not being able to earn respect of students.
53. Fear of dealing with today's young kids because they seem to be so different.
54. Was anxious because it was my first class.
55. I found it quite frustrating dealing with my cooperative teacher. I never knew what she wanted.
56. My only fear was not being prepared.

57. My fear was not being able to find any equipment (e.g., audiovisual material) in the school.

More Than 180 Things Teacher Interns Should Do to Survive the Internship

Do's

1. Build a rapport with students.
2. Establish yourself as a teacher.
3. Be fair.
4. Don't give tests with bonus questions on them.
5. Be enthused or pretend you are enthused.
6. Think about incentives.
7. Use different types of incentives.
8. Sometimes learn to turn a blind eye to a lot of things.
9. Save your breath for something serious.
10. Try and establish a positive relationship with students.
11. Be flexible.
12. Be confident even when you are not.
13. Maintain energy.
14. Leave your preconceived notions behind you.
15. See what you can see.
16. See what the school has to offer.
17. Be open-minded.
18. Try and get an early gauge about your students ability.
19. Do what you are told (by others in the school).
20. Mould yourself to the situation.
21. Get along.
22. Be considerate.

23. Don't fight.
24. Take care of yourself physically and emotionally.
25. Take time for yourself.
26. Cool off before you have to deal with a problem.
27. Have a sense of humour.
28. Be friendly.
29. Take it easy in the school where you are welcomed.
30. Remember you are not working in the school, you are an intern.
31. You are more or less a guest in the school.
32. Get to know the students.
33. Get to know the staff.
34. Get involved with the guidance counsellor.
35. Talk to the guidance counsellor about the things to look for in children who have been abused.
36. Do get to know the kids.
37. Do get to know your co-op teacher.
38. Do get to know your principal.
39. Take the kids aside if you want to discipline them.
40. Take the good things from school home with you and talk about them to everyone you meet.
41. Tell everyone that you are proud of your kids at school.
42. Tell the kids that you are proud of them.
43. Be as understanding as possible.
44. Do try and work with resource people in the community as well as with parents.
45. Provide the best education for the children.
46. Try to make your classes as much fun as possible.

47. Make your class have as much variety in it as possible.
48. I should always try to be fair.
49. Always be thinking about do's and don'ts all term.
50. Take it (bad things in classrooms) with a grain of salt and start off fresh on another day.
51. You should try to relate it (the textbook) to outside things or use other different resources.
52. Use other textbooks as supplements because there's interesting stuff in them.
53. Any way you can avoid becoming attached to students, avoid it.
54. Get to know the other interns for sure, because we are all in the same boat.
55. Talking to others helps relieve some of the pressure.
56. Get things out of yourself.
57. Get to know all the teachers other than your cooperative teacher -- as many teachers as you can.
58. Use other teachers as resource persons.
59. Try to get a variety of opinions in the school.
60. Try to become involved with them (students) outside of the classroom.
61. Try to get involved in extracurricular activities and stuff like that.
62. Treat everyone fairly, even boys and girls.
63. Be relaxed.
64. Be yourself in front of the classroom.
65. Be patient with them (students).
66. Be understanding.
67. Make an effort to be understanding.
68. You get as much out of it as you put into it.
69. You have to put a lot of effort into it.

70. You have to make that extra effort to know their (students) environment which is all new to you.
71. Extra effort to be nice to them, know your purpose and place in the school.
72. Make an effort.
73. Set up a plan to talk to your cooperative teacher once a week.
74. Prepare everything before hand.
75. Do suck up.
76. Do everything that is asked of you and do more.
77. Find out all the information that's available to you.
78. Find out exactly what courses you're required to teach.
79. Find out exactly what the book's going to be.
80. Find out exactly how your cooperative teacher teaches.
81. Find out how to duplicate your cooperative's teaching and add a few of your own ideas in there.
82. Stay around in school after 3:00 p.m. for 20 minutes.
83. Go to school early in the morning.
84. Make sure you're in class on time.
85. It is not good for you and it's not a good impression on the kids to be late.
86. Be responsible.
87. Do everything humanly possible to make yourself an effective teacher.
88. Make sure how the school works.
89. Make sure you know who's in the school, what their function is, what you need to do, what you need to know, how do you get around things, how do you get information, whom to contact, who the resource people are, where all the duplicating materials are, and what available resources are in the school itself.
90. Must consider yourself a teacher.
91. Take some of the responsibility in the classroom.
92. You got to be firm and friendly.

93. You got to get involved in order to be a part of the staff.
94. You got to go around.
95. Make yourself accessible to the staff and be friendly and say "Hi" to this person and "Hi" to that person.
96. Make yourself speak to the people.
97. Get involved, that's one big thing.
98. Get involved during lunch time, if not in extracurricular activities.
99. Eat your lunch in the staff room and then go out with the students.
100. Make sure everybody gets to know you.
101. Get on a one-to-one basis with people.
102. Remember you're in school to learn.
103. Go through the gradual process to learn about your classroom and the school.
104. Slowly increase your role in what you do.
105. Remember, students are going to watch what you are doing.
106. Yes, go there (in the classroom) with an open mind.
107. Take each day as a new experience.
108. Go home and chatter with your friends and laugh and joke about what happened in the school.
109. You have to be able to accept criticism.
110. Put up with a bit of chatter in your classroom.
111. Sometimes you have to yell and talk loud.
112. Got to raise your voice every so often.
113. Be louder than them (students).
114. Dealing with students one-on-one (style of keeping control) works.
115. Take their privileges away from them. It is quite effective, e.g., computer time, gym time, etc.).
116. Have a lot of energy.

117. Move around in the classroom.
118. Use proximity control, i.e., move near students.
119. Be assertive.
120. Make your presence known in the classroom.
121. Be confident of yourself.
122. Pure silence works.
123. Use verbal and non-verbal cues to gain control.
124. Learn to appear angry without being angry.
125. Be calm.
126. Have patience.
127. Learn to deal with your frustrations.
128. Experiment with different techniques to get your ideas across or in maintaining control.
129. Use detention not too frequently. It doesn't work.
130. Think of yourself as a professional teacher.
131. Learn from trial and error.
132. Talk to other teachers.
133. Just try to talk to the students.
134. Just try to understand the students.
135. Get to know why students do what they do.
136. Slow down and write neater on the board.
137. Try to interact more with the students.
138. Ask the students more questions.
139. Remember words that are simple to you may blow students away.
140. Lay down the rules.
141. Try to earn respect of students.

142. Remember, respect is earned.
143. Get used to the juggling act, to deal with disruptive kids and get through your lesson is a real juggling act.
144. Lesson management is necessary, it leads to classroom management.
145. Be prepared to be a counsellor at times.
146. Just stand there, and look at students and be quiet.
147. Pinpoint the student with whom you are having a problem.
148. Learn to deal with students one-on-one for keeping control.
149. Make the class think that everyone is responsible for each others actions.
150. Forcing students to leave the room sparingly (occasionally.)
151. Think twice before you ask a student to leave your class. Remember, there will be days you will have good control and days when control will be bad.
152. Remember you are new in the classroom and the students will try you out and how they can challenge your authority as a teacher.
153. Learn to deal with classroom problems on your own.
154. Follow the proper procedures.
155. Get along with or have no trouble with the principal, the staff, the parents and the students.
156. Do your own self judgement and evaluation as to the severity of discipline problems before getting help from higher authorities.
157. Get students to admit to you that they're wrong, get them to tell you what their punishment should be and get them to tell you what they deserve and then deal with it.
158. Prepare your lesson well, doubly well.
159. Make an extra effort to find the material and equipment you need for your classroom, i.e., do good planning. Everything is planning.
160. Remember that some days students are not in the learning mode and nothing will work to calm them down.
161. Remember there's got to be a way to quieten down a particular student.

162. Talk to other teachers about a particular student you have problems with, get to know his family background.
163. Remember, that in many cases, potential dropouts are your problem students.
164. Potential dropouts are very disruptive.
165. Let potential dropouts have their little chit chat sometimes and get it over with.
166. Be a little bit more lenient with the potential dropout students, a little bit more lenient.
167. Remember if you threaten your students (dropouts potentially), a wall goes up, and then it is a fight, then you got a fight on your hands.
168. Give students multiple choice questions if they have problems with writing and reading. Sometimes make them write a bit but never threaten them.
169. Get yourself organized enough to answer questions that might be posed to you in different situations and to face those kinds of challenges.
170. Always address individual needs of students.
171. Handle the class by relating to students on an individual basis -- giving as much of yourself as you think is necessary.
172. Feel positive in the way you relate to students, to the whole class.
173. Present yourself in terms of your humour, use humour to make students relax in your class.
174. Create a good learning environment, one that's not overly stressful and that's not full of emotional problems in any way.
175. Make an environment that makes people feel comfortable and in which students can work.
176. Make your class as a game, as a place to have fun. Remember, too much education is boring and that's why we get so many disciplinary problems.
177. Remember some students are bored in the classroom and they don't want to be in it.
178. Remember that discipline problems stem from poor teaching.
179. Try to get students to do things themselves for the sake of getting out of school.
180. Remember students can put you on the spot in front of others.

181. Observe your cooperating teacher and learn techniques of classroom control from them.
182. Ask your students to make important decisions.
183. Ask students questions.
184. Ask your students to provide reasons for their actions.
185. Ask your students for future plans.
186. Be more conciliatory and adopt a democratic approach to teaching, where students have to think through reasoning.
187. Ask your students "what is the problem" if she/he is giving you trouble.
188. Let students know where you are coming from.
189. You have to look for yourself.

About 70 Things Teachers Should Not Do to Survive the Internship

Don'ts

1. Don't give tests with bonus points on them.
2. Don't be yourself right away, wait.
3. Don't be fake.
4. Don't freak out if somebody disobeyed or did something.
5. Don't take things personally.
6. Don't get frustrated easily.
7. Don't expect to get everything right all the time.
8. Don't waste your breath on everything.
9. Don't speak to students everyday for some minor infractions.
10. Don't be judgemental or don't be judgemental at all.
11. Don't try to change the situation right away because you can't change it.
12. Don't enter into one-to-one confrontations with students in a classroom environment.
13. Don't open your mouth unless you know what you are saying.

14. Don't speak before you act.
15. Don't get too stressed.
16. Don't push yourself beyond your own physical limits.
17. Don't ignore your own needs.
18. Don't question the principal.
19. Don't make the principal look bad in front of the staff.
20. Don't reprimand or discipline kids in front of the whole class.
21. Don't take your problems home with you.
22. Don't put down other teachers or other students around the kids.
23. Don't forget that you're supposed to be a role model.
24. Don't forget that the kids are going through a lot more than just what you see everyday in school.
25. Try not to show your anger because if you do the students just play on it.
26. You don't want to try to be buddy buddy with the kids because they'll walk all over you.
27. You shouldn't get too upset if there's talking in your class because it is going to be there, so don't worry about it.
28. Don't expect a whole lot from kids at first until you get to realize their achievement.
29. Student interns shouldn't be too upset if they have a bad day because it's going to happen, probably more than once.
30. Try not to stick with the textbook a whole lot.
31. Don't become too attached to people and things in school. Don't become attached over everything.
32. Never yell.
33. Never embarrass a student.
34. Never take them out or draw attention to them.
35. Remember it is the cooperative teacher's class after all.

36. Don't try to take total control of it (classroom.)
37. Never override the cooperative teacher.
38. Don't argue with your cooperative teacher.
39. Don't run out of school at 3:00 p.m.
40. Don't be late in the class.
41. Don't depend on the cooperative teacher all the time.
42. Don't be shy even if you are shy.
43. Don't go into your classroom and rule with an iron fist as such!
44. Don't just sit down and be a passive observer.
45. Don't forget that students are going to look at you as a teacher.
46. Don't forget that you are going to be the role model for them (student).
47. Don't let things bother you.
48. Don't take today's things home, forget about it.
49. Don't keep bringing your day-to-day problems in with you and...
50. Don't take your problems home with you.
51. Don't be afraid to accept constructive criticism you know.
52. Don't be afraid to ask your cooperative teacher "is there anything I am doing wrong"?
53. Don't take students behavior personally.
54. Don't get angry.
55. Don't get overly frustrated if the class is not getting what you are saying.
56. Never assume that the students know everything.
57. Don't try to build Rome in one day. Remember it wasn't built in a day.
58. Make kids stay after the class today.
59. For something that happened on Friday or yesterday.
60. Even detention doesn't work.

61. Don't force students to leave the class excessively. It doesn't serve the purpose.
62. Don't be too lenient to students.
63. Don't be unprepared for your classroom.
64. Don't think you can handle the students everyday.
65. Don't single out one student in the class and never do that in front of his peers, i.e., scream at them.
66. Don't argue with the potential dropout students back and forth.
67. Don't threaten your students as a person, i.e., threaten their person.
68. Don't use games everyday.

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TOWARD A COMPREHENSIVE PRACTICAL GUIDE FOR REFLECTIVE CLASSROOM MANAGEMENT

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General Introduction

In this general introduction, I plan to outline selected scholarly work which has been completed by many of my colleagues and others and which has direct and indirect bearing on issues surrounding classroom management and discipline. This should also serve as the introduction to two articles by Dr. King and one by Dr. Singh which appear in this issue and relate to the topic being considered herein.

Over the years, teachers, teacher interns, parents and the general public have desired to access knowledge on classroom management and discipline. We hope the material presented in this issue of the *Morning Watch* will meet their wishes in this area at least to some degree.

A Reflective and Critical Focus in Teacher Education

For the last twenty years or so my colleagues in this Faculty have been researching and publishing in the area of teacher education. Recently, some of us have focused on the reflective and critical aspects of teacher education locally, especially in the area of the teacher internship. We have also extensively consulted with colleagues at the University of Hawai'i at Manoa, and at some Australian universities, who are involved in reflective and critical teacher internship programs. Our intention has been to test results of our research, mostly produced in the form of "local knowledge" and "local theorizing", in comparative and international contexts. In order to do this, we have attended several conferences and presented papers based on our research. The response has been very positive, to say the least. We have been encouraged to continue our work and expand it in many other directions.

Drs. Wilf Martin, Ishmael Baksh, Clar Doyle, Bill Kennedy, Roy Kelleher, Alice Collins, Frank Cramm, Amarjit Singh and Len Williams have been researching and writing in the area of teacher internship and teacher education for several years. Lately, Drs. Barrie Barrell, Andrea Rose, Elisabeth Yeoman, and Dennis Mulcahy have been deeply involved in reflective and critical thinking in teacher education and internship. Professor Fred Hawksley carries out similar research in the area of drama education.

In our work with teacher interns we have discovered that the phobia of classrooms is rampant among teacher interns. Interns also struggle, individually and collectively, with dominant discourses in many other areas such as instruction, resources, the ability level of students, the purpose of internship programs, as well as the culture of school life. Teachers in general, cooperating teachers who work with the interns during the internship program, and university based professors/supervisors are no less concerned with the phenomenon of classroom management/discipline and with other areas in teacher education.

In recent research efforts involving the complex classroom situations that teaching interns encounter, we found that the interns themselves are often obsessed with the mastery of technical skills for instruction and classroom management (Singh, Doyle, Rose & Kennedy, 1997). However, without intending to underestimate their concern with the fear of classroom management, we pose in our other work some critical and reflective questions. These are: how can we, as teacher educators, wean interns away from a focus on technical skills toward a process where they can feel safe to try to put their own work into a wider social, cultural, and political context (Doyle, Kennedy, Ludlow, Rose & Kennedy, 1994; Kennedy, Doyle, Rose & Singh, 1993; Kennedy & Doyle, 1995; Singh, Doyle, Rose & Kennedy, 1996).

A few words on methodology may be in order. In all of our work on reflective and critical teacher internship and education, we have used the concepts of voice, local theories, cultural, capital, problematizing dominant discourses, sites, social interaction and reflection as pedagogical categories for the purpose of analysis. For the analysis purpose we have mostly used the framework of qualitative methodology in the sense that we support our claims by using a number of quotations from data collected during interviews and reflective sessions. Finally, in all our work, there is an attempt to enable the teacher interns, cooperating teachers, university professors/supervisors and students in the class to speak for themselves.

The Concept of Voice as a Pedagogical Category

This is not the place to discuss our theoretical and practical orientations in detail; these can be readily found in articles and documents which are referred to above. On the whole, however, it is clear that for the purpose of organizing material relevant to teacher education and internship, and material relevant to the specific topic of classroom management, discipline and school culture, all of us have predominantly relied on the voice as a pedagogical category. In our work we focus on the voices of students, the voices of teacher interns, the voices of cooperating teachers, the voices of university professors/supervisors, and the voices of teachers at large.

While a great deal has been written on voice as a pedagogical category, no attempt is made here to review the literature on this category. However, very briefly, it suffices to mention that the exercise of listening to the voices of teachers, teacher interns, students, cooperating teachers and supervisors in teacher education programs enables us to see what these occupational groups bring to the educational organizations functioning as complex systems. Their voices make us realize what forms of knowledge and culture these groups produce while interacting with one another. These groups then bring this shared knowledge to their classroom and other work settings, i.e., the schools and the university. In this situation, we believe the goal should be to make knowledge and production of knowledge less external and more germane to the world of each group of people, who must be able to express their understanding of the world. All parties involved in teacher education and internship programs must realize that they can collaborate with each other to transform aspects of their lived experiences, if necessary. But as our friend and colleague Clar Doyle (1993, p. 130) often reminds us, transformation works "in an analogous position to hegemony. Transformation, which should be allowed to seep through our institutions and relationships usually comes in small doses and usually happens over time.

Transformation usually happens with gentle hands. Transformation usually happens through cultural production."

O'Neill (1976, p. 12) draws our attention to the function of the teacher when he states that "the function of the teacher is to challenge, arouse, interest, make anxious, give confidence, coordinate achievement, and encourage reflection." The notion of voice when used in this sense puts emphasis on building rather than enhancing, on producing rather than reproducing. We should also remind ourselves that in any educational setting all parties involved are simultaneously teachers and learners. We all, one way or the other, teach others and learn from others. Pedagogical intents are omnipresent in all sites or situations in many subtle ways.

Our orientation is that if teachers, especially the teacher interns, can produce "local knowledge" and "local theories" about classroom management in relationship to the larger debate in society about the so-called crisis in the classroom, they might be able to speak to their own classroom reality with more confidence. They could self-consciously reflect on their own construction of classroom reality and on their own transformation. This process in the end should lead to locally manufactured (produced) classroom practices, which promotes democracy and democratic living.

In the internship situation, it has been important for us that the supervisors and the interns reflect together and make the internship together. Therefore, in our work with the teacher interns, we have (Doyle, Kennedy, Rose & Singh) consciously resisted the idea of inviting "experts" on classroom management, control, discipline, professional lesson planners, who could tell the teacher interns how to go about managing classrooms. We have often sought a balance between students', teacher interns', voices and the voices of the "experts" who are readily willing to provide in-service training programs on classroom management organized by various professional agencies.

Local and Other Studies Using the Concept of Voice

After having said a few things on the notion of voice as a pedagogical category, I wish to draw the attention of readers of the *Morning Watch* to the work done by Martin, Baksh & Martin, Baksh & Singh, and Williams & Kelleher. All these authors have extensively used the notion of voice (students' perspectives) in their research. Many of their articles have been published in the *Morning Watch*.

My article in this issue entitled, "**Voice of Teacher Interns and the Fear of Classroom Management**" uses the concept of voice. The article in this issue by my colleague, Dr. Irvin King, who teaches in the College of Education, the University of Hawai'i at Mnoa, attests to the voice of an experienced teacher as it relates to the issue of discipline in the classroom.

In an attempt to balance subjective voices of teachers and teacher interns, Dr. King splits his article into two sections. In one section he voices his own experiences with classroom discipline and presents his personal perspective on it. In the second part of his paper, he presents an extensive review of research done by some of the well-known scholars in the area of classroom discipline and management.

The Morning Watch

Since 1972, members of this Faculty have published their work on various aspects of teacher education in the ***Morning Watch*** which is edited by Baksh and Singh. The articles which appeared in this local journal have been compiled in five different volumes (Singh & Baksh, 1977; Singh & Baksh, 1982; Singh & Baksh, 1991) and are readily available to teachers and students in this province. Copies of ***The Morning Watch*** should also be available to the libraries of many Canadian Universities. The readers of ***The Morning Watch*** may like to know that it no longer appears as "hard copy"; it is now available as an electronic journal on the Faculty's home page. This is in line with the many changes organizations are making in order to adopt to the larger cultural change taking place due to many factors (e.g., globalization, downsizing, etc.).

Series of Monographs

In a series of monographs, published by the Publication Committee, Faculty of Education, Memorial University of Newfoundland, Wilf Martin has documented the voices of students from the classroom. He summarized the main aspects of this research methodology and the findings of his research in his book entitled **Voices From the Classroom** (see Martin, 1985). Everybody involved in teacher education, especially teacher interns, will find a wealth of material in his book and monographs which will enable them to be effective teachers in the classroom. As demonstrated by Martin's research classroom management and disciplinary problems cannot be completely separated from the process of effective teaching, which should take into account the voices of students and the classroom culture.

In the **Voices From the Classroom** and in his other monographs, Martin focuses on such issues as school rules, homework, teachers' pets and classroom victims, student embarrassment, helpful, understanding, and cooperating teachers. In each of these major areas, he finds that students have identified themes that reflect the school/classroom cultures. For example, many students voice their concerns about being embarrassed by teachers. Martin highlights the causes of student embarrassment as voiced by students. In other contexts, students think that there are teachers who show "understanding" and "patience" when dealing with them. Then there are teachers who are "caring" and "respect" students. On the other hand, some teachers are "rude" and "ignorant", while others hold "grudges" and bestow "favours" on some students.

These categories have special meaning for students which are quite different from the meaning attached to these categories by teachers. This dissonance or discrepancy between students' and teachers' meaning has significant implications for classroom discipline and management. It is quite clear that if teachers' actions and behaviors are embarrassing students, then they will resist, deviate and misbehave in the class just to challenge teachers' authority. Martin's studies show that the consequences of student embarrassment are that students develop dislikes for teachers, they are afraid of teachers' actions, and they develop negative self-concepts. All these factors most likely have potential to contribute toward classroom management and disciplinary problems.

In a similar manner, Martin highlights other categories and provides deep insight into the school and the classroom cultures. Some other categories he focuses on are: amount of homework, distribution of homework, problems of uneven distribution, time preferences for homework, school rules, schools with no written rules, meaning of rules, misbehaviors and punishment, making and implementing rules, teachers' pet and classroom victims, teachers' attitudes toward students, criteria for categorizing students' academic performance, student behavior, family background, geographical location, gender, disliking students, nature of favours and mistreatments (expectations for student behavior, selection of students for activities, attention students receive, assessing students' performance), the consequences of class victims and others ("being left out", the marking process, discipline, disliking teachers, anticipating and empathy among students, disagreement with pets-victims phenomena), helpful, understanding and cooperative teachers, getting along with teachers, helpful teachers (the need for help, obstacles to helping, students blaming themselves), understanding and friendly teachers (understanding teachers, friendly teachers), help through encouragement and cooperation (nature of encouragement, reciprocal nature of encouragement), listening to students' point of view (the sensitivity of teachers, "teachers are never wrong", students need to be understood, the consequences of not being understood).

Baksh & Martin (1992), Martin and Baksh (1984) highlight many other aspects of the school and the classroom cultures. Their most recent book length monograph on school humour is full of insights which will enable teachers, teacher interns, and others to understand the complexities of everyday school life (Martin & Baksh, 1995). Two earlier monographs by Baksh and Singh (1979, 1980) document voices of teachers in small rural Newfoundland communities which provide useful insights for the teacher interns.

It is up to the teachers, supervisors, and other teacher interns to learn about these categories. Understanding the intricacies of the classroom and school cultures should enable all parties involved in educational process to modify their actions and behaviors toward students, which in turn should overcome some difficulties involved in classroom discipline and management.

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REFLECTING ON TEACHING

Wayne Williams
Balbo Elementary School, Shoal Harbour

What am I doing? Why am I doing it?
Are there other ways of doing it?
Simple questions but where are the answers?
Will the art of reflection provide insights?

When a teacher engages in reflection...

She interrogates herself, questions her everyday practices;
She quarrels with her beliefs and her views;
She re-evaluates her instructional methodologies;
And boldly, courageously, redefines her philosophical paradigms!

She poses questions...she embarks on a quest for solutions.

Who creates the curriculum?

Curriculum committees, bureaucrats and educators?
Institutionalized knowledge experts? Textbook publishers?
Teachers, parents, all who search for truth?
Students seeking to construct personal knowledge?

Which statements are true? Which are false?

All teaching is intrinsically political?
Schooling is unnatural?
True learning evolves from motivation?
Educational labels become reality?

Who occupies my classroom?

Unmannerly children who need to learn the value of discipline?
Empty vessels who require knowledge?
Curious learners with their own opinions and perspectives?
Fellow learners seeking to build their version of the world?

Why can't Adam read?

Does he see the same print I see?
What transaction is taking place between Adam and the text?
How is he responding internally to the print?
Is the experience a meaningful one for Adam?

Writing - what is it?

A boring, onerous, communications task?

A time consuming, recording procedure?
A method of clarifying ones representation of the world?
Thinking on paper, a unique form of learning?

What is mathematics?

A set of numeracy skills essential to modern life?
Boring, repetitive exercises - the domain of the calculator?
A logical, reasoned approach to problem solving?
An exciting, creative way to explore and make sense of the world?

What is testing?

An evaluative procedure to assess student progress?
A public relations scam to congratulate the educational system?
An accountability tool to ensure teachers do their jobs?
A discipline tool to keep students in line?

Perplexing questions?

What are the different kinds of literacy?
What does it mean to be mathematically competent?
Science, technology and media - Where will they lead?
How do the arts enrich the lives of students?

Monday morning questions?

Will I use the prescribed text or the weekend sports stats to teach average?
Will my students participate in meaningful reading and writing activities today?
Will I bring the 'real world' into the classroom so my students can be "in the know"?
Will I engage individual students in conversation?

A teacher needs to reflect...

to think quietly, to question,
to write critically, to dialogue thoughtfully, to ask

What kind of teacher am I?

REFLECTING ON WHAT WAS BEING REFLECTED

Cindy May-Follett

Looking back on what was reflected in the Internship Workshop in September of 1997, I can now see a different reflection than what came to me at the time. Sometimes we educate teachers to work in the ideal situation. The "What ifs..." are discussed to pieces but do not always become a reality for most teachers until they are on their own.

What type of work force are we preparing our interns for? Let's consider for a moment the number of graduates from the Faculty of Education. Based on that number let's answer three questions out of a possible hundred:

- How many of these graduates wish to move into the teaching profession?
- How many get permanent positions in their chosen field?
- How many become substitute teachers?

I fear that, out of those who wish to continue in their field, a large number become substitutes. Some have the success of moving into a permanent position immediately, but they are few.

In view of this situation, should we be preparing our interns to be substitute teachers first? I am not trying to be negative but to be realistic. Substituting and being in a permanent position are two different jobs. Permanent teachers know their classes. They know what happened yesterday, where they are today and what to expect for tomorrow. Substitutions would mean stepping into someone's domain for one day. Keeping in mind the importance of delivering the best education possible, in line with our philosophy of education, the substitute could be given an ideal prepared plan for the day or as little as a blank sheet. When a teacher walks into a class, whether it is someone else's or his/her own, a plan may not always work out. They must be prepared for setbacks and build on the positive experiences.

I recommend to the interns that, just as doctors on house calls are prepared with a doctor's bag, they, too, should have a teacher's bag. When packing, they should think of being a substitute first; then, if they later find themselves in a permanent position, they should use it to help themselves and their classes grow. They should never count on someone else to be prepared for them. They should prepare themselves to be their own particular kind of teacher and use the rest as a gift.

The following are a few ideas for a teaching bag:

- Letters from a scrabble game (language can be so much fun in large or small groups).
- A list of large words in which one can derive smaller words.
- A Knock...Knock book.
- Two packs of playing cards (lots of Math and Science already built in).
- A few hit CD's.

- "The Important Book" by Margaret Wise Brown (ideal for Health, Religion, Social Studies or Art at any grade level).
- Space for more things.

As Educators, we should reflect not only on teaching itself, but on the types of teaching we are preparing our interns for. In completing an internship program, substituting should be a major part of the course requirements.

Constructivism: From Personal Beliefs To Theoretical Principles

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As educators, our practice is informed by the beliefs and personal theories that we hold about teaching, learning and knowledge. Beliefs about how we come to know, what it means to be a teacher or how students learn constitute our own 'philosophies' which are reflected in and guide our practice. These beliefs may not be explicit in that we may never have actually articulated them. Nonetheless, if we stop to reflect on our practice, or especially if we try to explain our actions and behaviours, our beliefs surface and we become more aware of them. In becoming aware, we bring them to a more conscious level so that we can actually question, challenge, compare and communicate them or even replace them by new beliefs that we might consciously decide to embrace.

Epistemological beliefs or beliefs about what constitutes knowledge and how we come to know are fundamental because they influence or provide a basis for our beliefs about learning and teaching. As Ernest (1998) argues, all practice and theories of learning and teaching rest on an epistemology, whether articulated or not. If, for example, we see knowledge as a commodity that is typically transferred or transmitted from one person to another, then our practice as teachers will likely reflect this belief. In such a case, as teachers, we may see our roles as dispensers or as transmitters of knowledge and that of students as receivers. If, on the other hand, we believe that knowledge is not transmitted but constructed through a process of sense-making, then we are more likely to see our role as that of guides or of individuals who provide support and facilitation to this construction process. Such a conception of knowledge adopts, not the metaphor of the student as passive receiver, but that of sense-maker.

Often, our beliefs and tacit knowledge about teaching and learning come from explicit, expert knowledge and theories that have influenced thinking over time. The theory of behaviourism provides an example of this type of influence. During the 1950s, behaviourism began to exert an influence on educational thinking. As its name suggests, behavioural psychology limits its focus to observable behaviour and not to underlying phenomena such as understanding, reasoning and thinking (Good & Brophy, 1990). Thus, it is interested in the study of changes in manifest behaviour as opposed to changes in mental states. From this perspective, learning is conceived as a process of changing or conditioning observable behaviour as result of selective reinforcement of an individual's response to events (stimuli) that occur in the environment. Behaviourism centres on students' efforts to accumulate knowledge of the natural world and on teachers' efforts to transmit it. According to Fosnot (1996), the behaviorist approach involves preplanning the curriculum by breaking down the subject area into component parts and then sequencing these parts into a hierarchy ranging from simple to more complex. The intent is to facilitate and subsequently to reinforce the learning of the component parts.

Theories of knowledge may also influence our approaches to teaching and learning. Early theories emphasized knowledge as being the awareness of objects that exist independent of any subject. According to this objectivist view, objects have

intrinsic meaning and knowledge is a reflection of a correspondence to reality. In this tradition, knowledge should represent a real world that is thought of as existing separate and independent of the knower and this knowledge should be considered true only if it correctly reflects that independent world. Jonassen (1991) describes how an objectivist epistemology translates into an approach to teaching and learning:

Objectivists believe in the existence of reliable knowledge about the world. As learners, the goal is to gain this knowledge; as educators, to transmit it. Objectivism further assumes that learners gain the same understanding from what is transmitted (...) Learning therefore consists of assimilating that objective reality. The role of education is to help students learn about the real world. The goal of designers or teachers is to interpret events for them. Learners are told about the world and are expected to replicate its content and structure in their thinking (p.28).

Like Jonassen, Hanley (1994) describes how objectivism is reflected in a "traditional model" or "objectivist model" of the classroom:

Classes are usually driven by "teacher-talk" and depend heavily on textbooks for the structure of the course. There is the idea that there is a fixed world of knowledge that the student must come to know. Information is divided into parts and built into a whole concept. Teachers serve as pipelines and seek to transfer their thoughts and meanings to the passive student. There is little room for student-initiated questions, independent thought or interaction between students. The goal of the learner is to regurgitate the accepted explanation or methodology expostulated by the teacher (p.3).

On an epistemological continuum, at the opposite end from objectivism would be constructivism. Constructivism argues that knowledge and reality do not have an objective or absolute value or, at the very least, that we have no way of knowing this reality. Von Glasersfeld (1995) indicates in relation to the concept of reality: "It is made up of the network of things and relationships that we rely on in our living, and on which, we believe, others rely on, too" (p.7). The knower interprets and constructs a reality based on experiences and interactions with his or her environment. Rather than thinking of *truth* in terms of a match to reality, von Lagerfeld focuses instead on the notion of *viability*: "To the constructivist, concepts, models, theories, and so on are viable if they prove adequate in the contexts in which they were created" (p.7).

Although von Glasersfeld's perspective on constructivism is cited frequently in the related literature, it does not represent the dominant perspective. In fact, we can distinguish between a number of perspectives such as radical, social, physical, evolutionary and post-modern to name but some (see Steffe & Gale, 1995; Prawat, 1996; Heylighen, 1993). Ernest (1995) argues that "there are as many varieties of constructivism as there are researchers" (p.459). Von Glasersfeld, whose thinking has been profoundly influenced by the theories of Piaget, is typically associated with radical constructivism - radical "because it breaks with convention and develops a theory of knowledge in which knowledge does not reflect an objective, ontological reality but exclusively an ordering and organization of a world constituted by our experience" (von Glasersfeld, 1984, p.24).

Von Glasersfeld defines radical constructivism according to the conceptions of knowledge. He sees knowledge as being actively received either through the senses or by way of communication. It is actively constructed by the cognising subject. Cognition is adaptive and allows one to organize the experiential world, not to discover an objective reality (von Glasersfeld, 1989). In contrast to von Glasersfeld's position of radical constructivism, for others, social constructivism or socio-constructivism has emerged as a more palatable form of the philosophy. Heylighen (1993) explains that social constructivism "sees consensus between different subjects as the ultimate criterion to judge knowledge. 'Truth' or 'reality' will be accorded only to those constructions on which most people of a social group agree" (p.2).

Derry (1992) points out that constructivism has been claimed by "various epistemological camps "that do not consider each other 'theoretical comrades'". In spite of these differences in perspectives, there is some agreement on a large number of issues, for example, on the role of the teacher and learner. In von Glasersfeld's (1995b) radical constructivist conception of learning, teachers play the role of a "midwife in the birth of understanding" as opposed to being "mechanics of knowledge transfer". Their role is not to dispense knowledge but to provide students with opportunities and incentives to build it up (von Glasersfeld, 1996). Mayer (1996) describes teachers as "guides", and learners as "sense makers". In Gergen's (1995) view, teachers are co-ordinators, facilitators, resource advisors, tutors or coaches. Understanding the role of the teacher in the constructivist classroom provides a useful vantage point from which to grasp how the theory impacts on practice:

The role of the authority figure has two important components. The first is to introduce new ideas or cultural tools where necessary and to provide the support and guidance for students to make sense of these for themselves. The other is to listen and diagnose the ways in which the instructional activities are being interpreted to inform further action. Teaching from this perspective is also a learning process for the teacher (Driver, Aasoko, Leach, Mortimer, Scott, 1994, p. 11).

While the radical and social perspectives of constructivism each have their particular emphases, Ernest (1995) derives a set of theoretical underpinnings common to both:

1. Knowledge as a whole is problematized, not just the learner's subjective knowledge, including mathematical knowledge and logic.
2. Methodological approaches are required to be much more circumspect and reflexive because there is no "royal road" to truth or near truth.
3. The focus of concern is not just the learner's cognitions, but the learner's cognitions, beliefs, and conceptions of knowledge.
4. The focus of concern with the teacher and in teacher education is not just with the teacher's knowledge of subject matter and diagnostic skills, but with the teacher's belief, conceptions, and personal theories about subject matter, teaching, and learning.
5. Although we can tentatively come to know the knowledge of others by interpreting their language and actions through our own conceptual constructs, the others have realities that are independent of ours. Indeed,

it is the realities of others along with our own realities that we strive to understand, but we can never take any of these realities as fixed.

6. An awareness of the social construction of knowledge suggests a pedagogical emphasis on discussion, collaboration, negotiation, and shared meanings (...) (p.485).

Central to constructivism is its conception of learning. Von Glasersfeld (1995) argues that: "From the constructivist perspective, learning is not a stimulus-response phenomenon. It requires self-regulation and the building of conceptual structures through reflection and abstraction" (p.14). Fosnot (1996) adds that "Rather than behaviours or skills as the goal of instruction, concept development and deep understanding are the foci (...) (p.10). For educators, the challenge is to be able to build a hypothetical model of the conceptual worlds of students since these worlds could be very different from what is intended by the educator (von Glasersfeld, 1996).

In this paradigm, learning emphasises the process and not the product. How one arrives at a particular answer, and not the retrieval of an 'objectively true solution', is what is important. Learning is a process of constructing meaningful representations, of making sense of one's experiential world. In this process, students' errors are seen in a positive light and as a means of gaining insight into how they are organising their experiential world. The notion of doing something 'right' or 'correctly' is to do something that fits with "an order one has established oneself" (von Glasersfeld, 1987, p. 15). This perspective is consistent with the constructivist tendency to privilege multiple truths, representations, perspectives and realities. The concept of multiplicity has important implications for teaching and learning. It defines, not only the epistemological and theoretical perspective but, as well, the many ways in which the theory itself can be articulated.

In spite of the multiplicity of perspectives on the theory, there are many common themes in the literature on constructivism which permit the derivation of instructional models and general principles of constructivist learning and teaching. Such principles can assist teachers by providing them with a guide for the design and delivery of learning activities. The researchers and theorists whose perspectives are listed below suggest links between constructivist theory and practice. They provide the beginnings of an orienting framework for a constructivist approach to the design of teaching and learning. Jonassen (1991) notes that many educators and cognitive psychologists have applied constructivism to the development of learning environments. From these applications, he has isolated a number of design principles:

- Create real-world environments that employ the context in which learning is relevant;
- Focus on realistic approaches to solving real-world problems;
- The instructor should be a coach and analyser of the strategies used to solve these problems;
- Stress conceptual inter-relatedness, providing multiple representations or perspectives on the content;
- Instructional goals and objectives should be negotiated and not imposed;
- Evaluation should serve as a self-analysis tool;

- Provide tools and environments that help learners interpret the multiple perspectives of the world;
- Learning should be internally controlled and mediated by the learner (pp.11-12).

Jonassen (1994) summarises what he refers to as the implications of constructivism for instructional design. The following principles illustrate how knowledge construction can be facilitated:

- Provide multiple representations of reality;
- Represent the natural complexity of the real world;
- Focus on knowledge construction, not reproduction;
- Present authentic tasks (contextualizing rather than abstracting instruction);
- Provide real-world, case-based learning environments, rather than pre-determined instructional sequences;
- Foster reflective practice;
- Enable context-and content dependent knowledge construction;
- Support collaborative construction of knowledge through social negotiation (p.35).

Wilson and Cole (1991) provide a description of cognitive teaching models which "embody" constructivist concepts. From these descriptions, we can isolate some principles central to constructivist design, teaching and learning:

- Embed learning in a rich authentic problem-solving environment;
- Provide for authentic versus academic contexts for learning;
- Provide for learner control;
- Use errors as a mechanism to provide feedback on learners' understanding (pp.59-61).

Ernest (1995) in his description of the many schools of thought of constructivism suggests the following implications of constructivism which derive from both the radical and social perspectives:

- sensitivity toward and attentiveness to the learner's previous constructions;
- diagnostic teaching attempting to remedy learner errors and misconceptions;
- attention to metacognition and strategic self-regulation by learners;
- the use of multiple representations of mathematical concepts; awareness of the importance of goals for the learner, and the dichotomy between learner and teacher goals;
- awareness of the importance of social contexts, such as the difference between folk or street mathematics and school mathematics (and an attempt to exploit the former for the latter) (p.485).

While these principles do not represent an exhaustive list they do nonetheless represent those most commonly cited in the literature. As principles, they can serve as a general guide for teaching and learning and as specific indicators of best

practices. They also present a point of comparison against which can be measured our own beliefs about knowledge and about teaching and learning. Such comparisons are useful because they reassure us that our beliefs have actually been tested and proven to be valid. In cases when our beliefs do not correspond to the principles, we have an opportunity or reason to re-evaluate our thinking and our behaviours. In either case, there arises an opportunity to make more explicit the reasoning behind our behaviours either to validate them or to call them into question so that they can be modified.

In Molière's *Bourgeois Gentilhomme*, the 'nouveau riche' Jourdain, who wants nothing more than to be accepted into the company of the French Aristocracy, makes an important discovery: "*I am speaking prose! I have always spoken prose! I have spoken prose throughout my whole life!*". Jourdain's sudden realisation highlights the notion that not all our actions are necessarily directly guided by an overt knowledge of the reasoning behind them. In the same way, educators often adopt a particular approach or method without necessarily having purposely considered the theory or beliefs that underpin the approach. Intuition, successful experiences, observations, personal beliefs: these factors play an important role in influencing the behaviour of teachers and, no doubt, often drive their practice.

The fact that personal beliefs can relate to or reflect official theories should provide a certain reassurance to teachers that their practices are guided by valid and tested principles. No doubt there are many teachers who, although unfamiliar with constructivist theory, rely implicitly on many of its principles in order to guide their practice. Von Glasersfeld (1995) commented on how teachers oftentimes intuitively rely on official theories without being necessarily aware of their existence: "Constructivism does not claim to have made earth-shaking inventions in the area of education; it merely claims to provide a solid conceptual basis for some of the things that, until now, inspired teachers had to do without theoretical foundation" (p.15). Von Glasersfeld's musings remind us that official theories and personal beliefs exhibit a curious interplay which is oftentimes unpredictable and, sometimes, unexplainable. His comments remind us, as well, that constructivism is more than a theory of learning. It is a set of beliefs that can be translated into principles to guide our actions. Perhaps an important challenge for us as educators is to begin to question and come to a greater understanding of the philosophy, theory and epistemology that presently informs our practice. Like Molière's Jourdain, understanding what our behaviours mean can oftentimes be both revealing, and, hopefully, useful.

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One of the more interesting issues to consider in schooling is that of motivation. Teachers often lament about students' lack of motivation. Psychology has been interested in motivation for some time, and many theories have been developed as a means of trying to explain and enhance motivation. However, these theories seldom seem to find their way into classroom practice in an explicit way. Good teachers, though, seem to have an intuition about students' motivation that is consistent with these theories. The following article shows how one teacher has struggled with implications of the ideas from psychology in her classroom.

Timothy L. Seifert

A TEACHER'S INTERPRETATION OF MOTIVATIONAL STRATEGIES: TOOLS TO HELP STUDENTS SUCCEED

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In reflecting on an eleven year teaching career I have tried to come to terms with one question that everyone asks: How do you motivate your students? Most of the time I laugh it off and say, "I have no idea". However, I have come to realize that I do know how I motivate my students. **I do not motivate them:** they motivate themselves. What I do is give them the kind of classroom environment that fosters their motivation. Therefore, to answer the question "How do you motivate students", I have to analyze my teaching strategies, classroom environment, instructional strategies, and goals as well as my students' self-efficacy/self-worth, cognitive strategies, evaluation processes, attributions, and their interpretation of belongingness in my classroom.

There are a variety of ways to accomplish this mammoth task: (1) understand the interaction of students and their interactions with others; (2) interpret the perceptions of students; i.e. their perceptions of teaching and other students; (3) develop personal goals for a classroom and allow the students the same right; (4) develop a form of evaluation for all the stakeholders, and (5) encourage students to develop a sense of self-esteem and worth, a love for learning and the experience of new challenges, and a greater understanding of how they as individuals add to the classroom environment. In order to attain this very important task teachers also need to focus on their own emotions and those of their students. We are teaching students a love of learning and a "way of being" (Seifert, 1996).

In order to develop a motivational atmosphere in any classroom one must have a definition or understanding of what educational motivation actually means. According to Weiner (1990), motivation consists of various cognitions that are interrelated. He lists five such cognitions; casual ascriptions, efficacy, control beliefs, helplessness, and goals for which one may strive. However, I also believe that Atkinson's (1964) theory of emotions, Covington & Beery's (1976) theory of self-worth, and Dweck's (1988) goal theory are highly relevant to developing a motivational classroom and must be included in a working definition of motivation. In

our classroom we use the following definition for motivation: "Classroom achievement motivation is a students' and teacher's set of beliefs and behaviours that guide both in a social environment to interact with teaching and learning".

The next step is to take the classroom environment and link it to what current research has to say regarding motivation. The five motivational theories of attribution, self-worth, self-efficacy, self-determination, and goal (social cognition) are, I believe, the most important in developing a motivational classroom. Each theory adds another dimension to a classroom environment and the beliefs and methods of teachers and students. If teachers can understand and find ways to implement what the theories propose in their classroom practices, then teachers will have ample data to develop motivational strategies for their classrooms.

First Strategy for a Motivational Classroom

As a new teacher I never paid attention to how students interpreted their learning outcomes. I attached no value to how they felt about their normative evaluations. I never believed that success or failure mattered much to future learning. If students passed it was good; if they failed, they would try harder the next time or I would try to encourage them to review their test for future reference. I did, however, write comments regarding their performance. I never asked the question "What caused this student to do well and that student to do poorly"? After reading Weiner's Theory of Attribution I can now answer such a question with some degree of knowledge and comprehension.

Weiner's theory (1984) proposed that students try to understand and uncover why a happening has occurred. For example; "Why did I fail this test"? Students will attribute the cause of failure or success to either effort, ability, others, emotions, task difficulty, or luck. What we as teachers have to do in our classrooms to enhance motivation and continue success is to help the students develop healthy attributions about their successes and failures. We have to help the students interpret the event in a positive way so they can maintain their sense of the value of the learning experience. How do we do this, one might ask. I focus on the positive aspects of the performance. If a student did poorly in a particular test I would find a way to put it in a positive light. For example, I would ask questions to ascertain if the student's knowledge was adequate to complete the assignment successfully or if their study skills were effective. We have to help students develop a sense of control over their successes and failures.

Second Strategy for a Motivational Classroom

Any motivational classroom must have incorporated a strategy for developing and fostering a sense of self-worth and self-esteem in students. When we discuss a definition of students' self-worth we need to understand that students' perceptions of value and their ability are primary activators of achievement behaviour. Covington's self-worth theory (1984) proposed that there is a direct link between ability and effort, performance and self-worth. Covington and Omelich (1982) asked first year college students to rate their successes and failures to their feelings of self-worth in the courses. A path analysis showed that the grades the students received accounted for one-fourth of the feelings of self-worth and that perceived ability, independent of

grades, accounted for one-half of the feelings of self-worth. I believe that high school students are no different from first year college students; therefore, the research carried out by Covington and Omelich would apply to a high school classroom.

The first question to be asked is "How do teachers affect students' self-worth?" I believe that teachers have great influence regarding students' self-worth through perceptions of and interactions with students. Teachers therefore need to be cognizant of the fact that what is said and done will greatly affect students. Research (Ames 1977, Kelly 1971, Schnur 1982, Covington 1984) has shown that high school students and young adults perceive that ability is the most important causal factor in their achievement. It behooves us as teachers to make sure that we try to help students develop a sense of value in our classrooms regardless of their academic achievement. We must give students the control they need for their learning but it must not be a conditional control. Like unconditional love, unconditional value is of the utmost importance in developing students' sense of belonging and self-worth.

To develop a self-worth motivational strategy a teacher needs to focus on the individual student. This must be done in the beginning weeks of class. Using ice breaker strategies like "getting to know you bingo" will help all members of the class come to know one other. Having all classroom participants set guidelines for the year also shows the students that they have some control over their learning. Setting up in-class-helpers for various tasks allows all individuals to feel they are part of the development of the classroom activities, be it just as motivators or timekeepers. All of these classroom practices help foster self-worth and well being. If we focus on self-worth based on belonging and value in the class and believe that all students have that value and belonging, regardless of academic achievements, then student's self-worth will grow in a positive direction. Self-worth can be accomplished while maintaining standards and goals. We must remember that all students have various degrees of ability, so we need to set, at the beginning of the year, standards based on the goals the students have set for themselves.

Third Strategy for a Motivational Classroom

When students make personal judgements regarding their performance capabilities in any subject they are using what Bandura (1977) termed the "**Self Efficacy Theory**". As teachers we need to understand how a student's self-efficacy works in our classrooms and how it affects a student's achievement. According to Schunk (1985), self-efficacy is believed to have very diverse effects on motivation, achievement, performance and the choices of activities for the student. Bandura (1981) also proposed that students gather information about their self-efficacy in any domain from evaluations, experiences, social interactions, and physiological states. It is very important for teachers to know this because if we give students the wrong information regarding any one of the elements of this theory then we are going to influence a student's sense of self-efficacy.

Self-efficacy can develop in a negative or positive direction. Collins (1982) found that students, regardless of their ability on standardized tests, would try more mathematical problems and solve more problems correctly if they had a high self-efficacy. This finding helps teachers understand that if students' judgements regarding their performance is high then, even if their abilities are not as high as

others, they will persist longer and expend greater energy in trying challenging activities. Students with high self-efficacy are not afraid to try new activities. While this is not the solution for all low ability students, if we can help develop a student's self-efficacy then we can give them the foundation to try and perform to their full capability. Schunk's (1985) studies have shown that the effects of any student's performance on self-efficacy can be changed by the cues derived from a teacher's educational practices. If we as teachers do not engage in positive feedback during and after instruction then students may feel their performance is lacking and if their expectations and the teacher's do not match then the chances are that students will develop a low self-efficacy or not maintain the high level of self-efficacy they had before starting the class. If teachers at the beginning of the year asked students how they weigh their learning and performance cues, then the classroom learning goals and activities can be developed to suit the various cues. However, learning goals for students must also be viewed as a very important component in developing a motivational classroom.

Fourth Strategy for a Motivational Classroom

According to Seifert (1995), recent research has shown that when it comes to achievement motivation goal theory emerges as the predominant explanation of students' motivation and behaviour. Again the first question that teachers need to address concerns what goal theory means. Dweck (1986) argues that students pursue two very different types of goals. These are performance goals (wanting to gain other people's good judgements about performance) and mastery goals (wanting only to learn to gain competence). In any given classroom students are motivated for various reasons to attain these two very different types of goals.

Teachers need to be aware of the goals their student engage in during classroom activities. If teachers know in advance what type of goals their students engage in, they can find ways and means to help students become mastery learners (wanting to learn for competence). This training will be a skill needed for life long learning and the processes that the teacher and students go through will be a valuable experience for both. How does a teacher ever get to know what their students' goals are? According to Dweck (1986) a teacher has only to develop goals that focus on mastery rather than on performance of a task. Students need to internalize that it is more important to focus on if and how they learned and not on whether they did better than their classmates. Consequently, the focus shifts from a performance goal to a mastery goal. Teachers, therefore need to develop goals orientated toward developing students' abilities and not toward adequacy of their abilities. Feedback from teachers during the task is very important in developing a motivational classroom that focuses on goal theory.

Fifth Strategy for a Motivational Classroom

Regardless of all the principles derived from the last four theories, students who feel in control of their learning and who have choices in their learning do much better in classroom activities (Deci & Ryan 1987). This is the proposition advanced by **Self-Determination Theory**. There are two dimensions in self-determination: they are intention and choice. An intention is generally thought of as a determination to engage in a behaviour (Atkinson, 1964). For a teacher, this implies that students have

personal causation and this motivates the student to act. When students engage in a task, their behaviour plays a role in the initiation and regulation of the learning outcome. Students will have a desire to achieve positively valent outcomes or avoid negatively valent ones (Deci & Ryan, 1987).

According to Deci & Ryan (1987), one way to enhance motivation and learning is to give students the opportunity to choose some of the tasks they want to do. This is not that difficult to accomplish. Teachers and students have to design from the very beginning what activities can be carried out in class, how they can be carried out, and how are they evaluated. When classroom environments' accomplish this task the students are given a choice over three important elements of learning. Several studies (Pintrich, Roeser and De Groot, 1992) reported that high school students were more likely to focus on learning and mastery if they were in a positive focused classroom. Students were found to have high levels of task interest and value for the course material when the classroom environment provided the students with some choice of tasks, the work was interesting, the teacher provided good explanations, and allowed the students to work with each other. This classroom environment also fostered high levels of self-efficacy and low levels of test anxiety. Students also engaged in cognitive and self-regulated strategies.

Sixth Strategy for a Motivational Classroom

The final element in developing a motivational classroom environment encompasses the emotions of teachers and students. In 1983 Weiner wrote "Affective reactions and affective anticipations, in conjunction with expectancy of success, are assumed to influence a variety of motivational indexes, including persistence of behaviour, choice, and approach or avoidance of tasks and other people" (p. 531). This statement is very significant for teachers, students and the development of classroom environments. Studies conducted by Dweck (1975), Reimer (1975), Weiner (1971), supported the findings that a theory of motivation must take into account the full range of the self, including the emotions of the self. Atkinson (1983) developed the emotion motivation formulation which states that a student will approach or avoid a goal depending on the affective elements of pride, shame, anger, gratitude, guilt, and pity. Teachers have to take into account all these emotions and feelings that they and their students possess in planning feedback, classroom activities and evaluation. If we do not consider the students' emotions then we are not providing a motivational classroom. Weiner (1985) developed a theory consisting of emotion and motivation. The theory has five elements: causal antecedents, casual ascriptions, causal dimensions, psychological consequences and behaviour consequences. Under the elements of causal dimensions, psychological consequences and behavioural consequences fall in Weiner's opinion (1985) the four determining motivational factors of controllability, expectancy, affective involvement and persistence.

If teachers would take the time in the beginning of the year to talk to the students about their emotions and feelings that arise in a classroom, the students would be knowledgeable about the emotions that may effect their motivation and achievement. We have to remember that students do not try and fail, that what they do is try to be or look successful by maintaining their self-worth. This is accomplished in ways and means that are either beneficial or not beneficial to their future

successes and learning. Some educators may believe that teachers do not need to be concerned with all of these theories and findings, that theory and practice just do not equate to a learning environment. However, research has shown time and time again that a nurturing caring attitude develops and fosters a motivational learning environment.

When a teacher steps into the classroom at the beginning of the year there is always high hopes that all will go well, that students will be motivated to work and achieve success. Students are human beings and because of that fact they have just as much right to dignity and worth as do teachers. If we give them that dignity and worth from the beginning we will be sending a message that they have value in our classroom, that they add another dimension to our teaching. Our motivational classroom would not be the same without them; therefore they belong and have value in the teaching/learning paradigm. If we can realize these beliefs, then we help students maintain their academic success, self-worth, self-efficacy, a set of positive attributional beliefs, self-determination and a set of goals that foster mastery learning. All of these elements need to be individualized and if they are then it is not the teacher who motivates the student but it is the students who motivate one another.

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CONSIDERATIONS ON MOTIVATION: SELF-ASSUREDNESS AND AGENCY

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I wish to begin by a brief consideration of the distinctions between the different usages of the word "motive." When we speak of someone being motivated or not being motivated, we are referring to some qualities of the person's behaviours directed towards achieving some end. When we describe someone as being motivated to learn, we are making a judgement based upon observation of that person's behaviours: things they say, things they do, and the quality of the work they produce. In the context of schooling, a person motivated to learn may be characterized, in part, as someone who is willing to engage in the task (eagerness), will persist at a task, and is self-initiating and self-directing. Such a person demonstrates a commitment to learning by focussing on learning new skills, acquiring more knowledge, improving competency, understanding and mastering the work. On the other hand, someone who is not motivated to learn may refuse to do the assigned work or may do the minimum work necessary. That student may choose to do only the easiest work, perform the work in the easiest way possible, and avoid any unnecessary work. The student may shy away from challenging problems or situations which may tax his or her abilities. Such a person may be less interested in learning than pursuing other ends.

In contemporary cognitive psychology, metacognition has emerged as a dominant construct characteristic of the type of motivated person described above. Good learners are metacognitive, poor learners are not. Good learners are mentally active, poor learners are not. It is the quality of this mental activity that determines immediate and future performance. By metacognition, we mean the orchestration and utilization of mental resources to address the task at hand. When a student approaches a task, the student must identify the type of task and know what the task requires. The student must also know about ways to complete the task, or strategies. The student must know what strategy might work and what strategy might not work. Yet, the learner must also regulate thinking while performing the task. The learner needs to make plans, monitor strategy use, and evaluate performance on the task. In other words, the learner must be mentally active. The student needs to be aware of his/her thinking, in control of his/her thinking, and be willing to modify his/her thinking.

The development and utilization of this mental activity is closely connected to motivation to learn. Not only does this mental activity describe a person motivated to learn, the motivational disposition of the learner may sustain and enhance this mental activity. A student who is motivated to learn is a student who will be mentally active. Because the student is mentally active, utilizing components of the metacognitive system, he or she is more likely to achieve success through his or her efforts. Having achieved success through effort enhances the development of the metacognitive system and sustains motivation to learn. This motivation will increase the likelihood that the student will put forth the necessary mental effort enabling the student to achieve future success. Thus motivation to learn, metacognition, and success become interrelated in a way that promotes the development of the child.

On the other hand, a student who is not motivated to learn will not engage in the mental activity necessary to achieve success. Consequently, he or she may fail. In failing, the student does not acquire the metacognitive knowledge and skills needed for future learning. Motivation may continue to be low, or pushed lower. The student eventually falls into a pattern of failure which may become debilitating. Understanding motives is important to improving academic performance.

When we speak of a person as having a motive, we refer to the reason a person engages in some behaviour, such as an act or speech. This reason may be external to the person such that the person is compelled to engage in the behaviour. Such a view is not uncommon and was a powerful force in early psychology. Early attempts at formulating laws of learning and behaviour tried to explain behaviour in terms of reinforcements and punishments. A person who was rewarded for engaging in some behaviour ought to be likely to engage in similar behaviours in similar circumstances. Such thinking underlies the current and prevalent practice of businesses offering token points for utilizing their services which may be accumulated and exchanged for some tangible merchandise. This particular school of thought views human behaviour as contingent upon reinforcement of responses to certain antecedent conditions. Something happens; we respond; there is a consequence to our response which determines whether or not our future responses will be similar to our initial response. Behaviour is conditioned, and the motive for our behaviour is conditioned -- we have learned to respond in a certain way in a certain situation.

Other schools of thought have suggested that the reasons for our behaviour, our motives, are internal -- they originate within us. Some view motives as arising from drive reduction, need satisfaction, or thoughts and beliefs. The drive reduction and the needs satisfaction views suggest that humans have drives that must be reduced or needs that must be satisfied. Our behaviour is subsequently directed towards reducing the drive or satisfying the need. For example, psychologists might postulate adults have a sex-drive or a need for sex, and behaviour is subsequently directed towards engaging in sexual activity to reduce that drive or satisfy the need. Such is the thinking underlying the suggestion of inducing learning behaviours in students by using novelty or tricks to stimulate interest or curiosity. The intent is to create a need to learn which will be satisfied by doing the assigned work. However, the cognitive school of psychology has suggested that the reasons for behaviours are more profound and arise from beliefs held by the person and it is this particular view I wish to expound.

Two constructs have emerged as being paramount in the cognitive view of motivation. The first construct is self-assuredness, the second is agency. To understand the role of self-assuredness, it is important to understand the constructs of self-efficacy and self-worth. Self-efficacy refers to a person's belief that he or she is capable of performing a task, a perception of competency. It is a confidence judgement about being able to what is being asked. The research in self-efficacy theory has resulted in some very straightforward claims. Students who believe themselves to be capable are more likely to be motivated; those who believe themselves incapable will not be motivated. This explanation is readily apparent when we witness a child exclaim "I can do that!" and readily attack the task at hand, or when we witness a child proclaim "I can't do that!" and refuse to attempt the task.

Yet, we must also admit that this explanation is unsatisfactory on two accounts. First, while it may seem sensible enough to say that students who judge perceive themselves incapable will not be motivated to learn, it is not necessarily the case that students who are not motivated to learn see themselves as incapable. This point is evidenced by the bright but bored underachiever who does the minimum to get by. Such a student may feel capable but attaches no value to effort beyond the minimum. Second, we may have witnessed children proclaim "I can't do that" but proceed to attempt the problem anyway. A child may state that they do not know how to do something but that perception of incapability may not necessarily hinder that child.

However, if we view motivation as an attempt to protect self-worth then we can provide a more powerful explanation than self-efficacy theory. Covington has suggested that motivation may be explained as an attempt to protect self-worth. Each person has a need to believe that he or she is worthy and valued. According to Covington, many people believe that self-worth is inherently tied to one's ability to perform. Thus, who you are and your value as a person becomes inherently connected to one's ability to do something well.

If you will allow me to digress for a moment, a story will clarify what Covington is trying to point out. I happened to see a television interview of figure skater Kurt Browning on a CBC show called Champions. In this interview, Kurt was recollecting the events of the 1993 World Championships and 1992 Olympics. He was expected to win a gold medal at both events but during his performance at each event, he fell after attempting a difficult jump. At the end of one of the performances he came off of the ice crying and made the remark that this must be what it feels like to lose a child. He received many faxes and telegrams of support from fans, but one of the letters he received was from Barbara Underhill who had lost a child. She told him this is not what it feels like to lose a child. It was just a competition. In the interview, Kurt stated that when he read that, he realized that figure skating is not who he is, it is just something he does. Unfortunately, many people believe that who they are, their worth and dignity as people, is intimately connected to their ability to perform.

According to self-worth theory, self-worth is intimately connected with performance for many students and doing well is important to one's self of worth and dignity. Yet, if students cannot perform well, they seek ways to make it appear as though they could have succeeded. In other words, no matter what else occurs, do not look incompetent. Consequently, if students perceive themselves incapable of performing well, they become motivated to protect perceptions of competency, for if they can convince themselves and others they could do well they will maintain some sense of worth or dignity.

For example, imagine a student who has been given a test to complete. The student looks at the answers and realizes that this is a hard test. Instead of answering the questions, the student fools around and fails the test. The teacher admonishes the student by saying that with some effort the student could have passed. This is exactly what the student wanted, because the student and the teacher have blamed the failure on lack of effort, leaving the student's perception of competency and self-worth unthreatened (for now).

In summary, self-worth theory posits that if a student believes that self-worth is conditional upon performance, and performance is not satisfactory such that perceptions of competency may become threatened, that student will behave in such a manner as to protect perceptions of competency and self-worth. This is consistent with self-efficacy theory, for if the student believes himself or herself to be capable, then he or she will be motivated to do the work. If the student does not believe that a satisfactory performance is possible, the student will not be motivated to do the work. Covington describes such students as failure avoidant.

However, if the student does not believe that self-worth is conditional upon performance or that ability is the source of performance, competency perceptions may not influence motivation for a task. These students seek to learn, and increase competency. Failure, for such a person, does not necessarily imply incompetency or lead to a lower sense of self-worth. Failure is interpreted as meaning that one lacks some skill or knowledge needed for the task which can be acquired. Thus, even though initial confidence is low, a student may still be motivated to perform a task because he or she can learn from doing it. More importantly, the student, despite low competency perceptions, may engage in a task because the student sees himself or herself as a causal agent. Such a student believes that with effort and knowledge success is attainable.

Agency has emerged as a second important construct in contemporary motivational theory. The basic premise of agency as a motivating force is that people who see themselves as agents are more likely to be motivated than people who are passive. By agency, I refer to a sense of control and autonomy. Students who believe that their success lies within their control attribute their success to internal, controllable factors (e.g., effort or strategy use). These are students who will feel proud, satisfied, and competent. These students recognize that it was through their own efforts they succeeded, they feel good about themselves and have attained a measure of self-worth. Consequently, these students are more likely to choose to work on harder tasks, persist in the face of difficulty, and produce work that is of good quality. These students will be self-regulating and self-determining. Such behaviours should lead to more success which should result in enhanced feelings about self.

Some students do not see themselves as agents of success. These students will attribute success to internal, uncontrollable factors (specifically ability) or to external factors (e.g., luck, teacher's help). Consequently, they do not feel proud or satisfied with the work they do. These students tend to be less motivated. They prefer to work on less-challenging tasks and do not persist in the face of difficulty, produce work that is of lesser quality, and are prone to maladaptive or dysfunctional behaviours.

Of particular importance is the attributional pattern in which success is attributed to external factors (e.g., luck) but failure is attributed to internal, uncontrollable factors (especially inability). Such a pattern is characteristic of students who are helpless. If they fail, they blame themselves; if they succeed, they do not give themselves credit. The result of this pattern of thinking is a student who does not see himself/herself as an agent and feels very little control over his/her learning. He/she does not feel proud or satisfied and his/her sense of self-worth disappears.

Consequently little learning occurs and the metacognitive development of the learner suffers.

Yet agency is not just a matter of believing that one is in control. Agency is an essential part of the human condition that stems from an innate human desire to behave in an autonomous manner. That is, people seek to be self-determining and behaviours are directed towards becoming autonomous or maintaining autonomy. Students who believe themselves to be acting in a self-directing manner will be more motivated -- they will be self-regulating, take greater interest in their work, experience more positive emotions about their work, and develop deeper conceptual understanding of the content. If students perceive that they are being coerced, or if their sense of autonomy is threatened motivation to learn will decrease as other motives arise (such as please the teacher or not fail the test).

Motivation, being motivated, is closely connected to the formation of the self. Students who are motivated are in the process of becoming aware of themselves and have a strong sense of self. They are self-assured and have a sense of agency or autonomy; they are motivated to learn and their behaviours are self-enhancing. If this sense of self becomes jeopardized or threatened, or if students lose a sense of self, then their behaviour becomes dysfunctional. They begin to engage in behaviours which are self-protective or self-destructive.

A sense of self-assuredness and agency develop, not from curriculum innovations or educational reforms, but from human interactions. Students come to feel good about themselves and come to develop a sense of agency through interactions with teachers and parents who are perceived to be caring, respectful, and striving to promote feelings of competency and agency.

The relationship between self-assurance and motivated behaviours has two important implications. The first implication concerns the messages we send to students about the opportunities for success and the value of success. What opportunities do we provide to students so that they can meet success with effort? Often the rewards that are offered to students are distributed such that only a few can share in the rewards and achieve success. Grade distributions are arbitrarily constructed such that only a few can achieve A's within a class. Special privileges are often allocated to those who finish fastest or have the most correct, cutting off most students from a chance to share in those privileges. Consequently the opportunity to achieve success is a remote possibility for some students.

Further, if performance and self-worth are as closely connected as Covington suggests, are we providing opportunities for students to find things that they are good at (such as the arts, trades, academics), and thus obtain some measure of self-worth? Do students have an opportunity to display their various skills or are all assessments written format? Such considerations are important because there are certain trends that present the real possibility of cutting students off from sources of self-worth through displays of competency. For example, many students with reading disabilities have very good spatial skills and are good artists or musicians. While they may not read or write very well, they can draw or perform. If the only opportunities these students have to express their knowledge is in written form, they may not do very well and self-worth may suffer. However, if they can express their knowledge in

other forms (through art or music, for example), they may come to see themselves as competent, be seen as competent by their peers, and thus attain some measure of self-worth.

Yet we must also consider the types of programmes that are being offered and being cut through economic downsizing. If programmes in the arts, music, the humanities, and physical education are eliminated, and math, science, and technology become valued as the programmes to which resources should be allocated, many students will be cut off from sources of self-worth. A large number of students do not see themselves capable in math or technology. Yet if math and technology are the paths students are pressured into because of scarcity of resources and economic priorities, many students will be cut off from a major source of self-worth.

As an example, I watched a documentary about a school in Western Canada which implemented a new pass/fail system in math and science in which the passing grade was raised to 80%. From a self-worth perspective, students who were achieving at 75% may be able to raise their performance to 80%. But students who were performing at the 60% level may see the new pass level as unattainable. If so, they would perceive themselves as having little chance of success; self-worth would be threatened and motivation to learn would disappear.

Yet, the most important implication of self-worth theory pertains to the formation of the performance-worth link itself. The belief that worth comes from performance creates a conditional sense of worth. I am worthy as long as I am good at something. But is it possible to unconditionally accept someone? Can we say to our students that you are a good person, you are important to us, we love you even though you may not be getting A's? What messages are being sent by teachers and parents about the worth and dignity of the person? You are valued only if you do well?

The agency-motivated behaviour relationship has important implications for teaching, specifically the types of messages we send and the opportunities we offer students for making meaningful decisions. Psychological research has pointed out that students who are motivated to learn are students who see themselves as agents. Students who are not motivated to learn are students who make external or uncontrollable attributions. What messages do we send about the causes of success and failure? Does our language and do our practices leave students with the belief that ability is the cause of success or failure? Or do we teach them the importance of strategy and effort in success and failure?

Offering support unities for students to be autonomous is critical for the development of self-determination and self-regulation. But do we provide students with the opportunities to make meaningful decisions in their learning? Do students have a role in decision-making matters with in the school? Could they be given opportunities to make decisions about what they might learn, how they might learn it, what tasks they might accomplish, or how they might be evaluated? Are students given an opportunity for making meaningful decisions?

Motivation to learn is strongly related to self-assuredness and agency. Students who are sure of themselves and have a sense of agency are students who will be motivated to learn. But this sense of self and agency is developed through interpersonal relationships. Parents and teachers who are seen as caring and supportive will help students develop a strong sense of self. Parents and teachers who are seen as uncaring, manipulative, or punitive will stunt the growth of the sense of self within the student. For example, the inappropriate use of reward systems can lead to a decrease in motivation to learn by decreasing students' sense of agency. Students may begin to form external attribution patterns and feel a loss of autonomy. Classrooms which get students to think about how they learn and solve problems, create meaning in the work for students, give students opportunities to make decisions, and place emphasis on effort and strategy use tend to be classrooms in which students are motivated to learn.

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Agency and autonomy are two constructs critical to the formation of self, which is, in turn, critical to motivation. The classroom environment is, in the first place, psychological in nature. Social interactions ultimately impact on the students' sense of self by fostering agency and autonomy, or constricting agency and autonomy. Teachers' comments and expectations for students are natural occurrences within that social interaction and profoundly influence the psychological environment of the classroom.

Craig Janes is a graduate student in our Master of Education programme. He has undertaken a review of the literature on teachers' expectations and written a solid paper on the topic. His summary of the research conducted in this area, when considered in light of the other two papers on motivation, illuminates our understanding of schooling in an important way.

Timothy L. Seifert

AN EXAMINATION OF THE RELATIONSHIP BETWEEN TEACHER EXPECTATIONS, ATTRIBUTION THEORY AND STUDENT ACHIEVEMENT

R. Craig Janes

In a document prepared by the Newfoundland Government entitled, *Adjusting The Course* (1994), it was emphasized that a fundamental priority of Newfoundland's educational system be that high levels of expectations and standards be maintained for the success of the schools and students. A shift in our approach to educational achievement was necessary, a shift that would form the basis for establishing high standards and for creating an expectation that these standards can be met . The repetition of the word **expectations** is not merely for literary purpose but is indicative of the growing emphasis placed on the causal relationship between expectations and student achievement. It will be useful at this point to examine how the literature defines expectations.

Lawler, cited in Saracho (1991), defined expectancy as " the persons' estimate of the probability that he will accomplish his intended performance, given the situation in which he finds himself" (p. 27). Saracho (1991) then went on to state that teacher expectation is the "teachers' estimate of the child's academic performance within the classroom" (p. 27) .

The other concept that we are attempting to understand is *attribution theory* and more specifically how attribution theory and teacher expectations relate to one another. On a very simplistic level attribution theory undertakes to explain "why" an event occurred when there is an unexpected outcome (Weiner, 1984). On a deeper level, this theory analyzes the perceived causes of an event from a number of causal dimensions:

1. Locus of Control - was control of the cause within or outside of the individual.
2. Causal Stability - does the cause always exist or is it only present for a short period of time.
3. Controllability - whether or not the cause was something they **could** control (effort vs. illness).
4. Intentionality - Poor effort vs. poor use of a strategy. (Weiner, 1984)

Once such an examination takes place, the learner will attribute the unexpected event to a particular cause and this will result in some affective or emotional change (Weiner, 1984). For instance, if a student attributes a good mark on a test to ability, a perceived stable and non-changeable cause, they are likely to experience feelings of pride and a sense of accomplishment. Failure attributed to a stable and non-changeable cause results in feelings of guilt or shame (Tollefson, 1988).

In the realm of motivation, how the student attributes the cause of an event will directly affect his or her level of motivation for future tasks. Tollefson (1988) argued that students who attribute success to a stable factor such as ability increase their expectations for success and are therefore encouraged to greater task persistence. When failures are attributed to ability, the student's expectancy for future success decreases and along with it task persistence. There is a sense of hopelessness and resignation in that the learner feels there is nothing he/she can do about it. Weiner (1984) echoed this hypothesis when he noted that once success or failure has been attained and as long as the conditions or causes of that outcome are perceived as remaining unchanged, then individuals will anticipate success or failure for future tasks with a certain degree of certainty.

If a learner believes, however, that the causes are a result of unstable and changeable factors, such as luck or effort, then the focus of motivation shifts. If failure is attributed to an unstable factor there is still a high expectancy for future success but, if success is attributed to either of these factors, a low expectancy for future success results (Tapasak, 1990). The basic premise is that a learner will not expect to succeed later if the present success was a result of something that can change from situation to situation. In the same vein, failure as a result of something that can change would not reduce one's possibility for future success. The fact that the factor **can** change implies that it might, so there is no reason to think that one will always fail.

To summarize thus far then, expectations are the beliefs that a teacher and student hold for that student's future success in learning situations. Attribution theory states that where a student attributes the causes for their success or failure will affect his/her emotional state and expectancy for future performance. The connection to be made at this point is that what one expects to happen in the future with regard to success or failure is inherently linked to what one believes to be the cause of past successes or failures. Therefore, expectations for success or failure can sometimes be linked to how one attributes past successes or failures. But this may be a reciprocal relationship in that one's expectations for success or failure may dictate where one attributes the causes for past events. If one expects to be successful, they

may determine that a changeable factor was responsible for past failures and a stable one responsible for past successes.

In either case, the expectations and attributions that a student holds must originate from somewhere or, at the very least, be fostered in some manner by outside influences. It is here that we have to examine the role of the teacher in this relationship. In other words, how does the teacher influence the students' expectations for success or failure and thereby influence the attributions that students make.

Theories on how a teacher's expectations, for the success or failure of a student, influences that student's actual achievement are varied and some times even contradictory. One of the original studies by Robert Rosenthal and Lenore Jacobson (1968) entitled *Pygmalion in the classroom* showed a definite relationship between the expectations of a teacher for a student and that student's level of achievement. Teachers were told that some students were high achievers while others were low achievers when, in fact, there was no actual measured difference. At the end of the study, those labeled as high achievers had actually done better than those labeled as low achievers. However, later studies done along the same lines often failed to produce the same results (Clairborn, 1969). In fact, Williams (1975) put forth that it is mainly the intellectual capacity, social origin, and structural arrangements that a school provides which affect students' performance. This would echo the findings of '**The Coleman Report**' which claimed that no particular school characteristic had a measurable, positive impact on student achievement (Towers, 1992). The report even went so far as to claim the only factor considered to have *any* impact on student achievement was the social class of the student body.

More recent studies and literature, however, have reported that there is a relationship between teacher expectations and student achievement. Although the major body of literature agrees the relationship exists, it is the exact nature of the relationship which needs to be examined further.

Early research held the notion that there was a direct cause and effect relationship between teacher expectations and student achievement (Anderson, 1991). It was felt that the simple possession of high expectancies for students would translate into increased achievement levels. The belief was that if students knew what they were expected to do and how they were expected to act, they would behave accordingly (Monhardt, 1995). Hassenpflug (1994) asserted that a teacher with high expectations could raise students' expectations and have a positive effect on students' achievement. She goes on to say that "students actually can and will do better if quality work is expected of them..." (Hassenpflug, 1994, p. 161). This line of thinking may, in fact, need further development, for Anderson (1991) maintained that such an interpretation may be naive and superficial in light of the current research. This basic association between expectancies and achievement will need further refinement and clarification.

Much of the literature reviewed attempted to explain the relationship in a more succinct and detailed manner by attributing the relationship between teacher expectations and students' achievement to one or more of the following concepts:

Perceptual Bias, Sustaining Expectation Effect, and Self-fulfilling Prophecy (Anderson, 1991; Kolb & Jussim, 1994; Saracho, 1991; and Weinstein, 1995).

The concept of *perceptual bias* revolves around a very simple premise. Kolb (1994) stated that perceptual biases result when the expectations of the teacher influence the teacher's evaluation of the student's achievement. In other words, a teacher feels that a student is a high achiever and evaluates them higher than their abilities merit. In this particular case, then, there is no action on the part of the student which affects his or her achievement but rather the action is on the part of the teacher.

Closely related to perceptual bias is the notion that in some teachers there is the tendency to expect students to continue or maintain previously developed behaviour patterns, disregarding the students' abilities. This is the process known as *sustaining expectation effect* (Saracho, 1991). Anderson (1991) further clarified this effect by stating that "teachers expect students to sustain previously developed behaviour patterns to the point that they take these behaviour patterns for granted and fail to see or capitalize on changes in the students' potential" (p. 22).

A further development in the analysis of teacher expectancy comes in the form of the concept *self-fulfilling prophecy*. Merton (1948) first coined the phrase to describe how erroneous beliefs about people and situations sometimes create their own fulfillment. Kolb and Jussim (1993) refined the notion when they explained that self-fulfilling prophecies occur when teachers induce students to perform at levels consistent with their (teachers') initially erroneous expectations. In other words, if a teacher believes a student to be bright then the interactions between the two may be such as to ensure that this expectation comes true (Anderson, 1991). This is where we begin to see a deviation from the notion of a direct causal relationship to one that is more detailed and explanatory.

The prominent notion being argued now is that it is not the expectations themselves which influence the students' achievement and behaviour but rather how those expectations cause the teacher to interact with the students thereby affecting achievement levels. In each of the three concepts mentioned the onus is placed on the teacher and his/her interactions with the students as the major factor affecting achievement levels. It is also within an examination of teachers' communicated behaviours towards students that we can understand how a teacher's attributions about student success and failure is delivered to the student, internalized by the student, and subsequently affect expectancies for future success. It is here that the complementary nature of expectations and attributions begins to take form when the role of the teacher and their behaviours are incorporated into the argument.

Much of the research and literature now holds fast to the notion that, although teacher expectations are an integral part of the issue, it is more a matter of how the expectations are communicated in 'differential treatment' that actually influences student achievement (Weinstein, 1995). In fact, Anderson (1991) endorsed the notion that "current analysis of teacher expectations shows that while the expectations teachers hold for students may indeed be influential, the way in which the teacher responds or behaves as a result of these expectations is a more important variable" (p. 22). Numerous studies (Gottfredson, 1995; Hall, 1993; Kolb and Jussim, 1994 ;

Lee-Corbin, 1994; Taylor and Reeves, 1993) have been done to determine the validity of the thesis that if a teacher has different expectations about pupils, they then respond differently toward those pupils.

Studies (Gottfredson, 1995; Hall, 1993; Kolb and Jussim, 1994; Lee-Corbin, 1994; Taylor and Reeves, 1993) have concluded that there is a great deal of evidence to support the premise that teachers interact differently with students based on their expectations for those students. Teachers tend to call upon those who they think will know the answers more often than those who they feel will simply provide an incorrect response (Taylor, 1993). Also, when a teacher has high expectations for a student, they often develop an interest in that student and focus on improving his/her (student's) performance (Saracho, 1991). This inherently implies, then, that students about whom negative perceptions are held are not provided the same opportunities for performance improvement. In fact, the following behaviours are used more often with perceived low achievers: insincere praise, less frequent and informative feedback, paying less attention to the student, making less eye contact, and making less use of students ideas (Gottfredson, 1995). What could these behaviours communicate to a student about how the teacher attributes the student's success or failure?

A teacher's perceptions about the causes of students' behaviour is extremely important. Peterson and Banger (1988), as cited in Fennema (1990), maintain that a teachers' causal attributions are vital because their view on why a student succeeded or failed influences the teachers' expectations for future achievement on the part of the student. If a teacher felt failure was a result of ability and therefore unchangeable, they are less likely to react toward that student in the same manner than if such failure was attributed to effort. This is where the communication aspect comes into play.

It is my contention that students will develop their own attributions based, to a certain degree, on how the teacher interacts with them following failure or success on learning activities. Complementary with expectancy theory and the transmission of perceived expectancies comes the notion that attributions are also transmitted to a student. Kurtz and Schneider (1990) contend that...

"Teachers influence cognitive development and school achievement not only through explicit strategy instruction but also through overt and subtle messages about their perceptions of children's' abilities and their attributional theories about other factors that influence achievement." (p. 269)

An example of this line of thought is provided by Tollefson (1988). If a teacher attributes failure to some uncontrollable cause such as ability, he or she is more likely to help and praise the student. However, when combined with the standard behaviours of teachers toward students with perceived low ability, such praise may simply be gratuitous and given simply to placate the individual (Saracho, 1991). Such behaviour communicates to the student that their failure is a result of something they, the student, cannot control and this, in turn, will cause the student to lower their expectancy for success in the future. They lower their expectancy for future success because they have attributed their failure to a stable and unchangeable factor based

on the teacher's behaviour toward them. Anger and frustration toward a student's failure communicates that the attribution is a controllable one such as effort and therefore does not result in a reduced expectancy for future success.

Kurtz and Schneider (1990) maintain a similar argument by claiming that the attributional theories about achievement a teacher possesses combined with their expectancies for various students will affect the amount of praise and/or criticism they provide to the children. It also plays a significant role in the level of intimacy and degree of power sharing a teacher has with certain students (Grant and Rothenberg, 1986 cited in Kurtz and Schneider, 1990). Transferred to expectancy theory, the argument is that students with perceived low ability are given less autonomy when it comes to working on tasks (Saracho, 1991). This would communicate to the student that not as much is expected of them because they are incapable of doing the work. Here, then, low ability is equated with low expectancies for success. What results is a certain degree of influence relating to children's' achievement expectations, effort expenditure and resulting achievement. Tollefson (1988) views the relationship in a cyclical manner...

"A student believes he/she cannot do the work without help. The teacher believes that the student could do the work if he/she tried harder and withholds help. The student develops an attitude of ' what's the use in trying if I am going to fail'. The teacher maintains his/her attribution and continues to be angry, critical, and unhelpful, and reinforces the student's beliefs and subsequent behaviour." (p. 264)

While the teacher in this instance may believe the student capable of doing the work, the critical and unhelpful nature displayed actually communicates the opposite according to expectancy theory. Such behaviour is characteristic of teachers who perceive low ability in and have poor expectations for students. Therefore, a perception of low ability on the part of the teacher and subsequent teacher behaviours communicates to the student that the cause of their failure is uncontrollable therefore the student experiences the emotions of hopelessness and resignation.

A detailed list of teacher behaviours based on high and low expectations is provided in Appendix A and while their existence does not guarantee the theorized effects in all situations, the research evidence does hold that there is a correlation.

Fennema (1990) tied this element to the expectancy of teachers in the following way. The instructional decisions that teachers make which, in turn, transmit to the student their views on what caused the event are mediated by the teachers' beliefs. Teachers have a wide range of preconceived ideas and beliefs about students based on a number of factors and such beliefs vary from student to student.

Such discrepancies in expectations can result from a number of traits: race, gender, age, appearance, handicap, perceived effort, and socio-economic status (Anderson, 1991; Gottfredson, 1995). While a complete analysis of all these topics is beyond the scope of this paper, it is interesting to note a couple for their inclusion is important when examining possible solutions to the effect.

These so-called 'foundations' for expectancy differences can be succinctly summed up using two words: stereotyping and labeling. Stereotyping leads people to have preconceived notions or ideas about someone simply because that person possesses some of the characteristics of a particular group of individuals. Once labeled as part of this group the teachers' behaviour may change accordingly. When combined with expectancies in the school setting, a number of interesting conclusions have been drawn.

First of all, students of a particular race, about which preconceived notions are held, often have expectations about them in line with the 'stereotype'. Minority students are often given subtle messages by their teachers about their ability and worth thereby negatively influencing their achievement (Hall, 1993). Studies such as the one carried out by Fennema (1990) addressed the myriad of contentious issues surrounding the perceived gender differences between boys and girls in the area of math achievement. It was discovered that teachers tended provide more encouragement for boys than for girls to engage in math. Boys' success in math was often attributed to ability and, as already discussed, success attributed to ability results in feelings of pride and a sense of accomplishment (Tollefson, 1988). For the girls, their success was often attributed to effort, a changeable factor, which results in a decreased expectancy for future success (Weiner, 1984).

When Tapasak (1990) examined how males and females, themselves, attribute success and failure he discovered the same pattern. Males tended to attribute success to stable factors such as ability and failure to changeable factors such as effort. Women, on the other hand, made attributions in the exact opposite manner. Therefore, they attributed success to an unstable factor such as effort and failure to a stable factor such as ability; both situations often result in reduced expectancies for future success. These situations would appear to be a result of the preconceived stereotypes that individuals hold which have tended to propagate the idea that boys are better at math than girls.

The discussion thus far has been purely one of providing information about a situation that exists within the school system today. Such a task would be worthless without an examination of suggested solutions or intervention strategies to the problems created by differing expectations in the class.

From the study so far it is quite obvious that the problem in this situation lay not with the student but with the teacher. Therefore any discussion of solutions will naturally have to center upon those actions that teachers can take to correct where necessary their thoughts and behaviours.

On a very simple scale, Metcalf (1995) said that it is important to think differently about what you do in the class - to look beyond the negative behaviours... and focus on the positive. Using labels and stereotyping may help to rationalize the behaviours of students but it does not help to solve the problem. Teachers need to be better educated on the effects of racism and discrimination (Hall, 1993). Grant and Zeichner (1995) incorporated this line of thinking into their discussions on reflective teaching. They stressed that the reflective teacher must be dedicated and committed to the teaching of all students not just certain students. This would imply that teachers must reject the thoughts that restrict them in their teaching practices and develop new

ways of viewing the teachability of all students. Weinstein (1995) felt it was vital for teachers to be exposed to situations whereby evidence, which he called 'disconfirming' evidence, would be provided to dispel the previously held notions about certain groups of students. Although this particular solution is tied to the notion of stereotypes, it is linked with far more significance to an overall strategy for success:

"...interventions need to provide an ongoing context in which negative beliefs can be disconfirmed and more positive beliefs and actions can be developed, and which would enable teachers and administrators to play a *reflective* and *active* role in both diagnosis and prevention of low expectancy practices." (Weinstein, 1995, p. 126)

On a deeper or more sophisticated level, the changes necessary are much more complicated. Weinstein (1995) asserted that in order to create a 'positive expectancy climate' changes must occur to the eight interactive features of the organization of classrooms and school life. These eight features are:

- a) curriculum
- b) grouping for instruction
- c) evaluation
- d) **motivation**
- e) student responsibility structures
- f) relationships within the classroom
- g) relationships with parents
- h) relationships within the school

When concentrating on motivation and attribution theory, the possible solutions are quite similar in that the perceived causes of the events, and in particular failure, need to be changed (Weiner, 1984). Altering teacher behaviours when addressing the notion from the vantage point of expectancies is a deliberate step in the right direction. But like expectations, the underlying reasons for the behaviours must be dealt with if a profound and long lasting change is desired. Tollefson (1988) asserted that the solution resides in the elimination of the negative thoughts and actions and their replacement with positive ones. Teachers must become cognizant of the effects that subtle behaviours have on the attribution patterns of students. Once aware that gratuitous praise and pity communicate to the student that their, the students', ability is the cause of their poor results, the teachers can strive to communicate more productive and positive messages. Such radical changes in the thought processes of both teacher and student will require a commitment to work together to solve the problem.

In the area of expectations, collaboration and cooperation from teachers is paramount to the success of any intervention strategy designed to be used in a positive manner (Hassenpflug, 1994; Metcalf, 1995; Taylor, 1993; & Weinstein, 1995). Taylor (1993) insisted that success can only be achieved if teachers agree to train together and provide mutual support for the implementation of new teaching strategies to encourage active student engagement. Kolb and Jussim (1994) suggested that teachers must be educated about the subtle ways in which they may have created an environment that can depress some students' performance. A

couple of studies are so confident of the relationship between expectations and student achievement that they stress the importance of maintaining high expectations as a viable intervention strategy (Kolb and Jussim, 1994 & Taylor and Reeves, 1993). In both cases, they felt that for any substantial rise in the achievement of students to occur, it was paramount to keep expectations high as a motivational factor. This would appear to mirror the message stated at the beginning of this paper concerning the document *Adjusting the Course* (1994, p. 10); "High expectations and standards are necessary and all students, except those with specific disabilities, should be able to meet those expectations and standards".

From a review of the literature it is apparent that the findings of the Coleman Report are dubious in light of the evidence which asserts a direct link between teacher expectations and student achievement. The research would also support the notion that a teacher can communicate 'why' the success or failure occurred influencing how the students attribute their success or failure. Although the exact nature of this relationship is open to some interpretation as to the degree to which perceptual bias, sustaining expectation effect, or self-fulfilling prophecy operate on those concerned, it has been proven that they do operate in some fashion.

First of all, there is evidence of some correspondence between what a teacher expects from a student and what that student's achievement levels turn out to be. How these expectations manifest themselves in the behaviour of teachers is the key to understanding the relationship. Studies have shown that high and low expectations on the part of the teacher lead to observable differences in achievement. Studies have also shown that the perceived cause of the event will influence the expectations for future success or failure and that these perceived causes can be transmitted from teacher to student. In both cases their interaction is closely linked through the behaviour of teachers toward students. The degree and type of feedback and amount of teacher interaction with the pupil are just two such behaviours where differences have been recorded.

Secondly, such expectations arise from the misguided behaviour of stereotyping and labeling. Many teachers hold certain expectations about a student based on the particular group to which that student belongs. Teacher expectations are influenced by gender, race, and socio-economic background just to name a few. Such expectations, based on an irrelevant factor such as gender, have shown that they influence the attributions of both teachers and students.

Due to their close interaction and reliance on the communicated behaviours of teachers', solutions to the expectancy/attribution problem are very similar. Efforts must be made to dispel the underlying thought processes which guide and dictate behaviours. The elimination of stereotypes and labels is a positive step in the right direction. Secondly, teachers must become aware of how their obvious and not so obvious behaviours communicate poor messages to the students. Once aware, they can work to moderate their behaviour and direct behaviour which communicates constructive messages to those who need them.

Appendix A

Examples of Teachers' Behaviours Based on their Expectations

Teachers who perceive students to have a higher ability:	Teachers who perceive students to have a lower ability:
<i>Public Performance</i>	
1. provide them honest and contingent feedback on their responses.	1. give them less honest and contingent feedback but more gratuitous feedback.
2. elaborate on their responses.	2. accept their responses and go on to something else.
3. help them to arrive at the correct answer by providing them with clues.	3. reject their response and call on someone else.
4. encourage them to provide open contributions.	4. call them for very brief and controlled contributions.
5. respect them as individuals with diverse needs and interests.	5. have less respect for them as individuals with diverse needs and interests.
6. treat them with warmth.	6. treat them with less warmth.
7. praise any of their efforts and assist them with their responses.	7. fail to praise their strong efforts but criticize their weak efforts.
8. encourage students to initiate interaction.	8. discourage students to initiate interaction.
9. give them freedom to express their feelings.	9. control their behaviour.
10. provide them with opportunities to achieve during group time.	10. provide them with limited opportunities to achieve during group time. (ignored or criticized)
11. permit students to reflect on their responses.	11. provide them with limited opportunities to respond to a question.

Group Assignments	
1. Assign students to a high ability group with assignments which require students to use their analytical and comprehensive skills.	1. Assign students to a low ability group with assignments which require them to work on meaningless tasks such as drill and practice.
2. Allow them enough time to complete their tasks.	2. Allow them limited time to complete their tasks.
Learning Responsibilities	
1. Give them more autonomy such as selecting assignments and hardly interrupt them.	1. Limit their freedom such as constantly monitor their work and intrude.
2. Encourage students to conduct self evaluations.	2. Evaluate students or have another responsible person evaluate students.

Source: Saracho, 1991.

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WHAT'S WORTH MEASURING? TEACHERS, HARD-TO-MEASURE OUTCOMES, AND ACCOUNTABILITY

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The Globe and Mail refers to itself as "Canada's National Newspaper". National, in the sense that it is distributed across Canada and makes an attempt to cover stories from all parts of the country, it is usually described as a paper with a decidedly business/right wing, conservative viewpoint. On Saturday, June 28, 1997 it carried an editorial by William Thorsell entitled "Taking the Measure of Our Education Systems" (Saturday, June 28, 1997, D6) which vividly illustrates the pressures being applied to education today:

More than 50 per cent of the residential property-tax bill in Toronto (and many other cities) is dedicated to primary and secondary education. Canadians are among the highest per-pupil spenders in the world on schools.... Our laws generally require children to attend school until they are 16 years of age. Quite obviously we value education highly.

In the very next paragraph, Mr. Thorsell questions whether Canadians really value education. He states:

Somewhere along the way, we forsook some basic management tools in education. The simplest is this: you cannot manage any system without goals that can be measured. This doesn't mean that every goal that is important to a system can be explicitly measured, but some core goals must be if the system is to be managed at all.

Some time in the 1960s, it became fashionable -- and that is the word -- to set goals for education that were effectively beyond measurement. They had to do with self-realization, curiosity, awareness, creativity, open-mindedness, tolerance, gentleness and critical thinking.

Mr. Thorsell attacks what he calls the "corkscrew curriculum" in which all students proceed at the same rate, but not the same pace, through the system. He concluded: "The combination of hard-to-measure goals and corkscrewing (which saw the end of external, general exams) reduced the accountability for spending public money or students' time." The result, he claims, is that mastery of basic skills began to deteriorate. Parents found it hard to monitor their children's progress, and "higher proportions of education taxes went into "supporting missions" such as counselling, extracurricular activities and special interest/needs programs." In Mr. Thorsell's view, funding the education system has led to a form of "indirect taxation without meaningful accountability."

In every part of our country, and in other countries in the Western world, similar views are being expressed. Accountability and testing are indeed buzz words of the 1990s. Mr. Thorsell applauds the solutions which he identifies across Canada:

Alberta restored system-wide testing of basic measures early. British Columbia removed many powers of local school boards. New Brunswick eliminated school boards. Ontario is acting to restore measurable standards and rein in the powers of fewer school boards, while Quebec reviews its core curriculum.

Although not addressed by Mr. Thorsell, Atlantic Canada is also engaged in similar measures. In fact, comparisons of educational systems across the country, and even internationally, make one wonder where all the common ideas for reform spring from and how they are circulated so efficiently among educational bureaucracies. The Atlantic Provinces Education Foundation (APEF) is identifying core learning outcomes in mathematics, language arts, science, and social studies. An indicator program is in place to allow standardized testing based on these anticipated learning outcomes. Departments of Education are assuming responsibility for district, provincial, and national testing and comparisons. If School A is not measuring up to School B, then school councils composed of community members, parents, teachers and administrators (another creation of the 1990s) will want to know why, and the provincial departments (or ministries) of education can investigate. To perfect techniques in this area, many administrators have travelled to distant school districts to see first hand what is happening there. For example, just a few years ago, a team of educators from Newfoundland flew to Kentucky to observe their attempts at school reform through accountability and testing.

This situation should concern all teachers. For many educators, the reaction to Mr. Thorsell's comments is to ask, what is education if we ignore hard-to-measure goals such as "self-realization, curiosity, awareness, creativity, open-mindedness, tolerance, gentleness, and critical thinking"? Furthermore, are they "effectively beyond measurement" (as Mr. Thorsell states) or are there ways to measure them?

Educators may react to the challenge that such a viewpoint poses by becoming angry with those who hold views similar to Mr. Thorsell's; they may then try to ignore that viewpoint and proceed as if it does not exist, holding on to their beliefs and hoping that others will support them in what they consider valuable work. For example, a typical teacher can continue to plan and teach units, devote long hours of one-to-one assistance and help to students, assume a leadership role in school-wide professional development and engage with colleagues to master new and emerging technologies that will assist in the teaching and learning within the school. This is the path that many teachers have chosen in the past. They shudder at the very thought of becoming politically active and would not know where to begin. They would argue that they know and their students know that they work hard, that what they do is important and helpful, that they do not have the time nor the interest to do more. You could ask, what is wrong with such a response?

To ignore what Mr. Thorsell is saying will lead to changes in teaching which may be problematic for many, because although teachers see the value of the different ways they do their work, it is seldom documented. Our research (Brown & Sheppard, 1997a; Brown & Sheppard, 1997b; Sheppard & Brown, 1996) reveals that even in the most recognized schools with strong programs and qualified professional teachers, there is seldom any indication of how programs contribute to student

outcomes. The problem is that much of what teachers do falls into the category of goals that Mr. Thorsell rightly identifies as "hard-to-measure".

There is, however, another choice, which is to accept the reality that in today's environment there is a need for accountability. Process goals, such as those involved in helping students learn how to learn, to become independent, life-long learners, are indeed hard to measure, but the important point is that they can be measured. It just requires a different approach to measurement. Part of the problem is that too many teachers in the past have assumed that everyone would support and believe in the need for programs and approaches they saw as important. Because certain values were important to them, many assumed that they would be important to everyone else as well. In this post-modern world, teachers need to recognize that there is no longer an overriding belief in anything. They can no longer take for granted that the goals they endorse are endorsed by the education system, or if they are, that the system will agree on how these goals can be reached. Teachers will need to be politically astute, and that begins by recognizing that there is a need for evidence to back up what is valued.

Our research reveals that schools are not defining learning outcomes well, but others outside the school are. In Canada, education is a provincial rather than a national responsibility. However, provincial departments of education are voluntarily forming themselves into regional groups such as the Atlantic Provinces Education Foundation (APEF). A similar Foundation exists for western Canada. Their mandate is to establish learning outcomes for what they have labelled as core. In addition, editorial writers and other journalists have their own criteria. All educators need to examine and understand what measurements are being used by editorial writers such as Mr. Thorsell. Most would agree with Mr. Thorsell's conclusion that in the end, a major goal for all schools is: "Instructing the next generation about how the universe works, where our civilization came from, why it values what it does and what's on the agenda next". However, those who commit themselves to a career in the classroom want far more than that – they want the "hard-to-measure" goals for all students as well.

Why have non-educators, such as Mr. Thorsell, determined a narrow range of outcomes on which schools are to be judged? Why does he (and others) seem willing to judge the reputation of schools on only those measures easy to obtain? We may not like the answers we hear, such as this example from Stoll & Fink (1995):

If there is a problem for educators and researchers, we did it to ourselves. We have never demonstrated to ourselves, let alone anyone else, that schools make a difference to pupils' learning, knowledge, skills and attitudes which will enable them to be successful citizens in the twenty-first century. If most educators are not assessment literate how can we expect our publics to understand the issues that relate to assessment?" (p.167)

Teachers would be wise to do some private soul-searching and ask themselves how comfortable they would be if asked to show the link between what they do and student outcomes. They need to ask themselves also whether their professional values are reflected in the essential learning outcomes accepted and

shared by their colleagues and by the larger community. Teachers who know they are doing a good job need to ask themselves: Who else knows how well I do what I do and the importance of this function to students' learning? How can I show improvements in student achievement scores? In the current political environment, it is critical that teachers identify and articulate the learning outcomes that they want measured, and determine ways they can be measured, for "What gets measured, or assessed, gets valued. If schools do not measure what they value, what others choose to measure will be valued" (Stoll & Fink, p.167). In the research that we are doing, we were told that all teachers need to show that their work is directly or indirectly related to students' learning outcomes. In the restructuring that is taking place, only those programs seen as contributing to the mission of the school will survive.

To bridge the gap between process or hard-to-measure goals and the need for accountability, there needs to be a greater emphasis by teachers and schools to identify what the important goals in schooling are, to develop measures for such goals, and ensure that they are collected. If teachers perform other critical functions, such as providing peer coaching and training for their colleagues and participating in school improvement initiatives, they need to show that such activities also contribute to student success. For those involved in the education of teachers at the university, there is a need to ensure that programs provide students with the ability to understand and interpret the findings of research, and as well with the knowledge and ability to engage in research themselves. A current imperative is that a research base be built that will provide the evidence that is so badly needed. To do so, the gap between the university researcher and the school practitioner must narrow.

The research program that we have developed is an action research model (Calhoun, 1994) which involves us, both members of a university faculty of education, as "critical friends" (Lieberman, 1995, p.3) in the schools in which we work. We are actively engaged with school teams in an effort to obtain information and data which are beneficial to us and the school. We see this as a very promising way to develop and test theory and to conduct research, including how best to identify and measure the hard-to-measure goals held within the school.

One thing is clear -- teachers cannot leave the determination and measurement of school goals to administrators, other teachers, or outsiders. It is too important for that. They need to recognize their responsibility for they cannot assume that others hold the same educational values that they do. It is at the school level that teachers will need to ensure that the goals that the profession values are measured; that the contributions of teachers from various programs are identified as making a real difference to students' learning outcomes, and that these outcomes be measured. Teachers have a professional responsibility to work with colleagues in determining the learning outcomes that are valued in the school, and to be leaders in finding ways in which they can be measured.

Professionals in education, whether they work in universities or in schools, want schools that are providing the best possible learning experiences for students. However, the day is gone when anyone can rely only on his or her individual intuition as to what the best is. Neither can teachers assume that the outcomes they value will be measured by standardized provincial or national tests. The current society

requires evidence and is demanding greater accountability. All groups in education are in danger of being discredited and disregarded unless they provide that evidence. Schools need to become learning organizations (Senge, 1990), where collectively the staff makes the best decisions they can for the students they serve. This will require a new type of professionalism for teachers and a commitment to continuous improvement for schools through a process of self-evaluation and learning. Increasingly parents and the community can work with schools to identify the learning outcomes that need to be valued and measured, and they can be supporters in the fight for a school system that will provide such an education.

These are difficult times in education for all those who believe in the value of programs such as music, physical education, social studies, drama, and art, and who see the value and need for qualified teacher-librarians. Many people in our society are seeking tax reductions and are unwilling to support educational programs in the way they were in the past. Politicians are responding to these demands, and as a result, senior administrators and government bureaucrats are being given reduced budgets and asked to trim their expenses. They are being forced to make very difficult choices, and as it is in nature, it is the weakest that will not survive. For too long teachers have tried to avoid the need for public accountability. Focused on the classroom and the student, they have been reluctant to become politically sensitive and responsive to the public's movement towards increased accountability. They can avoid it no longer. If teachers do not stand up for the outcomes they value and measure them, others (such as educational bureaucrats, special interest groups within the public, government members, the business community) will hold teachers accountable for outcomes they value. Teachers need to ask themselves: is this what we want?

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EQUALITY OF EDUCATIONAL ATTAINMENT IN NEWFOUNDLAND (1993)

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Purpose

The question addressed in this paper is: *To what extent does equality of educational attainment prevail in Newfoundland?* In particular we are interested in whether the equality of educational attainment holds for subgroups in the population based on the following ascribed criteria: gender, age, religious membership, type of community and region.

Background

Concern about inequities in educational opportunity arose in the post-World War II era with the consequence that the governments in virtually all Western nations, no matter whether to the right or left of the political spectrum, and no matter which side of the Atlantic, subscribed to the equal opportunity principle. The principle holds that everyone should have an equal chance to achieve the benefits and rewards that a society makes available; that there should be no artificial barriers holding some people back; and that there should be no special privileges giving some unfair advantages over others. It is for these reasons that equality is usually coupled with the concept of justice. It flows from this that the society which adheres to the equality principle will disallow discrimination which bars people of a particular gender, religion, or ethnicity from careers or public offices. And this means that all children and youth must be given an equal start through provision of equal or common educational opportunities, thereby giving them an equal chance to develop their talents.

While there is little controversy today about the principle of equal opportunity, the same cannot be said for the policies designed for achieving it; and, in particular, for a corollary of the principle called the equality of outputs, or equality of results. While there are numerous empirical studies on the equality of the resource inputs of schooling, there are fewer empirical studies dealing with the equality of schooling outcomes. The reason is fairly obvious: equality of inputs is believed to be attainable, whereas equality of outputs is not. Currently (1995-96), the controversy over equality of outcomes is over the question: What minimal educational provision is each person in society entitled to? The controversy is less over what resources go into education than over what kind of product comes out. From the perspective of the school graduate it is not so much a question, therefore, of how "equal" the school is, as a question of how well equipped the graduate is to compete on the open local, provincial, or national labour market on an equal basis with others, regardless of gender, social origins, community of residence, and such like. The issue has shifted from one focused on equalizing the schools to one focused on whether on entry to adult society all children are equipped to ensure their full participation and potential. Another way of stating this proposition is to say that schools will be evaluated primarily in terms of the extent to which they eliminate barriers based on ascribed

criteria. And, first, we have to identify the extent to which ascribed criteria constitute barriers to full participation, which is the purpose of this paper.

Research Questions

To examine the extent to which educational attainments are equal across different social groupings we can establish a set of conditional probabilities; for example,

- (i) the probability of high school graduation,
- (ii) the probability of attendance at a post-secondary educational institution, and
- (iii) the probability of graduation from a university.

Each probability is conditional upon selected ascribed criteria which are often identified as barriers to full participation in society. In the present instance five conditioning factors -- gender, age, religion, type of community and region -- will be included in the analysis. Five research questions flow from this; namely, to what extent are educational attainments conditional upon (i) gender differences, (ii) age differences, (iii) differences in church membership, (iv) the type of community where a person lives, and (v) the region of the province where the community is located?

Each research question takes a form parallel to the following: Are educational attainments conditional upon gender, other things equal? In other words, can it be said that differences in educational attainments are attributable to differences in gender when taking the other four conditioning agents into account simultaneously? The "other things equal" rider associated with each question is important. It refers to the "other" potential conditioning agents in the full model. Here we are asking whether the gender-educational attainment relationship is net of (or over and above) the effects of age, church membership, community type, and region. The five conditioning variables are referred to as ascribed criteria because each represents a quality which, for the most part, is given at birth, or by the position into which persons are born, hence, over which they may have little or no control. The outcome variable, educational attainment, is an achieved quality; that is, something which most individuals in an open society can attain with appropriate effort, given the opportunity.

Theoretical Framework

Gender Differences

The struggle for gender equality has had a tortuous twentieth century history, but the post World War II era proved to be one which was more receptive than prior years to the idea of equal educational and occupational opportunities for women. There is still a tendency to believe that as a social construct men and women, along with the concepts of feminine and masculine, are polar opposites, and as such provide a basis for people's expectations. In this sense, if men are perceived as being adventurous, assertive, and independent, women are expected to be the opposite. The result in practice is that women who may be performing the same job with the same qualifications and experience as men tend to earn less than men. Statistics

Canada reports that on average women earn *other things equal* about 70 per cent of what men do.

Despite the well documented evidence of the barriers to equal opportunity for women, we can find little evidence for inequalities in *educational* opportunities for women in Newfoundland. Educational historian, Phillip McCann, author of *Schooling in a Fishing Society*, reports data showing that from 1921 through 1946 a higher proportion of girls attended school than boys even though 5 to 15 year-old girls constituted a smaller proportion of the population than boys. For the past decade, girls have been outperforming boys in Newfoundland schools at every grade level and in every subject except level 3 physics. In verbal subjects such as reading, language, religion and social studies, the differences in favour of girls are pronounced. For the past decade more females than males have been graduating from Memorial University, and while females are still underrepresented in the physical sciences, mathematics and engineering, the female minority in these fields are significantly outperforming their male counterparts. These are the differences accounting for the fact that medical school entry, which is based largely on academic performance, is in favour of females. Given this kind of evidence we conclude that there are unlikely to be gender differences in educational attainment, and if there are, they are not likely to be in favour of males.

Age Differences

There is ample evidence supporting the negative relationship between age and educational attainment in Newfoundland. Two theories are worthy of consideration: the theory of demographic transition and the theory of human capital. Prior to Commission Government (1934-49), the educational system in Newfoundland was somewhat static. One and two roomed schools were the norm. Few went beyond grade 8. Attendance was voluntary. Over a quarter of the 5 to 15 year-olds did not go to school and attendance among those enrolled in school was little more than 70 per cent. While the Commissioners perceived this as a major problem they were unable to implement changes because the ones imposed tended to infringe on established denominational rights; thus, during the early years of Commission Government the traditional limitations of the educational system were permitted to prevail. For example, though compulsory schooling was advocated by the Commissioners in 1934, they were unable to pass suitable legislation to that effect until 1942, and even then the legislation could not be enforced until about a decade later thanks to a shortage of both schools and teachers. Not surprisingly, Newfoundlanders attending school in these years -- that is, those who in 1993 were in their mid-fifties and older, and especially those from rural settlements -- with but few exceptions tended to have modest levels of formal education.

Substantial demographic changes began to occur during the war years (1939-45). The stable demography of the earlier years of the century with its relatively high birth and death rates changed. For example, death rates which in the 1930s hovered around 13 per 1000 began to fall. Today they are around 6 per 1000. According to the theory of demographic transition death rates begin to fall with improvements in nutrition, sanitation, health care and education. These are not documented here except to point out that in 1937 the death rate was 13.5, while by 1947 it was down to 9.9, and by 1952 it had dropped again to 7.5. In this early stage of transition the birth

rate remained high; hence, there was substantial population growth. In 1945 the population of the province was 290 thousand. Thirty years later, in 1975, and despite sustained out migration, it was 550 thousand, an increase of 90 per cent.

These changes were accompanied by shifts in social attitudes toward education, health, contraceptive use, and technology. Higher living standards, thanks to some extent to the war economy, were accompanied by an increased demand for education, by increasing life expectancy, and reductions in fertility. The 1955 birth rate of 36.3 -- probably the highest in the English speaking world -- by 1985 had dropped to 14.6 and was still dropping. To replace a population, fertility rates must be 2.1 or higher. In 1993 the rate was beginning to level out at 1.5, which is well below the replacement level, and below the prevailing Canadian rate of 1.7. In terms of demand for education, the proportion of provincial government revenues earmarked for education was already one fifth (21 per cent) of the provincial budget in 1950, and by 1970 had risen to 30 per cent of the total provincial budget.

In the late 1950s and early 60s economists were showing that investing in people yielded high dividends in terms of living standards. The classic example is Japan, a country in which people early recognized that the education and skills of its work force constituted its most powerful competitive weapon. The political goals of the period included both better health and education as a way of improving what the economists called human capital. Individuals, by investing in both, were increasing their worth to a future employer, and in the general case the amount of the investment was found to be reflected in their pay. The incentive to invest by both individuals and governments was considerable since there proved to be substantial returns to both private and social investments.

The age factor for three reasons, therefore, should account for differential educational attainments. First, the war time changes to a formerly stagnant provincial economy triggered demographic changes manifest as declining death rates and the beginnings of the post-war baby boom. As the economy grew the advantages to both individual and social investments in education became increasingly obvious, triggering a greater demand for schooling. Accompanying these powerful demographic shifts were substantial cultural changes as the province moved from a predominantly rural to a more urbanized society, a condition congruent with yet further educational expansion. Today's elderly while not necessarily benefitting personally have lived through an educational revolution, a revolution which was accompanied by demographic transition: from a prewar static stage with high birth and death rates, followed by rapid economic growth accompanied by even higher birth rates but declining death rates, followed finally in the 1970s to the present day by demographic slowdown. In each stage the demographic changes following a lag were accompanied by parallel economic and educational changes. Currently, following birth rates well below replacement, both the economy and the educational system seem to have stagnated. The evidence is that we are again entering a period of slow economic growth in which there is little room for further educational expansion even though our educational infrastructure falls short of that existing in other educational jurisdictions. Nevertheless, on the basis of these arguments we expect to find that each generation from the Commission Government era onward will be characterized by successively higher educational attainments. Both higher living

standards and low student/worker ratios, thanks to the baby boom, support educational investments and the subsequent educational expansion.

Religious Membership

Here we address the question: What grounds justify the hypothesis of a relationship between church membership and educational attainment? Do the members of some denominations invest more in intellectual competencies than others, and, if so, why? We address two theories posited by Adam Smith (1775) and Max Weber (1904-05). Smith in his classic work on *"An Investigation into the Nature and Causes of the Wealth of Nations"* provided an explanation for the birth of new religious organizations. He noted that as churches prosper, they become better endowed, and more firmly established in the eyes of the law, while at the same time there is a tendency for them to become less responsive to the spiritual needs of their congregations. He wrote that in such circumstances the clergy, "reposing themselves on their benefices [neglect] to keep up the fervour of the faith and devotion in the ... people; and [to] become altogether incapable of making any vigorous exertion in defense even of their own establishment." This lack of vitality, according to Smith, was in part due to the fact that stipends were awarded to "churchmen" regardless of their effectiveness either as preachers or proselytizers. Such complacency, he argued, would eventually lead to a spiritual vacuum which would be met by dissenting clergy, who would likely "...inspire [their congregation] with the most virulent abhorrence of all other sects."

In Smith's day, but not in ours, the mechanism accounting for the emergence of dissenting clergy would seem to operate solely in the Protestant camp, but not in the case of the Roman Catholic Church. Smith gave two explanations for this. First, he pointed out that a monetary incentive prevailed in the Catholic Church since the "inferior" clergy at the parish level depended on their parishioners for part of their income. Second, in times when the church fell into disfavour in Europe the mendicant orders "revived ... the languishing faith and devotion of the Catholic Church." Since the sustenance of the mendicants depended "altogether on their industry" they were "obliged, therefore, to use every art which can animate the devotion of the common people." Smith extended this argument by noting that "the advantage in point of learning and good writing [would] be on the side of the established church." He concludes, therefore, that the smaller, non-mainline denominations would place less emphasis on learning and more on preaching and proselytizing.

In Newfoundland there are three mainline, well established denominations; the Roman Catholic Church, the Anglican Church, and the United Church with 37 per cent, 26 per cent, and 17 per cent of the population respectively. For details see Table A1 in the statistical appendix. Non-mainline denominations would include the Salvation Army, the Pentecostal Assemblies and a half dozen or so small, mostly fundamentalist sects. Today the Salvationists constitute 8 per cent of the population and the Pentecostals 7 per cent. It would be congruent with Smith's thesis to posit two hypotheses: first, that educational attainments of the population would be higher among the adherents of the mainline churches than those in the non-mainline denominations; and, second, that there are unlikely to be aggregate differences in educational attainments between the adherents of the mainline churches themselves.

Weber's views differed from those of Smith. Weber's claim was that while the cultural changes brought about by the Protestant Ethic may not have been the cause, or the direct cause of capitalism, nevertheless, the ethic did provide a culture supportive of individualism, hard work, and self-reliance. In this sense capitalism was probably dependent on religious legitimation. In the *Protestant Ethic and the Spirit of Capitalism*, first written in 1904-05, Weber argued that Protestants lacked confidence in their own personal salvation. This view was based on the belief that only "the elect" were predestined for salvation. Their response to such "salvation anxiety" was hard work, self control, communal service, and reading the scriptures on the grounds that these might possibly be signs of "election". Coincidentally, these were the very qualities that enabled individuals to excel and prosper in worldly affairs. In contrast, Weber noted that Catholics believed that salvation was attainable through institutional means; that is, via the Church's mediation through the confessional, baptism, and communion.

The empirical status of Weber's thesis was given credence by Gerhard Lenski, an American sociologist, who in the 1960s, found on the basis of his Detroit Area Study that working class Catholics largely supported working class values, while working class Protestants largely supported middle class values. Compared to Catholics, Protestants had smaller families; considered work more important, saved their money; voted Republican; migrated to obtain an education or a better job; and developed a greater commitment to intellectual autonomy. And because the Protestant middle class believed in making substantial educational investments for their children Lenski was not surprised to find that a disproportionately high number of Protestants compared to Catholics were upwardly mobile, and had higher levels of educational attainment.

The church membership-educational attainment argument was also promoted by Lenski's findings that urban dwellers preferred face-to-face, personal relationships to impersonal, secondary-type relationships. He was able to show that this desire for primary group, personal relationships was often satisfied through membership of a neighbourhood church. Neighbourhoods, however, tended to be segregated along both economic and ethnic lines; hence there was a powerful tendency for churches over time to become differentiated on the basis of social class, so much so that church membership often became a badge of one's social standing. As neighbourhoods changed so did the churches. Because like attracted like, congregations tended to become composed of families with similar values, life styles and educational levels.

The findings from the Detroit Area Study were unambiguous; namely, that the mainline Protestant congregation was for the most part better educated than the typical Catholic congregation. But this argument carries little weight in Newfoundland. Since Confederation, the Catholic church in Newfoundland despite its other-worldly orientation and its traditional conservative distrust of Modernism, has materially benefitted from its growing urban base. Today Catholics in Newfoundland are as likely as Protestants to hold managerial positions, to hold elected office, to have equal media access, to be members of the professions, and to be well-educated. There is a sense, then, in Weberian terms, in which the Catholic Church in Newfoundland has become protestantized. Given these arguments one should expect few if any

educational differences between the Catholic and mainline Protestant populations of Newfoundland.

It is on the basis of these arguments that we predict that there are unlikely to be educational differences between the Catholic Church members and the adherents of the Anglican and United Churches. The adherents of the non-mainline Protestant denominations (though there are many exceptions) are likely to be, in aggregate, less well educated. At the top of the hierarchy, as at the bottom, there may be unmet spiritual needs. In theory, those falling into this category are likely to be highly educated -- e.g., the non-Christians and the unbelievers.

Type of Community

This section of the paper is concerned with whether place of residence affects educational attainment. While we focus on the rural community of less than 1,000 people, which is where 46 per cent of the Newfoundland population live today, we emphasize that the concept "rural" only assumes meaning in the context of its counterpart "urban"; that is, only when the culture of country life is contrasted with town life. The empirical evidence from Newfoundland data overwhelmingly shows that rural populations are less well educated than urban populations; and that with but few exceptions rural students in all school subjects perform at levels below those attained by urban students. The question addressed here, then, is why have such differences occurred.

The first point to note is that the phenomenon is not unique to Newfoundland. It is found to the same degree in many States of the U.S., and perhaps to a lesser degree in all Canadian provinces. And it is an ongoing concern in virtually all countries in the European Union; indeed, in Britain it was a major reason for introducing the National Curriculum in the *Education Reform Act* of 1988. Here, we present three arguments to support the hypothesis that urban populations in Newfoundland have higher levels of educational attainment than rural populations.

Item #1. Rural communities have benefitted less from the economic developments stemming from the aftermath of World War II than urban communities. Consequently job opportunities have deteriorated over most of this period in rural Newfoundland, and continue to deteriorate. Rural residents with competitive labour market skills, that is those with post secondary education levels, have tended to move into urban labour markets. And with the recent collapse of the traditional fishery many other rural residents have also moved to urban centres both in Newfoundland and the mainland.

Item #2. Rural educators face a double challenge, which places greater responsibility on the shoulders of rural educators than urban educators. In the first place, the economies of scale that are associated with the specialized teaching and uni-grade classrooms found in urban school systems, are not options for rural educators. Rural schooling, then, is inherently less cost effective than urban schooling, a fact which is rarely taken into account in the Government's policy of equal treatment. Yet to treat people equally when they are different in relevant ways is unjust. Further, given the high unemployment levels in rural areas, many rural youth will only find employment on the urban labour market. This, in turn, means that the rural educator has a mandate for teaching the values and skills which will enable rural youth to compete

on equal terms with their urban counterparts; values and skills, moreover, which if exercised could easily contribute further to the underdevelopment of rural Newfoundland. Policies based on educating rural youth for the urban job market might well exacerbate the problems with the rural economy.

Item #3. Traditionally, rural economies, largely dependent as they are on natural resource development, rarely required workers with advanced academic training and/or specialized technical skills. Thus, traditionally it was always a student minority who, wishing to further their education at the post-secondary level, were willing to subordinate rural values to those congruent with success in post-secondary education. Thus, the values of rural educators tend to be at odds with those held by the parents of their pupils. In terms of prevailing ideology the successful rural school is one which does the best job of training students for export -- a policy unlikely to find support in much of rural Newfoundland because it fails to support rural life styles and values.

Consider this view expressed by a teacher of vocational education in a rural school system.

To have a saleable skill is a value to most of our families here. For example, in our vocational program we have no problems with parents. None. They love what we're doing because it fits their norm; whereas in academia they have problem after problem. It is difficult for parents to relate to the need for academic skills as far as earning a living because most of them don't have such skills either. And most are not mobile anyway. They want to live here. They want to stay here. ...

This quotation is from *The Life and Death of a Rural American High School* by Alan de Young. The school referred to is in one of the Appalachian States of the U.S. Given the above propositions, it follows that academic attainments are likely to be higher in urban centres than in rural areas.

Regional Differences

Should we expect to find regional differences in educational attainments, over and above urban-rural differences; or are urban-rural differences mere proxies for regional differences, or vice versa? Regional differences at the national level, especially by province, have been well documented by Statistics Canada, especially in terms of per capita income, employment rates, and educational levels. Less well understood and documented are the regional disparities within provinces; nevertheless, few would deny that in most provinces there are regions of underdevelopment. In Newfoundland the underdeveloped regions are dependent on the export of raw products such as ground fish, lumber, and metal bearing ores. Underdeveloped regions are overwhelmingly rural and characterized by a low division of labour, and isolation in terms of access to post-secondary educational institutions. In political terms they have modest influence at best. The Labrador coast, the Northern Peninsula, the Baie Verte Peninsula, and the South Coast come to the mind of those familiar with the Provincial economy.

Most people in these regions are fisher-folk. They are more economically self sufficient than most Canadians. They live in small coastal settlements, seldom more than 1000 persons, and fewer than 200 households. They do not constitute a single class, but can be differentiated in terms of their degree of ownership of their trapskiffs, longliners, marine engines, and fishing gear. They are suffering today because their fishing grounds have been overfished by the factory ships and trawlers of the corporate fishing fleets, both Canadian and European, with the result that the ground fish population has been reduced to very low levels, while at the same time the marine ecosystems have been impoverished and destabilized. Ironically, the zero-sum drive for short-term profits (or "madhouse economics") has reduced, not increased jobs, and there is still no consensus about how to restore the ecological balance. The simple fact is, however, that it will require substantial structural reforms to the industry, including a marked reduction (even phase out) of the over-capitalized corporate fishing fleets on the grounds that their methods are *too* efficient. The economic needs of corporate capitalism have been permitted to override the social needs of regional Newfoundland economies. The purpose of restructuring would be to lessen pressure on fish populations and to increase employment in the fishery.

Hypotheses

On the basis of the arguments presented in the preceding sections we have derived the following hypotheses: (i) that there are few grounds on which to claim that gender differences account for educational attainments; (ii) that educational opportunities have consistently improved over the past half century with the result that in aggregate today's young adults are substantially better educated than today's elderly; (iii) that it is unlikely that there will be educational differences between Catholics and the members of the mainline Protestant denominations (the Anglican and United Church members); (iv) that the adherents of the non-mainline Protestant denominations are unlikely to be as well educated as the mainline Protestants, while the non-Christian/no religious affiliation group is likely to consist of highly educated persons; (v) that the type of community is likely to be a factor accounting for educational attainment, in favour of the residents of urban communities; and (v I) that over and above the effects of community type there are likely to be regional differences in educational attainments.

Methodology

Data

The public opinion poll data was gathered by Omnifacts Research of St. John's on behalf of the Government of Newfoundland and Labrador in October 1993. It was a follow-up to an almost identical survey conducted in November 1991 by Research Associates of St. John's on behalf of the Royal Commission on Primary, Elementary and Secondary Education. Both surveys were designed to assess public attitudes toward the role of religious denominations in the governance of the provincial school system. The 1993 survey was a 44 question, telephone survey of 1153 randomly selected respondents 18 years of age and older.

Sample

While the initial sample consisted of 1153 randomly selected respondents the Government requested the polling firm to overrepresent the Pentecostal minority; thus, the initial sample included 313 Pentecostal adherents or 27 percent of the total. Because the proportion of Pentecostal population in Newfoundland is reported by the 1991 Canadian Census as being 7 per cent we weighted the Pentecostal responses (WGHT=.204) to reflect the true Pentecostal representation in the Province, that is, to some 64 Pentecostal adherents, which resulted in 904 cases for the purposes of the present analysis. The margin of error for a random sample of this size is 4 percentage points 19 times out of 20. Sample accuracy can be ascertained by comparing the known characteristics of the present sample with parallel characteristics from the 1991 Census, as shown in Table A1 in the statistical appendix.

With reference to Table A1, the gender percentages could have been a little closer. Three denominations, the Catholics, Salvationists and Other Christian, were modestly underrepresented while the other four religious groups were marginally overrepresented. Differences in Type of Community and Region were minor except in one instance; namely, region #8 (Baie Verte). Here the difference of over six percentage points (9.1 percent of the population in the 1991 census were from the Baie Verte region whereas our sample population consisted of 15.6 per cent of the population) requires explanation. This region is the Provincial Pentecostal stronghold. To over-sample the Pentecostals as Government requested, the polling firm had to over-sample the residents of this region. In doing so they not only oversampled Pentecostals but also other Christian groups by 6 percent.

Table A1. Comparison of 1991 Census and 1993 Public Opinion Poll Sample¹

Variables	Variable Description	1991 Census %	1993 Sample %
Gender	Male	50.01	43.5
	Female	49.99	56.5
Age	18-24	17	13.2
	25-34	23.1	25.9
	35-44	22	29.7
	45-54	14.1	17.2
	55-64	10.3	7.8
	65+	13.5	6.2
Religion	Roman Catholic	37	31.8
	Anglican	26.1	27.2
	United Church	17.3	20
	Salvation Army	7.9	7.5
	Pentecostal	7.1	7.1
	Other Christian	2.6	2.5
	Non-Christian/No Religion	1.9	3.9

Variables	Variable Description	1991 Census %	1993 Sample %
Region of Residence	Region 1 Avalon	44.5	40.2
	Region 2 Burin	5.2	5.2
	Region 3 South Coast	4.3	3.5
	Region 4 Stephenville	4.5	4.4
	Region 5 Corner Brook	8	8.2
	Region 6 Grand Falls-Windsor	7.1	7.2
	Region 7 Clarenville	7.6	6.9
	Region 8 Baie Verte	9.1	15.6
	Region 9 Northern Peninsula	4.4	3.3
	Region 10 Labrador	5.3	5.5
Place of Residence	Rural (<1000)	46.4	44.8
	Small Town (1000-9,999)	19.4	14.8
	Urban Centre (10,000+)	34.2	40.4

1. The 1991 Census data were derived from several Statistics Canada sources; specifically the following: *Age, Sex, and Marital Status*, Table 1 (p. 7) and Table 4 (p. 100); *Religions in Canada*, Table 2 (pp. 20-22); and *Urban Areas*, Table 3 (p. 62) and Table 4 (pp. 68-75).

Variables

The models to be estimated in this study in order to confirm or falsify the hypotheses consist of 30 variables of which 28 are dummy variables. The age variable is interval and the educational attainment variable is ordinal. Variable descriptions and their directionalities are to be found in Table A2 in the Statistical Appendix. The age variable was broken down into four categories representing political eras. Category #1 included the young adults who were educated largely during the Moores' administration beginning in 1972 and who in 1993 were aged 18 to 27. Those aged 28 to 49 were educated during the years of the Smallwood administration 1949-1971; those aged 50 to 64 were educated in the Commission Government years; while the 65-86 year-olds were educated in the Colonial era. This odd categorization was designed to test a supplementary hypothesis. There is some debate about the effectiveness of the Commission Government years 1934-1949 in terms of educational progress. It is claimed, for example, that they were years of stagnation, years when the government's mandate was effectively to preserve the status quo ante, thus lacking the progress found under later administrations. The categorization specified in this study will test such claims in terms of educational attainment.

Table A2. Questionnaire Item, Mnemonic, Variable Description and Directionality of Variable

Item	Mnemonic	Variable Description	Directionality
Q38	EDATTAIN	Educational Attainment	Range from 1=elem. school to 6=university graduate
Q38	EDUC3	High school graduate or not	1=high school graduate, 0=otherwise
Q38	POSTSEC	Some post-secondary educ. or not	1=postsec. educ., 0=otherwise
Q38	EDUC6	University graduate or not	1=univ. grad., 0=otherwise
Q46	GEN	Gender, male or female	1=male, 2=female
Q39	AGE	Age in years	Range from 18 to 86 years
Q39	AGE1	Post-Smallwood generation 1971-93	1=age < 28, 0=otherwise
Q39	AGE2	Respondent schooled during Smallwood administration 1949-71	1=age 28 to 49, 0=otherwise
Q39	AGE3	Respondent schooled during Commission Govt. era 1934-49	1=age 50-64, 0=otherwise
Q39	AGE4	Respondent schooled in colonial era	1=age greater than 64, 0=otherwise
Q41	CATHOLIC	Roman Catholic	1=RC, 0=otherwise
Q41	ANGLICAN	Anglican church member	1=Anglican, 0=otherwise
Q41	UNITED	United Church membership	1=United Church, 0=otherwise
Q41	SA	Salvation Army	1=SA, 0=otherwise
Q41	PENT	Pentecostal Assemblies	1=Pentecostal, 0=otherwise
Q41	CHRISTN	Other Christian Religion	1=CHRISTN, 0=otherwise
Q41	NOREL	Not Christian or No religion	1=NOREL, 0=otherwise
Q43	MUN1	Rural community/municipality	1=MUN1, 0=otherwise
Q43	MUN2	Small town/municipality	1=MUN2, 0=otherwise
Q43	MUN3	Urban municipality (>9999)	1=MUN3, 0=otherwise
Q44	REG1	Avalon Peninsula	1=REG1, 0=otherwise
Q44	REG2	Burin Peninsula	1=REG2, 0=otherwise
Q44	REG3	South Coast/Burgeo	1=REG4, 0=otherwise
Q44	REG4	Stephenville	1=REG4, 0=otherwise
Q44	REG5	Corner Brook/Hampden	1=REG5, 0=otherwise
Q44	REG6	Grand Falls/Windsor	1=REG6, 0=otherwise
Q44	REG7	Clarenville	1=REG7, 0=otherwise
Q44	REG8	Baie Verte/Carmanville	1=REG8, 0=otherwise
Q44	REG9	Northern Peninsula	1=REG9, 0=otherwise
Q44	REG10	Labrador	1=REG10, 0=otherwise

Religious membership was included as a set of seven categories. Five of these were unambiguous -- Roman Catholic, Anglican, United Church, Salvation Army and Pentecostal Assemblies. Greater detail is provided in Table A1. Some 23 respondents belonged to small (in Newfoundland) Christian congregations such as the Apostolic, Christadelphian, Christian Bretheren, Gospel Hall, Baptist and

Presbyterian. These were combined into a single category and labeled "other Christian". The 35 respondents who identified themselves as belonging to religions other than Christian, or who had no religious affiliation, were also combined into a single category labeled "no religion".

The type of community or place of residence was a three point classification; namely, (i) a rural community with less than 1,000 people, (ii) a small urban area with a population at the time of the 1991 census of between 1,000 and 9,999, and (iii) urban municipalities with 10,000 or more people. Because it was thought that region of residence could also be a factor accounting for educational opportunity over and above community type, the Province was divided into the ten regions representing the proposed new school districts which closely resemble those boundaries called for by the Royal Commission on Education which reported in 1992.

Findings

This study is concerned with the extent to which five ascribed factors account for the educational attainments of adult Newfoundlanders. These factors were: gender, age, religious affiliation, place of residence, and region of residence. As a side issue we also address the question as to whether in educational terms the Commission Government era (1934-49) was a stagnant period in Newfoundland's history. The research questions were framed as conditional probabilities; namely the probability of graduation from high school, the probability of post-secondary education participation, and the probability of university graduation. The findings are presented in Table A3.

1. In terms of the probabilities of high school graduation, post-secondary participation and university graduation there were no gender differences identified. As hypothesized for the reasons given above the findings support the "null hypothesis" of no difference.
2. For all three probabilities in so far as age was concerned there were no differences found between those educated in the Colonial era and those educated during the years of Commission Government. This finding provides ample evidence for the conclusion that in so far as educational opportunity of results is concerned the Commission Government era was one of stagnation rather than change. At the same time it is acknowledged on the basis of the positive signs on all three AGE 3 unstandardized beta coefficients that the status quo ante was preserved.
3. Can we say that educational opportunities have consistently improved over the past half century for those adults educated in the Smallwood Government years and after? There is little ambiguity about the answer to this question.

Table A3. Logistic Regression Estimates for the Conditional Probabilities of (i) High School Graduation, (ii) Post-Secondary Participation, and (iii) University Graduation

Independent Variables	Dependent Variables					
	High School Graduation		Post-Secondary Participation		University Graduate	
	Beta	t-squared	Beta	t-squared	Beta	t-squared
Gender	.159	.962	.126	.671	-.190	.676
Age1	1.704***	22.410	1.231***	10.023	.087	.021
Age2	1.160***	13.422	1.147**	9.823	.640	1.354
Age3	.268	.586	.560	1.931	.530	.786
Anglican	.175	.648	.125	.398	.112	.131
United Church	-.039	.028	-.002	.000	.427	1.832
Salvation Army	-.722*	5.179	-.274	.694	-.082	.020
Pentecostal	-.173	.268	-.167	.229	-.637	.673
Other Christian	.312	.330	.168	.121	1.103	3.503
Other Religion	.520	1.084	.905*	4.488	1.663***	12.850
MUN1	-.910***	14.956	-1.014***	22.903	-1.044**	8.751
MUN2	-.453	2.542	-.274	1.098	-.192	.239
Reg2 Burin	-.049	.018	-.722	3.173	-.693	.758
Reg3 S. Coast	-1.047**	6.157	-.956*	4.270	-6.263	.356
Reg4 Ste'ville	-.861	4.952	-.613	2.132	.286	.244
Reg5 Cnr.	-.253	.658	-.396	2.144	-.016	.002
Brook	.057	.024	-.281	.879	-1.202*	4.704
Reg6 Grand	-.317	.912	-.576	2.774	-.251	.219
Falls	-.672**	6.474	-.435	2.567	-.531	1.297
Reg7	-.607	1.856	.003	.000	-.905	.702
Clarenville	-.498	1.813	-1.289***	10.642	-2.315*	4.897
Reg8 Baie Verte						
Reg9 N. Peninsula						
Reg10 Labrador						
Constant	0.269	0.39	-.927*		-1.807*	7.037
Chi square	129.084***		108.440***		72.607***	

* p \leq .05; **p \leq .01; ***p \leq .001

The opportunities for high school graduation and post-secondary participation were significantly better than those in either the Colonial or Commission Government eras. Table A3 findings, however, were not supportive of the hypothesis that the chances of graduating from university had improved when controlling for the other four potentially confounding factors in the model. They show that the opportunity to graduate from university is no better statistically for today's young adults than it was for their grandparents educated in the Colonial era, a finding which was unexpected.

4. We argued that there would be few, if any, educational differences among the mainline or founding denominations; i.e., the Catholics, Anglicans, and United Church adherents. The findings support this thesis in that there were no differences among them on any of the three probabilities. The arguments based on Adam Smith's thesis that adherents of the austere, non-mainline denominations such as the Salvationists and Pentecostals would have lower educational levels and fewer educational opportunities than the members of the mainline denominations was only partially supported. The thesis was partially supported in the case of Salvation Army members but not for the Pentecostals. Thus, Salvationists were significantly less likely to graduate from high school than were Catholics; but there were no differences for the Pentecostals and the "other Christian" groups compared to the Catholics. The most interesting finding related to religious membership was that, as hypothesized, the respondents identifying themselves as members of other than Christian religions, or of no religious affiliation, were far more likely to be post-secondary education participants and university graduates than the members of other religious groups. In sum, hypothesis #3 was substantiated in two particulars (the absence of educational differences between mainline denominations and the advantages of the non-Christian category over all other religious groupings), but only partially substantiated in the third particular (the claim that non-mainline denominations would likely be educationally disadvantaged).
5. Both community type and region of residence accounted for each of the three conditional probabilities, essentially as hypothesized. There were no differences between the urban centres and small municipalities in terms of the three probabilities, while, in contrast, residence in a small rural settlement proved a substantial barrier to educational achievement. There is no doubt on the basis of these (Table A3) findings that both urban and small town dwellers are educationally advantaged in terms of high school graduation, post-secondary participation, and university graduation. Pockets of educational disadvantage were also located in several regions of the Province. Compared to the Avalon region all other regions to varying degrees were educationally disadvantaged, but in most cases the differences were not statistically significant. Exceptions, however, included regions 3 and 10 (the South Coast and Labrador) which were disadvantaged on two out of the three criteria of educational opportunity; while regions 4 and 8 (Stephenville and Baie Verte) were disadvantaged in terms of high school graduation; and, finally, residents of region 6 (Grand Falls/Windsor) were disadvantaged in terms of the opportunity to graduate from university.

Conclusion

This study of the equality of educational achievement in Newfoundland has focused on five ascribed criteria, each of which, potentially, could constitute a barrier to the attainment of an individual's educational potential and therefore to full participation in Canadian society. We argued that in Newfoundland it was unlikely that barriers to educational attainment would be found on the basis of gender; and this hunch was supported by the analysis. And, as expected, we found that the substantial improvements in the Provincial economy over the past half century were

accompanied by considerable educational expansion, followed by the progressively higher educational attainments of subsequent generations. By the same token as the barriers to educational attainments on the basis of age dissolve through attrition -- as the older generations die off -- we can expect the age factor as a barrier to decline.

We also found barriers, as expected, in terms of religious membership. But these were far less than we anticipated on the basis of our theorizing. Salvationists were less likely to have completed high school than the members of other Christian denominations. And the members of the mainline denominations were far less likely to have completed post-secondary schooling than either non-Christians or those with no religious affiliation. This finding gives rise to two questions, namely, (i) Is being a Christian these days a handicapping condition in so far as the attainment of higher education is concerned, or does having a higher education tend to promote agnosticism? and (ii) Whatever the answer to the first question, is it culturally problematic?

Notwithstanding the effects of age and religious membership discussed above, the two factors which accounted most for the magnitude of the disparities in educational attainments, were the type of community in which a person resides and the region of the province where the community is located. Fact number one is that Newfoundlanders living in small rural settlements of less than 1,000 persons have educational attainment levels well below those living in the urban centres and small towns and that, given current educational policies based on equal treatments even for persons who are not necessarily equal, these inequities are likely to remain. And fact number two is that persons living on the South Coast, Stephenville, Baie Verte, and Labrador regions are much less well educated than the residents of the Avalon Peninsula and the other five regions of the Province; and, again, given current educational policies, these inequities are likely to remain unchanged. The ten regions, moreover, are those contiguous with the ten new school districts proposed by Government on the recommendation of the Royal Commission on Education. The School Boards in the four disadvantaged districts will have little chance to improve matters in their regions if the equality principle is based on the erroneous assumption that the people in these regions are otherwise equal to those in other regions in so far as educational treatments are concerned. The evidence suggests that they are culturally different and that such differences may justify unequal treatments.

Statistical Appendix

Logistic Regression

The estimates presented in Table A3 which follow are based on a logistic regression analysis. The logistic model uses a maximum likelihood estimator and is a natural complement of the least squares estimator used by the multiple regression model in the situation where the regressand, or dependent variable, is not continuous but, rather, in a state which may or may not obtain; for example, high school graduation or not, contraction of a disease or not, or voting yes in a government referendum or not. When such variables occur among the regressors of a regression equation they can be dealt with by the introduction of (0, 1) dummy coding; but when the dependent variable is of this type, the regression model breaks down (some key assumptions such as that of bivariate normality are violated). It is in

such instances -- i.e., in the case of qualitative dependent variables -- that a logit or logistic model provides an appropriate alternative.

Both the multiple regression model and the logistic regression model are designed to address systems of causal relations as opposed to statistical association. Both are designed to be isomorphic to the experimental model where the direction of causality is not in question. Both address models where there is a clear *a priori* asymmetry between the independent variables (regressors) and the dependent variable (regressand). But unlike regression the logistic model permits interpretation in terms of utility maximization in situations of discrete choice. Regression requires a disturbance term, but like all probability models the random character of the dependent variable in the logistic model flows from the initial specification.

Mathematically, the probability of falling into group 1 (not group 0) is expressed as follows.

$$\text{Probability of being in group 1 (e.g., high school graduate)} = 1/(1 + e^{-Z})(1)$$

where e is the base of natural logarithms (2.718), and Z is estimated from an equation which optimally weights each predictor variable. This necessitates the probability being greater than 0, but less than 1, given

$$Z = B_0 + B_1X_1 + B_2X_2 + \dots + B_pX_p(2)$$

where B_0 is the constant term and $B_1, B_2,$ and B_p are the coefficients each of which is estimated mathematically to maximize the predictive accuracy of the equation. The mathematical computations are done by computer, being too complex to be done by hand.

From the public opinion on education data set used in this study, where 1 = high school graduate, 0 = non-high school graduate equation 2 is (see Table A3):

$$\begin{aligned} Z = & .269 + .159(\text{GEN}) + 1.704(\text{AGE1}) + 1.160(\text{AGE2}) + .268(\text{AGE3}) + \\ & .175(\text{ANGLICAN}) \\ & - .039(\text{UNITED}) - .722(\text{SA}) - .173(\text{PENT}) + .312(\text{CHRISTN}) + .520(\text{OTHREL}) - \\ & .910(\text{MUN1}) \\ & - .453(\text{MUN2}) - .049(\text{REGION2}) - 1.047(\text{REGION3}) - .861(\text{REGION4}) - \\ & .253(\text{REGION5}) \\ & + .057(\text{REGION6}) - .317(\text{REGION7}) - .672(\text{REGION8}) - .607(\text{REGION9}) - \\ & .498(\text{REGION10}) \end{aligned}$$

where the values for the independent variables were obtained from Table A3. Consider the probability of a 64 year-old Pentecostal man from Carmanville, a small urban community in the Baie Verte region of the Province, graduating from high school.

$$Z = .269 + .159(1) + .268(1) - .453(1) - .672(1) = -.602$$

Thus, the probability of high school graduation from equation 1 is:

$$1/(1 + e^{-(-.602)}) = 1/(1 + e^{.602}) = 1/(1 + 1.826) = 1/2.826 = .354$$

That is, the chances are approximately one in three that this person (or his statistical twin) will have graduated from high school. Suppose, however, that the same person instead of being a resident of Carmanville in the Baie Verte region had been a resident of St. John's. His Z-score would be 0.523; hence the probability of his graduation from high school would be:

$$1/(1 + e^{-(.523)}) = 1/(1 + .593) = 1/1.593 = .628$$

That is, his probability of graduating from high school will have significantly increased from 35 per cent to 63 per cent. Obviously there are clear educational advantages to being a resident of St. John's on the Avalon Peninsula.

Now, consider the probability of a 21 year-old Anglican female from Carbonear graduating from high school

$$Z = .269 + .159(2) + 1.704(1) + .175(1) - .453(1) - .317(1) = 1.696$$

Thus, the probability of high school graduation is

$$1/(1 + e^{-(1.696)}) = 1/(1 + .183) = 1/1.183 = .845$$

Or, her chances are better than 4 out of 5 that she will graduate from high school. Would it have made any difference if this person had been a resident of St. John's? Her Z-score would be 2.466. Thus, her probability of high school graduation had she been a resident of St. John's would have been:

$$1/(1 + e^{-(2.466)}) = 1/(1 + .085) = 1/1.085 = .922$$

In other words although her probability of graduation from a Carbonear high school was high (84 per cent probability), her chances would have been even higher by an additional 8 per cent had she been a resident of St. John's. Both type of community and region of residence make a difference.

ENDNOTES

PARENTS AND COMMUNITY

MOTHERS' INVOLVEMENT IN THEIR CHILDREN'S READING: THE SORT PROGRAM*

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INTRODUCTION

This is a second article reporting and discussing the findings of the latest round of research conducted under the general umbrella of the SORT (Significant Others As Reading Teachers) program. The first article in this new series of articles focused on the fathers' involvement with their children's reading (Oldford-Matchim & Singh, 2002). For the sake of saving time and energy and still maintaining continuity and completeness, the material describing the SORT project and the conceptualization of parents' involvement with their children's reading within the SORT program is simply lifted from the first article on the fathers' involvement with their children's reading and is inserted verbatim in this paper under the appropriate sub-heading.

To present the material in an orderly manner, the authors provide below a brief discussion on Family Literacy and the SORT Project, a conceptualization of parents' involvement with their children's reading, the nature of the investigation and methodology and the findings of the study.

FAMILY LITERACY AND THE SORT PROJECT

In 1991 the International Reading Association formed a Commission on Family Literacy to increase recognition of the family's crucial role in the development of literacy stating that "schools need to view family literacy as part of the curriculum." As a family literacy initiative, SORT is a home-school partnership program in which parents/caregivers learn to incorporate literacy practices for children into the everyday life of home and community, as well as support students with school-based reading activities. The SORT initiative also involves an ongoing research component in which children's literacy achievements, home literacy practices and the SORT program are evaluated and analyzed. SORT recognizes that the home environment and children's relationships with significant others, particularly mothers, is critical to their success in learning to read (Oldford-Matchim, 1998). Mother's expectations for their children's reading development, their involvement in reading practices and their sense of efficacy in helping children read, can influence their children's reading achievement, their reading attitudes and concepts of themselves as readers (Legge, 1994; Lynch, 2002).

Significant Others as Reading Teachers (SORT) is a family/community literacy program for young children. Its purpose is to help establish literacy activities as a cultural practice within the context of everyday living. The program has been operating in a rural Newfoundland community since September, 1994. Seventy-seven parents/significant others and kindergarten children participated. A volunteer teacher,

who received the support of the primary school principal and the local school board, delivered the program during the school year 1994-95. The program received funding from the National Literacy Secretariat in 1991 for the development of the program, in 1995 for implementation, and again in 2000-2002 for the present study of reasons why parents become involved in the literacy education of their children.

To date materials developed for the program include a videotape, *Reading, A Gift of a Lifetime*, and a handbook for children's significant others entitled *Help Your Child Become a Reader* and a Facilitator's Guide for helping parents implement and apply the year-long program. A kit of children's books, which includes 100 copies of 100 titles, has also been prepared to accompany these materials. The videotape, which features home and school literary practices in local settings, received a National Award of Merit in 1994 by the Association of Media Technology in Education in Canada (AMTEC) for its educational effectiveness.

The Principles of SORT

1. Learning to read is a highly complex task.
 - (i) As early as six months of age, children can engage with significant others in reading activities and read-alouds.
 - (ii) Significant growth in children's knowledge about reading can occur between the ages of three and five.
 - (iii) Most children learn to read over a period of four or more years.
2. The purpose and value given to literacy activities in families and communities contribute to the significance children attribute to learning to read and write.
3. The single most important activity for building children's knowledge about skill in reading is reading aloud to them.
4. Messages that significant others give in their daily interactions with children, books and print, influence children's perceptions of themselves as readers.
5. Children model the reading behaviors enjoyed and demonstrated by significant others, especially behaviors of the same-sex others.
6. Children learn to enjoy story and book language when it is read aloud expressively by caring adults.
7. Children who develop positive images of themselves as readers engage readily in reading play and activities.
8. In listening to stories children try to understand the actions and feelings of characters in terms of their own experience.
9. Children construct their own knowledge of reading. As they become capable they need to be given more control over their reading activities.

10. Children who have been read to in homes and communities enter school with longer attention spans, have greater knowledge of stories, vocabulary, books and print, and experience less difficulties in learning to read.

Essentially, the approach taken recognizes that children learn literate attitudes, concepts and behaviours from people who are significant to them. As well, literacy learning that occurs before schooling has significant effects on children's literacy achievement when they go to school. The SORT program has demonstrated that parents and significant others will engage willingly in literacy activities with young children when they realize the potential benefit to their children's literacy learning. They will also hold high expectations for their children's literacy achievement and will provide supportive responses when they become aware of its significance to learning and learn how to become involved. The materials currently developed for the SORT program are designed to create conditions in which significant others become involved in daily book-sharing activities with children. The video, *Reading, A Gift of a Lifetime*, shows a variety of family and social gatherings where children share reading and writing with others. The handbook, *Help Your Child Become a Reader*, is written in a conversational question/answer style at a grade 8 reading level and includes a discussion of:

- how social interaction can help children develop a 'reader identity' and a positive attitude towards reading, conceptual knowledge of and skill in reading;
- how to find books to match children's reading development and interests;
- a variety of children's books and activities that encourage reading for imaginative, informative, affective, persuasive, and ritualistic purposes;
- * word and letter games for young children to learn how to identify words in print.

The SORT project takes a perspective that the most effective approach to stimulate and motivate young children's literacy development is to build books into conversations between children and the adults whom they care about and think are important. The specific books chosen to support the child's learning and interest, and the daily interactions around books, are important features of this program, as is the manner in which adults respond to children's questions. The learning environment needed is one where children can risk being wrong, receive appropriate feedback and can develop self-esteem. Their motivation to learn results from their expectations that they will learn, their past successes, feelings of self-control, including help-seeking strategies, as well as from their intrinsic interest in reading materials and the desire to be readers like their significant others who also expect them to read.

Conceptualizing Parents' Involvement Within the Sort Project

Among the many sources of influence on parents' decisions to become involved in their children's reading education, four important sources include:

- how parents construct their role with regard to their responsibility for teaching reading.
- their beliefs about how children learn to read.
- their sense of efficacy in helping children succeed in learning how to read.

- their perceptions of the opportunities for involvement presented by the school as well as their assessment of the quality and appropriateness of these opportunities. These opportunities include: personnel, programs, availability of reading and course materials, invitations and other such things.

Of course, other background variables are likely to influence parents' basic decisions to become involved in their children's learning to read, e.g., working schedules, age, educational levels, number of adults living with children and patterns of employment.

According to the perspective taken in this study, parents primarily become involved in their children's education because they have constructed a parental role that includes such involvement; secondly, because they have a positive sense of their own efficacy for helping their children succeed in reading; and, thirdly, because they perceive opportunities and invitations for involvement in their children's literacy education from their children's schools.

Parental Role Construction, Parental Involvement, Child Development Beliefs, Self-efficacy and Involvement Practices

An important factor contributing to parents' decisions to involve themselves in children's education, and in particular, with their children's literary learning, is their understanding of the parenting role. In other words, parents possess beliefs about what they are supposed to do in relation to their children learning to read. These beliefs about the parenting role are important to issues of involvement because they are the basis for establishing the range of activities parents consider to be necessary, important and permissible to engage in, with and on behalf of their children.

One implication of current theories and empirical observations about parental/involvement is the notion that parents develop beliefs and understandings about the requirements and expectations of the parental role as a result of their membership and participation in varied groups pertinent to child-rearing (e.g., families, workplaces, schools, churches, media, communities). Such groups hold expectations about the appropriateness of parental role behaviors, including those which are related to involvement with children's reading education. Further, parents' actions or practices with and on behalf of their children, including decisions to become involved educationally in their children's lives, are influenced by the roles they construct, and by the dynamic process that involves them in confronting the varied expectations held by various groups with whom they interact.

In this study the concept of role is defined as a set of expectations a group holds for the behavior of its members, or a set of behaviors characteristic of individuals within a group. These groups are referred to as parents' significant others. Parents' significant others include their children's teachers, the school principal, their own children, the family's priest or minister, the local media, and the SORT literacy coordinator. Parents' workplaces and the Faculty of Education at MUN, where the SORT project originated, were not included in the current study as significant others influencing the parents' role construct, although in future studies they should be considered.

When the notion of role construction is applied to parents' choices to become involved in their children's literacy development, current theories state that the groups to which parents belong (family, school, workplace, church, friends) hold expectations about what parental role behaviors are appropriate for supporting children's development as readers. When these expectations are perceived to be of value by parents, they may influence the choice of behaviors they engage in on behalf of their children's reading education.

Parents' ideas about child development and how children learn to read and develop reading practices and their notions of the appropriate roles for supporting children's literacy education at home appear to constitute specific components of the parental role construct that influence parents' decisions about their involvement in their children's literacy learning. Findings in these areas have suggested a general pattern in which child-rearing beliefs exert an influence on parents' choices of behaviors they engage in with their children. For example, parents' endorsement of the belief that children's intelligence(s) is/are not fixed at birth is likely to be reflected in the manner in which they provide educational resources in children's environments to enhance their intellectual development. Fundamentally, the overall perspective presented here suggests that, among the aspects of parent role construction for responsibility in children's literacy learning, specific sets of beliefs are quite important. Included and important for literacy education are:

- their beliefs about what children need from parents in order to read.
- their beliefs about desirable educational outcomes in reading.
- their beliefs about the effectiveness of reading practices in achieving reading success.

In addition, a parent's sense of efficacy for helping children learn to read is a factor in their decisions to become actively involved in their children's reading education. In other words, parents are likely to reflect on their ability to influence their children's reading ability before becoming involved with reading activities. Sometimes parents who want to increase their teaching skill and sense of efficacy might choose to enrol in programs designed to improve their ability to successfully contribute to their children's education.

The Investigation and Methodology

The larger SORT study attempted to explore and investigate the relationships among parents' role constructs, their self-efficacy in helping their children learn, their involvement practices in helping their children's learning to read, including the SORT program, and selected parental background variables. Measures of the many aspects of the parental role construct for their responsibility in children's reading education, as well as a measure of their self-efficacy, in helping children read were developed as questionnaires. Additionally, the specific involvement practices for children's reading that parents engage in were listed in a questionnaire. A specific assessment for parents' involvement in SORT was included. Background variables including parental age, employment and housing patterns, educational levels were included in a survey questionnaire.

Researchers of role construction have assumed that a person's behavior is related to his/her role construction definitions. When this idea is applied to parents' behavior, research shows that the various ways parents get involved with their children's schools and homework are associated with how they construct their many parental roles vis-a-vis their children.

The Background of Parents

In addition to parental role construction, child development beliefs, self-efficacy and involvement practices, the larger SORT study also investigated the background of parents. It has been well established that such variables as parental income and educational levels are related to parental involvement in children's education and, in turn, to children's school achievements. In particular, studies have shown that the educational levels of parents are positively related to their ideas about child-raising practices and to their children's school success. The major focus in this study, however, has been on the variables which reflect what parents think about and do with and on behalf of their children's literacy education, and, specifically, in promoting their children's learning to read.

The Hypotheses

We hypothesized that the parents who would get involved with their children's reading would be those who already believed that, as parents, it is their role to help their children learn to read, and would be those parents who perceived that other people expected them to be involved in children's reading education. To become involved parents would also need to believe they can contribute to children's learning (self-efficacy) in the present, or in the future by learning new techniques and skills to help their children learn to read through participation in such programs as the (SORT) program.

FINDINGS

Mothers' Involvement with their Children's Reading as a Function of their Parental Role Construction

In this section we focused on the relationship between moms' involvement in their children's reading and their parental role construction. For example, moms who encouraged their children to develop a reading habit said:

- that their role construct was not influenced by their friends and their expectations;
- that as parents they needed to understand their children's schools and teachers, and
- that it was equally important for both mothers and fathers to learn how to help children learn to read.

On the whole, moms, who expected to help their children learn to read,

- did not perceive that their involvement in SORT was based on what their friends expected of them as parents.

Moms who were involved with their children's literacy learning by listening carefully to their children's questions, constructed their roles in different ways. They believed that:

- although they expected to work hard to help their children with reading, they believed that reading was best left to teachers.
- both mothers and fathers should be equally involved in helping their children learn to read.

Moms who said they took an interest in their children's school work and activities in reading, constructed their roles by saying that:

- it was important for them to know how their children were progressing in reading, and
- it was equally important for both fathers and mothers to learn how to help children learn to read.

One source of continuous and constant involvement for parents is reading homework. Moms who involved themselves in conversations with their children about their school reading, looking at reading materials brought home from school and helping with and/or reviewing homework assignments in reading, constructed their roles in many ways. They said:

- it was important for them to know how their children were progressing in reading;
- that parents and teachers were partners in helping children learn to read;
- that they expected to work 'hard' to help their children with reading;
- that reading is best left to teachers, and
- that it was of equal importance for both fathers and mothers to learn how to help children learn to read.

Moms who designated a workplace for their children and identified a specific time each day when homework would be completed, constructed their parental roles by saying that they believed the home was responsible for children's learning to read.

Moms who were actively involved with their children through communicating with their children's reading teachers (through notes, phone calls and visits) believed that:

- parents and teachers are partners in helping children learn to read, and
- that it was of equal importance for fathers as for mothers to learn how to help children learn to read.

Moms who were involved with their children to the extent that they were aware of their children's strengths and weakness in reading expected to work hard themselves to help their children with reading. Moms who took the time and made an effort to incorporate literacy activities into everyday life, such as asking children to write grocery lists, make cards, read memos and newspapers, also expected to work hard to help their children with reading. Some moms were involved with their children by providing them with a dictionary. These moms believed that:

- it was important for them to know how their children were progressing in reading, and
- they expected to work 'hard' to help their children with reading.

Some moms were sensitively involved with their children's learning to read by trying to provide answers to their children's questions in a manner which they could understand. These mothers constructed their roles in many different ways. They believed that:

- it was important for them to know how their children were progressing in reading, and
- they needed to work hard to help their children with reading.

Moms, who were involved in creating fun and enjoyable interactions with their children through playing games that helped their children read and/or write and spell, believed that it was their parental role to help their children learn to read.

Some moms were involved with their children by providing them real-life experiences which build children's meaning base through visiting places such as parks, museums, and local landmarks with their children. These moms constructed their parental roles by saying that it was important for them to know how their children were progressing in reading.

The moms who supported their children in buying books in a book club believed the home is responsible for children's learning to read. Moms, who perceived their children expected them to participate in the SORT program, also supported their children buying books from book clubs.

Mother's Child Development Beliefs and their Involvement with Children in Reading Practices

When mothers believed that girls and boys are equally capable of learning to read:

- the more carefully they listened to their children's questions,
- the more they believed that T.V. watching should be limited in order for children to learn to read well.

Coupled with mom's beliefs in the need for reading materials in the home, is:

- their involvement in providing field trips and experiences for their children, including visits to parks, museums and local landmarks, and providing children with a specific book of words, a dictionary and
- their active encouragement of children's independent reading.

As well, when children's mothers possess a greater sense of efficacy in helping their children learn to read:

- fathers are more likely to believe that children's intelligence is not fixed at birth, but open to development from environmental influences.

- Mother's Self-Efficacy and their Child-Development Beliefs for Reading.

The more capable mothers feel about helping their children learn to read, the more they possess child-development beliefs that are in-line with a knowledge of the reading process. The higher a mother's 'sense of self-efficacy' for helping her children learn to read, the more mothers believe that:

- girls and boys are equally capable of reading achievement.
- parents and teachers should respect children's curiosity and questions about stories, print and reading.
- children should limit the time they spend watching television so that they can spend more time learning to read.

MOTHER'S 'SENSE OF SELF-EFFICACY' AND INVOLVEMENT PRACTICES

A major influence in parental decisions about involvement in children's reading education is their 'sense of efficacy' for helping their children learn to read. In other words, 'Do parents believe that their involvement can actually have a positive effect on their children's learning to read?' Self-efficacy theorizing suggests that parents will guide their involvement with their children's reading by thinking through, in advance of their practices, what achievements are likely to result from their practices. In short, parental self-efficacy with regard to reading, can be defined as parents' beliefs about their ability to influence their children's learning to read and about their influence relative to that of other significant others, including teachers and children's peers. If parents have a positive 'sense of efficacy' for helping children learn to read, they believe that they are indeed capable of helping their children learn to read.

Parents who have strong efficacy beliefs for helping their children's reading education will tend to exert greater effort in response to difficult situations by seeing them as challenges to be mastered rather than by being threatened by them. In short, they will tend to believe that their efforts can solve the difficulties. Parents with a higher sense of self-efficacy are likely to believe that their involvement will make a positive difference to their children's achievement.

Mothers possessed a greater sense of efficacy for helping children learn to read than did fathers or any significant other. When a mother's sense of self-efficacy for helping her child learn to read was stronger, she was more likely to be involved in many reading activities with her child. In particular, she was more likely to:

- listen carefully to her child's questions.
- encourage independent reading daily.
- provide her child with appropriate reading and writing materials.
- take interest in her child's school work and activities in reading by talking about and looking at homework reading assignments.
- communicate with her child's reading teacher through notes, phone calls and visits.
- become aware of her child's strengths and weaknesses in reading and to ask what role she can play in helping her child become a skilled reader.
- engage in playing games that help children read, and/or write and spell.

- provide her child with activities and experiences to broaden her understanding of the world.
- involve her child in writing grocery lists, making cards, reading menus, newspapers, writing letters.
- provide her child with a dictionary.
- buy her child books as presents.
- monitor the time her child spends watching television.
- provide opportunities for her child to observe her reading.
- encourage others to read to and around her child.

Mother's Involvement in Children's Reading

When mothers have many books of their own, they are more likely to provide their children with many books. The more often mothers listen to their children read, the more they are aware of the strengths and weaknesses of their children's reading.

Mothers who are more likely to be home between 3:00 and 5:00 p.m. or between 5:00 - 9:00 p.m. each day, are more likely to monitor their children's TV viewing and/or read to their children and listen to their children read. As well, the more overall involvement they have with their children in reading activities, the more mothers monitor their children's TV viewing. In particular, mothers who are more likely to be involved in the following reading activities are more likely to monitor their children's TV viewing. Included are:

- taking an interest in their children's school work,
- talking about what children are reading at school,
- making frequent trips to the library,
- providing children with dictionary,
- being aware of their children's strengths and weaknesses in reading,
- providing children appropriate reading and writing material,
- answering children's questions in a manner children can understand,
- providing children opportunities to see them reading, and
- encouraging others to read around their children.

PERCEPTIONS OF SORT'S VALUE

An open-ended question in which mothers were asked to indicate the value of being involved in the SORT program generated a variety of responses. Of first importance to mothers was helping their children learn to read. Mothers stated that learning new ideas, different techniques and improving their children's reading, or "setting them on the road to reading," was the most valuable aspect of the SORT program for them.

The second value mothers saw was stimulating their child's motivation, interest and positive attitude toward reading at an early age. The third value they saw in SORT was the program materials, which, in their opinion, included an exciting variety and ready availability of children's books for discussion with their children. This value of love and desire to read has often been proposed as an important contribution of the home particularly since the home is seen as the place which fosters love generally. In the home and community children see that the love of reading is

demonstrated in the lives of model adults and therefore believe it to be an important activity relevant to life itself.

Other values, less often mentioned by mothers, included aspects of reading such as learning word recognition, comprehension, sharing, conversing about books and understanding links between texts and illustrations. As well, mothers mentioned learning ideas from other parents and the literacy coordinator, and welcoming the opportunity to become involved with their children's learning.

TEN REASONS MOTHERS GAVE FOR THEIR INVOLVEMENT IN SORT

Parents were invited to respond to an open-ended questionnaire in which they were asked to name ten reasons for becoming involved in the SORT program for the year in which their child was enrolled in Kindergarten. The reasons that mothers gave are listed below in the order of importance that mothers attributed to them.

1. The opportunity to provide for the overall educational development of children and, particularly, in regard to children's learning to read, to learn techniques to apply in helping them learn to read.
2. The SORT program materials and children's books were of high quality.
3. The improvement of relationships with their children through spending quality time engaged in reading activities.
4. The fostering of positive attitudes toward reading for their children.
5. The credibility of the literacy coordinator as an excellent teacher.
6. The school's endorsement and recommendation of the SORT program.
7. The SORT program's promotion of the importance of reading and the parents' interest in learning.
8. The enhancement of the relationship between home and school that SORT fostered.
9. The opportunity to improve children's skill and knowledge of language structures (e.g., spelling and sentences).
10. The occasion to improve children's motivation to read and increase their independent reading.

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FATHERS' INVOLVEMENT IN THEIR CHILDREN'S READING: THE SORT PROGRAM*

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The Significant Others as Reading Teachers (the SORT) project is an on-going project. Over the years many studies have been conducted within the context of this project by the authors. The findings of those studies have been published elsewhere in the form of articles, reports and books. The current round of research activities of the SORT program focuses on what parents do to help their children to read better. Based on the selective review of research and the hypotheses presented later in this paper, in the current study the authors tried to investigate four things: (1) the background of the parents and their involvement with their children's reading, (2) what parents do to help their children read well, (3) why they are involved the way they are, and (4) parents' perceptions of the SORT program and its accompanying resources as an opportunity for them to learn about and get involved in their children's reading education. However, in this paper we present only the findings related to fathers' involvement in their children's reading program. The findings of involvement of mothers in their children's reading as well as other findings will be reported in a series of other short papers; the final report would include all the findings.

For the sake of orderly presentation of the material, the authors provide below a brief review of literature on fathers' involvement with their children's schooling, the history of the SORT project, a conceptualization of parents' involvement with reading of their children within the SORT project, the nature of the investigation and methodology, findings of the study, and recommendations.

A BRIEF REVIEW

There has been an increasing interest in the father's interactions with their children and its effects on their development. In the past few years, several books and research articles on father's roles and relationships have appeared (Minnesota Extension Service, 1992). Specifically, the role of fathers in their children's education has been examined in recent years. Fathers have in the past been overlooked in research, but in 1995 U.S. President Clinton asked all executive departments to include fathers in their programs, policies and research, where possible (U.S. Department of Education, 1997).

One of the more prominent reports in this area is a study carried out by the National Center for Education Statistics in the United States. Their October 1997 Survey, *Fathers' Involvement in Their Children's Schools*, found that children do better in school when their fathers are involved in their schools, whether their fathers live with them or whether or not their mothers are also involved (U.S. Department of Education, 1997).

The national study garnered enough attention to have U.S. Vice President Al Gore highlight it by commenting on it to the media. He said, "This study provides hard evidence about the powerful and positive influence that parents can have as full and equal partners when they make the commitment to help their children get a good education. Fathers matter a great deal when it comes to helping their children succeed in school and this study should encourage millions of American fathers to step up to the plate and make a difference in their children's education." (U.S. Department of Education, 1997, p. 1)

The study also concluded that if dads got as involved as moms in their children's education, children would be studying harder and getting a lot more A's. Fathers make a powerful difference in defining expectation and challenging children to do their best. Overall, children in two-parent families where the father is highly involved get better grades, enjoy school more and are less likely to repeat a grade, compared with those for whom mothers only are highly involved (U.S. Department of Education, 1997). This general perspective on the impact of father's participation in children's education provided inputs for researchers to produce "local knowledge" in this area (Singh, et. al., 1999a; Singh, et. al., 1999b).

THE SORT PROJECT, THE FOCUS ON FATHERS' INVOLVEMENT, AND THE FINDINGS

History of the SORT Project

Significant Others as Reading Teachers (SORT) is a family/community literacy program for young children. Its purpose is to help establish literacy activities as a cultural practice within the context of everyday living. The program has been operating in a rural Newfoundland community since September, 1994. Seventy-seven parents/significant others and kindergarten children participated. A volunteer teacher, who received the support of the primary school principal and the local school board, delivered the program during the school year 1994-95. The program received funding from the National Literacy Secretariat in 1991 for the development of the program in 1995 for implementation and again in 2000-2002 for the present study of reasons why parents become involved in the literacy education of their children.

To date materials developed for the program include a videotape, *Reading, A Gift of a Lifetime*, and a handbook for children's significant others entitled *Help Your Child Become a Reader* and a facilitator's guide for helping parents implement and apply the year-long program. A kit of children's books, which includes 100 copies of 100 titles, has also been prepared to accompany these materials. The videotape, which features home and school literary practices in local settings, received a national award of merit in 1994 by the Association of Media Technology in Education in Canada (AMTEC) for its educational effectiveness.

The Principles of SORT

1. Learning to read is a highly complex task.
 - (I) As early as six months of age, children can engage with significant others in reading activities and read-aloud.

- (ii) Significant growth in children's knowledge about reading can occur between the ages of three and five.
 - (iii) Most children learn to read over a period of four or more years.
2. The purpose and value given to literacy activities in families and communities contribute to the significance children attribute to learning to read and write.
 3. The single most important activity for building children's knowledge about skill in reading is reading aloud to them.
 4. Messages that significant others give in their daily interactions with children, books and print, influence children's perceptions of themselves as readers.
 5. Children model the reading behaviours enjoyed and demonstrated by significant others, especially behaviours of the same-sex others.
 6. Children learn to enjoy story and book language when it is read aloud expressively by caring adults.
 7. Children who develop positive images of themselves as readers engage readily in reading play and activities.
 8. In listening to stories children try to understand the actions and feelings of characters in terms of their own experience.
 9. Children construct their own knowledge of reading. As they become capable they need to be given more control over their reading activities.
 10. Children who have been read to in homes and communities enter school with longer attention spans, have greater knowledge of stories, vocabulary, books and print, and experience less difficulties in learning to read.

Essentially, the approach taken recognizes that children learn literate attitudes, concepts and behaviours from people who are significant to them. As well, literacy learning that occurs before schooling has significant effects on children's literacy achievement when they go to school. The SORT program has demonstrated that parents and significant others will engage willingly in literacy activities with young children when they realize the potential benefit to their children's literacy learning. They will also hold high expectations for their children's literacy achievement and will provide supportive responses when they become aware of its significance to learning and learn how to become involved. The materials currently developed for the SORT program are designed to create conditions in which significant others become involved in daily book-sharing activities with children.

The video, *Reading, A Gift of a Lifetime*, shows a variety of family and social gatherings where children share reading and writing with others. The handbook, *Help Your Child Become a Reader*, is written in a conversational question/answer style at a grade 8 reading level and includes a discussion of:

- how social interaction can help children develop a 'reader identity' and a positive attitude towards reading, conceptual knowledge of and skill in reading;
- how to find books to match children's reading development and interests;
- a variety of children's books and activities that encourage reading for imaginative, informative, affective, persuasive, and ritualistic purposes;

- * word and letter games for young children to learn how to identify words in print.

The SORT project takes a perspective that the most effective approach to stimulate and motivate young children's literacy development is to build books into conversations between children and the adults whom they care about and think are important. The specific books chosen to support the child's learning and interest, and the daily interactions around books on a daily basis, are important features of this program as well as the manner in which adults respond to a child's questions. The learning environment needs to be one where children can risk being wrong, receive appropriate feedback and can develop self-esteem. Their motivation to learn results from their expectations that they will learn, their past successes, feelings of self-control, including help-seeking strategies, as well as from their intrinsic interest in reading materials and the desire to be readers like their significant others.

Conceptualizing Parents' Involvement Within the Sort Project

Among the many sources of influence on parents' decisions to become involved in their children's reading education, four important sources include:

- how parents construct their role with regard to their responsibility for teaching reading.
- their beliefs about how children learn to read.
- their sense of efficacy in helping children succeed in learning how to read.
- their perceptions of the opportunities for involvement presented by the school as well as their assessment of the quality and appropriateness of these opportunities. These opportunities include: personnel, programs, availability of reading and course materials, invitations and other such things.

Of course, other background variables are likely to influence parents' basic decisions to become involved in their children's learning to read, e.g., working schedules, age, educational levels, number of adults living with children and patterns of employment.

According to the perspective taken in this study, parents primarily become involved in their children's education because they have constructed a parental role that includes such involvement; secondly, because they have a positive sense of their own efficacy for helping their children succeed in reading; and, thirdly, because they perceive opportunities and invitations for involvement in their children's literacy education from their children's schools.

Parental Role Construction, Parental Involvement, Child Development Beliefs, Self-efficacy and Involvement Practices

An important factor contributing to parents' decisions to involve themselves in children's education and, in particular, with their children's literary learning, is their understanding of the parenting role. In other words, parents possess beliefs about what they are supposed to do in relation to their children learning to read. These beliefs about the parenting role are important to issues of involvement because they

are the basis for establishing the range of activities parents consider to be necessary, important and permissible to engage in, with and on behalf of their children.

One implication of current theories and empirical observations about parental/involvement is the notion that parents develop beliefs and understandings about the requirements and expectations of the parental role as a result of their membership and participation in varied groups pertinent to child-rearing (e.g., families, workplaces, schools, churches, media, communities). Such groups hold expectations about the appropriateness of parental role behaviours, including those which are related to involvement with children's reading education. Further, parents' actions or practices with and on behalf of their children, including decisions to become involved educationally in their children's lives, are influenced by the roles they construct, and by the dynamic process that involves them in confronting the varied expectations held by various groups with whom they interact.

In this study the concept of role is defined as a set of expectations a group holds for the behaviour of its members, or a set of behaviours characteristic of individuals within a group. In this study those groups are referred to as parents' significant others. Parents' significant others include their children's teachers, the school principal, their own children, the family's priest or minister, the local media, and the SORT literacy coordinator. Parents' workplaces and the Faculty of Education at MUN where the SORT project originated, were not included in the current study as significant others influencing the parents' role construct, although in future studies they should be considered.

When the notion of role construction is applied to parents' choices to become involved in their children's literacy development, current theories state that the groups to which parents belong (family, school, workplace, church, friends) hold expectations about what parental role behaviours are appropriate for supporting children's development as readers. When these expectations are perceived to be of value by parents, they may influence the choice of behaviours they engage in on behalf of their children's reading education.

Parents' ideas about child development and how children learn to read and develop reading practices and their notions of the appropriate roles for supporting children's literacy education at home appear to constitute specific components of the parental role construct that influence parents' decisions about their involvement in their children's literacy learning. Findings in these areas have suggested a general pattern in which child-rearing beliefs exert an influence on parents' choice of behaviours they engage in with their children. For example, parents' endorsement of the belief that children's intelligence(s) is/are not fixed at birth is likely to be reflected in the manner in which they provide educational resources in children's environments to enhance their intellectual development. Fundamentally, the overall perspective presented here suggests that, among the aspects of parent role construction for responsibility in children's literacy learning, specific sets of beliefs are quite important. Included and important for literacy education are:

- their beliefs about what children need from parents in order to read.
- their beliefs about desirable educational outcomes in reading.

- their beliefs about the effectiveness of reading practices in achieving reading success.

In addition, parents' sense of efficacy for helping children learn to read is a factor in their decisions to become actively involved in their children's reading education. In other words, parents are likely to reflect on their ability to influence their children's reading ability before becoming involved with reading activities. Sometimes parents who want to increase their teaching skill and sense of efficacy might choose to enrol in programs designed to improve their ability to successfully contribute to their children's education.

The Investigation and Methodology

The larger SORT study attempted to explore and investigate the relationships among parents' role constructs, their self-efficacy in helping their children learn, their involvement practices in helping their children's learning to read, including the SORT program, and selected parental background variables. Measures of the many aspects of the parental role construct for their responsibility in children's reading education, as well as a measure of their self-efficacy, were developed as questionnaires. Additionally, the specific involvement practices for children's reading that parents engage in were listed in a questionnaire. A specific assessment for parents' involvement in SORT was included. Background variables including parental age, employment and housing patterns, educational levels were included in a survey questionnaire.

Researchers of role construction have assumed that a person's behaviour is related to his/her role construction definitions. When this idea is applied to parents' behaviour, research shows that the various ways parents get involved with their children's schools and homework are associated with how they construct their many parental roles vis-à-vis their children.

The Background of Parents

In addition to parental role construction, child development beliefs, self-efficacy and involvement practices, the larger SORT study also investigated the background of parents. It has been well established that such variables as parental income and educational levels are related to parental involvement in children's education and, in turn, to children's school achievements. In particular, studies have shown that the educational levels of parents are positively related to their ideas about child-raising practices and to their children's school success. The major focus in this study, however, has been on the variables which reflect what parents think about and do with and on behalf of their children's literacy education, and, specifically, in promoting their children's learning to read.

The Hypotheses

We hypothesized that the parents who would get involved with their children's reading would be those who already believed that, as parents, it is their role to help their children learn to read, and would be those parents who perceived that other people expected them to be involved in children's reading education. To become

involved parents would also need to believe they can contribute to children's learning (self-efficacy) in the present, or in the future, by learning new techniques and skills to help their children learn to read through participation in such programs as the (SORT) program.

Findings

Fathers' Reading Involvement Practices as a Function of Their Parental Roles

Nowadays, many dads, in their role as parents, involve themselves in helping their children learn to read and establish good reading practices. This is a new and encouraging trend that reflects the changing role of fathers and mothers in the family unit since previously mothers were the parents more likely to have been involved with children's learning. However, before fathers can become involved in doing something to help their children learn to read, they need to construct the appropriate roles which encourage them to behave in specific ways towards their children. What fathers' conceive their parental roles to be with regard to their children's reading, is related to their engagement in many activities involving children and their reading.

In this study many fathers constructed their roles believing that their involvement in the SORT program would help them be more confident in their ability to help their children learn to read. These dads were trying to increase their efficacy in helping their children learn to read. They also said they encouraged their children to develop a reading habit of their own. Similarly, fathers who offered encouragement to their children to develop good habits, constructed two other roles for themselves. For example, they believed their parental role included a need to understand their children's schools and teachers, and that significant others in their lives expected them to encourage their children to develop a good reading habit. In particular, these Dads believed that significant others such as their children's teachers and the Co-ordinator of the SORT program expected them to help their children become skilled readers. When fathers perceived that these significant others expected them, as parents, to help their children read, then fathers got involved and engaged in listening to their children and, in particular, listened carefully to their children's questions about stories and print.

Parents can become involved with their children in many different ways. For example, results of our study indicated that fathers who thought it was their role to help their children read better were encouraging their children to read independently everyday. Specifically, these dads who encouraged their children to read independently everyday:

- expected to work hard to help their children with reading;
- believed that participation in SORT would help them to be more confident in their ability to help their children learn to read;
- perceived that teachers expected them to be involved in helping their children learn to read;
- perceived a need to understand their children's school and teachers.

As well, dads who involved themselves in making frequent trips with their children to the library, thought that, in their roles as dads they:

- needed to understand their children's school and teachers;
- expected to help their children learn to read, and
- had friends who expected them to get involved in the SORT program.

Dads who were bent on involving themselves by providing their children with appropriate reading and writing materials constructed their various corresponding roles in many different ways. They:

- thought it was important for them to know how their children were progressing in reading;
- believed in working hard to help their children in reading;
- thought that parents and teachers were partners in helping children to read, and
- believed that the home was responsible for children's learning to read, although reading was 'best' left to teachers. These Dads also perceived that the **SORT literacy coordinator expected them to be involved**. Overall, the greater the parental responsibility Dads assumed for reading, the more they were involved with reading acts on behalf of children.

Another form of engagement with children's reading included Dads getting involved with reading school-work and activities. This was associated with various ways in which they constructed their roles. For example, the Dads perceived that:

- it was important that they should hold positive expectations for their children to learn to read;
- that they should know how their children were progressing in reading. One Dad commented, "We are very involved. Being involved gives us the chance to be aware of their progress, which brings a feeling of closeness with your child."

Similarly, those Dads who made the major commitment of expecting themselves to work 'hard' to help their children with reading, believed that it was equally as important for 'them', as it was for their children's mothers, to help their child learn to read. Generally, the cultural norm seems to be that mothers are the ones who are most involved with child-raising, including caring for children's personal needs, school-related activities and homework. The fact that some fathers are getting more involved in their children's schooling may be seen as a good trend from various perspectives. For example, work surrounding 'raising children,' 'parenting', or 'nurturing', can be delivered by both fathers and mothers. This way of thinking contradicts the assumption that only females can play this role. To be sure, this role construction on the part of the fathers does not happen in isolation. Significant others seem to play crucial roles in the development of this aspect of parental role formation for fathers. For example, dads who took an interest in their children's school work and activities in reading perceived that their friends expected them to get involved in the SORT program. Overall, their friends' expectations, when combined with other factors, helped dads to construct their overall parental role in such a way that they started taking an interest in their children's reading school work and activities.

Looking further into dads' involvement, it was found that some dads became involved deeply by talking with their children about what they were reading at schools,

looking at materials brought home from school and helping with and/or reviewing home assignments in reading. These fathers seem to construct their roles believing:

- they were responsible for helping children to read,
- that it was important for them to know how their children were progressing in reading,
and
- that it was as equally important for them to help their children learn to read as it was for their children's mothers. This deep involvement seems to be understandable in the context of changing parental roles in family structures.

Parents can help children in school homework and reading in many ways at home. For example, they can provide appropriate materials and appropriate spaces for children to study and work, along with timely meals, and praise to boost their children's self-esteem. In this study those dads who designated a workplace for their children and identified a specific time each day when homework would be completed, constructed their roles based on specific beliefs. They:

- expected to help their children with reading,
- thought it was important for them to know how their children were progressing in reading,
- expected to work 'hard' to help their children with reading,
and
- believed that the home is responsible for children's learning to read.

Fathers' participation in communicating with their children's teachers seems due to their overall perceived parental responsibility for children's learning to read and their perceived expectations from significant others. Specifically, fathers who were involved with their children's reading by communicating with their reading teachers through notes, phone calls and visits, constructed their parental roles by taking into account various beliefs. These dads:

- expected to help their children learn to read and to work 'hard' doing this,
- perceived that their children's teachers, school principal, and their friends all expected them to be involved in helping their children to read.

Some fathers constructed particular role responsibilities for their children's unique learning patterns in reading. A desire to help children learn to read based on the child's emerging pattern of strengths and weaknesses requires a major commitment of time, effort, ability and attention. The data suggested the desire to help their children on the basis of their strengths and weakness in reading is associated with various role constructions by dads. Those dads who said they were aware of their children's strengths and weakness:

- expected to help their children learn to read and to work 'hard' at this,
- believed they should know how their children are progressing in reading,
- believed the home is responsible for children's learning to read,
- believed that the teachers, principal and the SORT literacy coordinator expected them to be involved in helping their children learn to read.

Although these dads were committed to a high level of responsibility and involvement with their children, they nevertheless deferred to the school's expertise, since they believed that they sent their children to school and hoped for the best when it came to reading. It appears that when fathers have a high level of awareness of their children's patterns in learning to read it is a result of how they have constructed their parental role, taking into account the total expectation of how significant others expect them to participate in their children's bid to succeed in reading.

Another way dads can get involved with their children is reading is through play activities. Dads who played games that helped their children read, and/or write and spell perceived:

- it was their role to help their children learn to read;
- that their friends expected them to be involved with SORT.

This type of involvement seems to emphasize fun in learning, an overall emphasis on the father/child relationship and on learning as a social activity.

Dads who said were sensitive in trying to relate what children read about to their children's lives defined their roles by saying that it was important for them to help children learn to read. Overall, Dads who perceived more parental responsibility for their children's reading tried harder to relate what they read about to their children's own lives.

Dads who took the initiative to involve their children to engage in literacy tasks at home, such as writing grocery lists, making cards, reading menus, and newspapers, writing letters, and engaging in activities, constructed their corresponding roles in many different ways. Fathers' asking children to do the above things was related to fathers' belief that:

- home is responsible for children's learning to read;
- the teachers expected them to get involved in helping their children read;
- their own children, expected them to be involved in the SORT program.

Interestingly, dads who took an interest in their child's reading by the specific practice of providing a dictionary to them, constructed their roles to this in many different ways. They believed:

- that it was important for them to know how their children were progressing in reading;
- that home was responsible for children's learning to read;
- that the SORT program would help them to be more confident in their ability to help them learn to read;
- that they expected to work hard to help their children with reading;
- that teachers expected them to get involved in helping them learn to read.

Perhaps, for these Dads a tangible way of helping their children learn to read is to provide a dictionary for their children. Historically, the dictionary has played an important role in fixing the meanings of words in literary cultures; it has been seen as

an authoritative way of determining the meaning of words. Fathers' who constructed more parental role responsibility for helping their children learn to read are more likely to pay attention to their children's reading by providing them with dictionaries.

On the other hand, Dads who bought books as presents for their children constructed their corresponding roles by saying only that:

- they believed reading is best left to teachers;
- they sent their children to school and hoped for the best when it came to reading.

Again, it seems that fathers who construct their roles in this way are willing to play a minor supportive role in their children's learning to read. Schools and teachers are still believed to be the major players in helping their children learn to read. This is not surprising because schools and teachers have always been seen as a solution for many problems in most societies, and especially have been deferred to for the establishment and/or control of children's literacy skills.

Dads who visited places such as parks, museums, and local landmarks with their children conceptualized their roles by saying that they believed reading is best left to teachers. In other words, these dads were willing to participate in providing life experiences relevant for their children learning, but basically thought it was the teacher's responsibility to help children learn how to read. Dads who reasoned this way were also the ones who said they provided exposure to activities and experiences to broaden their children's understanding of the world around them.

One specific way in which dads were involved with their children was by monitoring the time their children spent watching television programs. This activity requires constant vigilance and, therefore, considerable commitment from parents to monitor their children. Fathers who were involved in this particular way, constructed many different aspects to their roles. They:

- set up expectations for themselves that as dads they should help their children learn to read;
- thought they should work hard to help their children with reading;
- thought it was important for them to know how their children are progressing in reading;
- believed that parents and teachers are partners in helping children learn to read.

These roles seem to be reinforced through fathers' perceptions that their friends expected them to be involved in the SORT program and the expectation of their significant others had encouraged them to construct their roles in this way.

Dads who involved themselves with their children in a sensitive teaching manner by trying to answer their questions in a manner that their children could understand constructed their parental responsibility for children's reading in many different ways. They:

- thought it was important for them to know how their children were progressing in reading;
- believed that parents and teachers are partners in helping children learn to read;
- thought that the home is responsible for children's learning to read;
- believed that dads have to work hard to help their children with reading;
- needed to understand their children's school and teachers.

Many dads are involved with their children through modeling and made sure that their children see them reading. Dads who were more aware of providing this opportunity for their children, had constructed their roles in different ways. For example, they had set up certain expectations for themselves. They said:

- they expected to help their children learn to read;
- that it was important for them to know their children were progressing in reading;
- that they needed, as parents, to understand their children's school and teachers. These dads believed that the overall expectations they have for themselves as dads, the expectations of all significant others, including their children's expectations for them to get involved in SORT, made them aware that their children should get the opportunity to see them reading books and other materials.

Many dads who are involved with their children by encouraging others to read to or around their children:

- expected to help their children to learn to read;
- thought it was important for them to know how their children progress in reading;
- perceived that their children expected them to be involved in the SORT program.

Father's Child-development Beliefs and Involvement Practices

When Dads believe that teachers need information from home to help their children learn to read, they engage in listening carefully to children's questions, provide exposure to activities and experiences to broaden children's understanding of the world around them and provide their children with a dictionary. When dads believe that children learn to read better when parents and teachers respect their curiosity and questions about stories, print and reading, they are more engaged in carefully listening to their children's questions, providing answers that children can understand, playing games that help their children read and/or write. When dads believe that children need encouragement in order to learn to read well, they try to answer children questions in a manner children can understand.

Fathers' Self-efficacy and Child-development Beliefs

The child-development beliefs that fathers hold for promoting children's reading education, e.g., respecting children's questions, monitoring time with TV. and providing encouragement, go hand-in-hand with their sense of efficacy in helping their

children read. In particular, when fathers possessed a greater sense of self-efficacy for helping their children learn to read, the more they believed firmly that:

- parents can influence children's learning to read,
- children need encouragement in order to learn to read well,
- parents and teachers should respect children's curiosity and questions about stories, print and reading, and that
- children should limit the time spent watching television in order to spend that time learning to read well.

Father's Personal Theories of Intelligence

Fathers' beliefs about children's intelligence(s) went hand-in-hand with certain beliefs about the value of children's questions. Specifically, when fathers believed that children's intelligence(s) is open to development from the environment, or when they believed that children possess many kinds of intelligences (e.g., musical, mathematical and verbal), they also believed that parents and teachers need to respect children's curiosity and the questions they pose about stories, print and reading.

TEN REASONS FATHERS GAVE FOR THEIR INVOLVEMENT IN SORT IN AN OPEN-ENDED QUESTIONNAIRE

Parents were invited to respond to an open-ended questionnaire in which they were asked to name ten reasons for becoming involved in the SORT program for the year in which their child was enrolled in Kindergarten. The reasons are ranked in the order of importance that fathers attributed to them.

1. A desire to help children become better readers.
2. The SORT program materials and children's books were of high quality.
3. The fostering of children's love of reading as a fun activity.
4. The excellent evaluation of the literacy co-ordinator who delivered the program.
5. The opportunity to learn new techniques to help children read.
6. The improvement of relationships with their children by spending quality time with them.
7. The fostering of children's motivation to read.
8. The school's endorsement and recommendation of SORT as a program promoting parents' interests.
9. The enhancement of the relationship between home and school that SORT fostered.
10. The SORT program was free and a 'good thing'.

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**PARENTS IN THE SCHOOL: THE IMPACT OF FATHER'S
PARTICIPATION IN CHILDREN'S EDUCATION IN NEWFOUNDLAND**

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Introduction

This paper is a part of larger effort to produce "local knowledge" in the area of school-community-family relationship (Singh, et al 1999). Historically, "outsiders" and a selected few nominated by the dominant forces of the day have been involved in producing knowledge in this province. As Greene (1999, p. 3) points out, "until the founding of Memorial University in 1949, Newfoundlanders were denied the privilege of post-secondary institution that could develop local studies." Even today ordinary citizens in this province have generally been discouraged from producing knowledge based on their daily experiences. They feel intimidated in recording and disseminating their experiential and observation-based knowledge. Greene (1999, p. 4) writes that "On the personal level, the individual Newfoundlander, regardless of class, has historically shown an aversion to preserving written records; and the few who were courageous enough to perform the feat have always been denigrated as hoarders ----- Oral tradition has held sway for centuries and remains still the richest source available for gaining an understanding of the everyday lives of people of Newfoundland's past." This situation has been changing, however, as more and more people are learning about how "official" and "state" forms of knowledge are socially constructed, preserved and strategically disseminated either to maintain the status quo or to change it (Singh, parts I & II, 1991; Finlayson, 1994). More than ever before, people in this province now feel confidence in their common sense ability to understand how the society works and how the culture influences their views and behaviours. For example, based on their understanding of social and cultural processes parents, students, teachers, families and communities were able to contest the recent reorganization of the school system in this province under the umbrella of educational reform. They were able to point out the contradictions and mismatch of the "official" knowledge which guided educational reform (see the recent pages of the Telegram and other local papers).

Many writers recognize the importance of local knowledge and local theorising. This form of knowledge and theorising helps people to enhance their well-being in the concrete context in which they work and live (Andrews, J., et al. 1999). In the context of school-family-community relation, local knowledge and theories produced by teachers, parents, students, and others help them to focus on the concrete relationship on which their daily lives depend (Geertz, 1983; Schibeci and Grundy, 1987; Tripp, 1987; Smyth, 1989).

This paper discusses, first, the benefits of parental involvement in education. Based on their personal observations and experiences (local knowledge), the authors discuss some reasons for increased parental involvement at Random Island

Academy. This is a small K-12 school serving eleven communities in rural Newfoundland. The authors then go on and describe some ways parents at this school have been involved, thus building strong, positive family, community and school relations. Following this, the focus shifts as the authors pay more attention to the impact of father's participation in their children's education. This they do in two ways: by providing a brief and selective review of literature in this area and by describing a Newfoundland perspective on father's involvement in certain schools in this province. The paper ends with a description of an episode the authors experienced in some schools in this province. This incident may demonstrate that there are some unreachable parents --- so called "Parents from Hell" (Warner & Curry, 1997). These individuals can slow down attempts by schools, families and communities to build positive reciprocal relationships to help children do well in schools.

Parents In the School

Benefits of Parental Involvement

Henderson (1987) points out some of the most important research findings about parental involvement that we should know. These are that (1) the family provides the child's primary educational environment; (2) involving parents in their children's formal education improves student achievement; (3) parent involvement is most effective when it is comprehensive, long-lasting, and well-planned; (4) the benefits are not confined to early childhood or the elementary level; there are strong effects from involving parents continuously throughout high school; (5) involving parents in their own children's education at home is not enough to ensure the quality of schools as institutions serving the community; parents must be involved at all levels in the school; (6) children from low-income and majority families have the most to gain when schools involve parents, and parents do not have to be well-educated to help, and (7) we cannot look at the school and home in isolation from one another but must see how they interconnect with each other and with the world at large.

When parents show a strong interest in their children's schooling, they tend to promote the development of attitudes that are the key to achievement, attitudes that are more of a product of how the family interacts than of its social class or income. If schools treat parents as powerless or unimportant or if they discourage parents from taking an interest, they promote the development of attitudes in parents, and consequently in their children, which inhibit achievement (Henderson, 1981, p. 3). Studies continue to show that, in reality, parents from all walks of life are interested in getting involved in their children's schooling. It is up to the educators to discover how to reach them and how to make their involvement a positive, productive experience (Warner, 1997).

Below we will show how the educators at Random Island Academy, a small rural K-12 school located in Hickman's Harbour, Newfoundland, are making parents' involvement a positive and worthwhile experience for everyone.

Contributing Factors to Increased Parental Involvement

From personal observations, and based on local knowledge, we provide examples of programs offered in this school which have been quite successful in connecting Random Island Academy with the families and communities sending children to the school. One of us has been a teacher at this school for ten years. During this time, there have been four different administrators. The change in administration is only one reason for an increase in parental involvement. Other factors that have increased parental involvement over the past ten years are educational reform, school development, declining enrolments, the head start program and a new reporting system.

The administration certainly played a role in making parents feel welcome. With new men on the block, new and different approaches towards parental and community involvement arose. In 1992, when the Williams Royal Commission Report on Education reported to government with recommendations for change, Random Island Academy was not negatively effected, since it was classified as a necessarily existing school. The Commission also recommended that parents be given a meaningful role in the operation of schools and that school councils should be established in all schools to provide an avenue for parental participation. The School Councils have brought the school, family and community together at Random Island Academy. School improvement, now known as school development, has also had a positive effect in bringing all parties together. All parties work together to achieve common goals. Declining enrolments have reduced units and increased teachers' workloads. Parents have alleviated the burden created by some of the time consuming tasks that needed to be done. (The school resource centre has received a tremendous amount of work from parents.) In the head start program, parents and their four-year-old children come to school one day a month. At times, the parent stays in the classroom with the child and at other times the school has sessions for parents. Finally, the board's new K-3 reporting system brings parents, students and their teachers together to discuss their child's individual program. This has benefits for everyone involved.

Parental Roles

Parents have been involved in many traditional/familiar roles at Random Island Academy. Some of these include: fund raisers, resource centre workers, coaches for teams, assistant for field trips, chaperones for overnight trips, drivers for teams and other kinds of helpers. We will now highlight some examples of parental roles that may be familiar in many schools in this province, though the parent(s) in Random Island Academy have gone beyond the call of duty in discharging these.

The Cake Lady - As a parent representative on the School Spirit Action Team (a committee formed in the course of the school improvement process but still active even though the focus changed), a parent decided to bake a birthday cake for every student and teacher in the school. In the first year, she baked a small cake for everyone. This was apparently not enough, so in the second year she added a small helium balloon and a small bag of candy. The expense for all these items was

met out of her own pocket. This initiative has led to improved social relationships among students, teachers and parents.

Breakfast Program - It was felt that some students were coming to school hungry for various reasons. The principal found a parent who was interested in running the breakfast program. This parent took the initiative to start this programme for any student in the school wanting to avail of the service. He made three tables and a cart to be used for this program. He also recruited parents who volunteered their time to serve the students in the morning. Since there is only a small amount of funding available for this program, fund raising was also required, so he recruited parents to raise funds or seek donations from community groups/businesses to keep this program going. He ended the first year of the program with over one thousand dollars in the bank. The school and administration created this environment which has provided the opportunity for different people with different backgrounds to become leaders. They brought the leadership role of parents into the school.

Active Home and School - A very active home and school association came into being with a change in the administration. This group had goals that required a large amount of fund-raising. They reached their goal. At one end of the school, they levelled a piece of land, fenced it and then installed playground equipment for the primary and elementary students. At the same time, they levelled another piece of land and then paved a basketball court for the high school students. Since this time, they have continued fund-raising. Teachers were informed that if they had any needs/wants for resources to submit them in writing to the Home and School Association. They have helped out various school programs, i.e., bought sashes for the school choir, purchased a volleyball net, provided resources for the challenging needs classroom, etc. They are now discussing the possibility of preparing another piece of land for a soccer/softball field. This resource based organisation is thus helping to create the culture at Random Island Academy.

Teacher Appreciation Week - During this week, parents treat teachers to hot turkey dinners, pot lucks, and recess treats. Another year, parents set up a tree in the front entrance and asked students to write something special about their teacher and place it on the tree. These things certainly do strengthen the family-school-community connection. This is another great initiative as all people need to feel appreciated. This gives teachers a sense of belonging, as well as reinforcing their efforts.

School Facilities Action Team - This committee was formed from the school improvement process but still remained active even though the focus changed and is now known as school development. This committee is made up of parents, teachers and students. One function of the group was to take ownership of the front lobby and hallways in the school. This group brought the atmosphere of the home into the school by adding ideas about interior decorating. It has engaged in such

activities as painting lockers to co-ordinate colours, helping fund-raise to purchase a large oak display case for the main lobby, putting up wooden shelves and adding little trinkets, enlarging pictures of students and hanging in entrance and lobby, displaying seasonal bulletin boards, and purchasing plants for the entrance, lobby and display case. Creating a pleasant atmosphere can certainly affect people's attitudes.

Provincial Tournament - Random Island Academy hosted the Boys' Provincial 'A' Volleyball Championships in December 1998. This was a major undertaking for a small area. However, with parental involvement the task became easier. The parents took full responsibility for finding accommodation for all athletes. In addition, they organized the banquet. The recent reforms in Newfoundland education has stressed cutting programs and focusing more on the three R's. However, the role of sport (the physical education program) in this community had a major impact. It generated a tremendous amount of energy in the community and brought everyone together.

Literacy Committee - A committee was formed in the school that included the principal, the special needs teachers and some parents. This committee wanted to improve the literacy level of students and adults who lived on the island. With funding from a variety of sources, a section known as the literacy centre was added to the school. This centre contains thousands of dollars worth of books, computers, and computer programs to which the school has access. This facility is still functional today. The example shows that when the school invites people in, it can help enrich the community.

The Impact of Father's Participation in Children's Education

There has been an increasing interest in the father's interaction with children and its effects on their development. In the past few years, several books and research articles on the father's roles and relationships have appeared (Minnesota Extension Service, 1992) and, in particular, the role of fathers as it relates to their children's education has been more closely examined in recent years. While the father's role has been overlooked in research in the past, U.S. President Clinton asked all executive departments to include fathers in their programs, policies and research, where possible (U.S. Department of Education, 1997).

One of the more prominent reports in this area is a study carried out by the National Center for Education Statistics in the United States. Their October 1997 Survey, Fathers' Involvement in Their Children's Schools, found that children do better in school when their fathers are involved in their schools, regardless of whether their fathers live with them or their mothers are also involved (U.S. Department of Education, 1997).

The national study garnered enough attention to have U.S. Vice President Al Gore highlight it by commenting on it to the media. He said: "This study provides hard evidence about the powerful and positive influence that parents can have as full and equal partners when they make the commitment to help their children get a good

education. Fathers matter a great deal when it comes to helping their children succeed in school and this study should encourage millions of American fathers to step up to the plate and make a difference in their children's education" (U.S. Department of Education, 1997, p. 1).

The study also found that if mothers got as involved as mothers in their children's education, children would be studying harder and getting a lot more A's. Fathers make a powerful difference in defining expectation and challenging children to do their best. Overall, children in two-parent families where the father is highly involved get better grades, enjoy school more, and are less likely to repeat a grade, compared with those in which only mothers are highly involved (U.S. Department of Education, 1997).

Father's Involvement in School: a Newfoundland Perspective

There are many school programs in Newfoundland and Labrador that could be examined for father's involvement and the impact it has on their children's education. The authors have chosen some specific examples from Newfoundland and Labrador to demonstrate how fathers' role in their children's education has increased, although only slightly. They will also discuss the effects of the involvement on the child generally.

Parent Teacher Night

One of the authors observed At Bayview Regional Collegiate (grades 7-12) in St. Lunaire and Random Island Academy that, over the past three to five years, there has been an increase in the number of fathers who have attended parent-teacher night to discuss their children's academic progress. While the increase in the number of fathers has only been small, the concerns of fathers over their children's education has seemed to be quite genuine. Of the approximate 150 students at Bayview Regional Collegiate, roughly one third of their parents attended parent-teacher nights five to ten years ago - about one fifth, or 10 of these, were fathers. Today, about 50 percent of the parents of children at this school attend parent-teacher night. Thirty-five of these are fathers, who generally attend with their wives or partners.

This example demonstrates that fathers feel an increased sense of responsibility for the education of their children, and seem for the most part to be concerned that their children improve academically and socially. In the past, parents of children performing well academically have been the ones who usually attended the parent-teacher night. Recently, however, an increase in the number of parents of struggling students has become evident, especially in the intermediate grades.

School Councils

In 1992 The Williams Royal Commission Report recommended that parents have a larger role in the management of their children's school. In the revised Schools Act (1997) this recommendation was taken into consideration and school councils were mandated by law. Parents along with community and school representatives were given positions on the school council. It is anticipated that, since

decision making is one of the responsibilities of the council, men (fathers) would play a more predominant role.

Indeed, two-thirds and one-half of the school councils at Bayview Regional Collegiate and Random Island Academy, respectively, are males. The principal, teacher and community representatives on the school council at Bayview Regional Collegiate consist entirely of parents, with five out of eight representatives being fathers. At Random Island Academy the principal and teacher representatives are not parents of students at the school. Of the parent and community representatives two out of five are fathers. This seems to suggest that, at least in some areas, fathers' involvement is increasing.

Field Trips

Schools use field trips to enhance the curriculum. All parents are provided the opportunity to volunteer their services when assistance is needed. More parent volunteers are needed at the primary and elementary levels. At Random Island Academy mothers tend to be more involved when the trip entails greater distances, while fathers tend to become involved in trips within the local area where they are able to leave work for a short period of time to assist their child at the swimming pool or the stadium. There seems to be, again, an increase in the fathers' involvement.

Homework

Homework is an important aspect of a child's education in that it reinforces the concepts taught at school. The tendency for fathers more responsibility for their children's education translates into their participation in the homework arena. The authors have found that fathers have become more involved in assisting their children with nightly homework in the late 1990s as opposed to the early part of the decade and previous years. This became evident when the authors noted the increase in the number of fathers' signatures attached to a variety of school and homework for validation purposes. Formerly, the mother assisted in this area, as society deemed it to be her role. However, with the changing role of both parents - and with more women entering the work force - the parent-homework role too has changed. Some mothers now work outside the home during evenings, whereas it is more likely that fathers work a 9-5 job and are available during the evenings to assist their children.

Fund-raising

Many schools implement fund-raising initiatives throughout the school year in order to provide for more resources at school or to assist with costs for school trips. Some of these initiatives require the assistance of parents. More particularly, school bake sales, car washes or hot dog sales lend themselves to participation by parents. In this area, there has not really been an increase in the fathers' involvement. Mothers are known to bake cakes, prepare lunches for students and assist in other ways of fund-raising for the school. Fathers' roles, on the other hand, are much reduced.

At Bayview Regional Collegiate, for example, the school graduating class holds a fund-raiser each year to assist with graduation ceremonies. Mothers prepare

hot meals for sale in the local community. Much time and effort is spent on this task. Fathers' roles are generally limited to delivery of the meals throughout the community.

Volunteers

Parent volunteers are vital to the administration of academic and extra-curricular programs. The authors have observed a noted difference in the roles of both fathers and mothers as volunteers within the school system. Mothers appear to volunteer more directly within the school setting as readers in the resource centres or assisting in classroom activities with the teacher. Fathers, on the other hand, are more likely to volunteer as coaches with sports teams, or to lead discussion on careers during a school career day. This is certainly true at the schools in St. Lunaire and Hickman's Harbour.

Again, when schools like the one at St. Lunaire plan variety nights, it is mostly fathers who participate in "lip syncs", skits and other demonstrations of local talent outside the classroom.

How Can Schools Assist Fathers in Becoming More Involved in Education?

There are many ways in which schools can help fathers become more involved in their children's education. This is a challenge that the schools, school boards and departments of education must focus on. If, as the U.S. study indicates, fathers' involvement does affect students positively, then all schools should move forward on the following suggestions:

1. The school needs to be flexible in looking for parent volunteers. Currently, many schools only search for volunteers during the beginning of a school year. If this is the time of year when fathers are busy, or not at home due to work, then schools limit themselves to the number of fathers they are able to attract. Perhaps schools should contact fathers and mothers three or four times through the year in a proactive fashion so as to attract as many fathers as mothers.
2. Regarding parent-teacher interviews, the issue of flexibility is raised again. Teachers and administrators must be willing to meet with parents during any time of the weekday or weekend.
3. Schools need to demonstrate to fathers that their assistance is invaluable. For many years, because mothers have been mostly involved in the school, fathers find it difficult to break through. Teachers, principals and others must tell fathers that their assistance is needed and appreciated.
4. Literature pertaining to the benefits of fathers assisting with their children's education should be distributed by educators through mailings to the home or as part of school-community newsletters. This would most likely lead to more fathers becoming involved.

5. While the authors have not offered detailed discussion on non-resident fathers, it is nevertheless important that schools keep the lines of communication open with fathers who are not living with their children, keeping in mind court orders which may be imposed.
6. The literature shows that most parental involvement occurs when children are in primary and elementary school for both mothers and fathers. Schools must continue to emphasize to parents the value of their involvement, even at the high school level. Although mothers' education levels have significantly increased in recent years, fathers in urban centres most likely still maintain the highest level of academic achievement. Therefore, the fathers should become more involved in assisting high school aged children with homework and the more academic activities.

Father's Involvement - The Effect on the Child

When fathers become more involved in their children's school work and school activities, children feel better about themselves. According to the U.S. study, "the involvement of fathers, as well as mothers, in their children's schools is important for children's achievement and behaviour" (p. 77). "In father-only families, fathers' involvement increased the likelihood that their children get mostly A's and reduces the likelihood that their children have ever been suspended or expelled" (p. 77-78).

Also, families with high parental involvement in their children's schools are "more likely to visit a library, museum or historical site with their children and are more likely to have high educational expectations for their children" (U.S. Department of Education, 1997).

Unreachable Parents

The book **Everybody's House - The Schoolhouse** (1997) by Carolyn Warner with Marilyn Curry provides the inspiration for this section of the paper. Chapter 8, "Unreachable Parents - Reachable Children," contains a section called the "Parent From Hell". As a principal one of the authors have encountered several of these so-called "parents from hell". These individuals can become a thorn in the flesh of both teachers and administrators of a school.

Encounters with "parents from hell" can be very unnerving. They have their own version of a situation and they refuse to listen to reason. Many times they become irate and can be boisterous if challenged. Also, they will go to any means to prove their point. If unsuccessful they can become a menace to the school.

One particular incident occurred in the school where one of us was and is at present the principal. During recess a teacher came to the principal's office to advise him that he had told one of the Level II students to remove his outside coat and take it to his locker. This student reluctantly did so. Other students said that another student was in class with his outside coat on. The teacher asked if it was an outside coat and he said, "No, it's just a heavy shirt". Upon further questioning the teacher discovered that this piece of clothing was worn over a T-shirt and was the only item worn outside when the student travelled to and from school. The teacher then told him to remove it

and put it in his locker. He very reluctantly complied. The teacher advised the principal that he believed this would not be the last they would hear about this incident. Just after the bell rang for the end of recess, indeed, the parent of the second student arrived at the principal's office complaining that teachers were picking on his son. He was absolutely furious that a teacher would ask his son to remove his outside coat, insisting that it was not a coat but a shirt. After arguing for about ten minutes about the particulars of the incident and the stupid rules the school had, he left. At noon the principal returned to his home for lunch.

On returning to school, the principal met the same parent outside his office waving a page from the Sears catalogue which contained the item of clothing in question. He argued that even Sears called it a shirt. Since he was still mad and very unreasonable the principal took the page and informed him that he would look into it further. During the afternoon, the principal pondered over this situation and decided that he had better call the school district office to advise them of this incident in case this parent complained to them. After completing the last afternoon class the principal returned to his office only to discover the mother of the first student involved in the outside coat incident awaiting his arrival. He invited her into his office and she let go at him verbally. Unable to speak to her, let alone reason with her, the principal sat back and listened. After about fifteen minutes she finally gave up and left without considering the position of the teacher. The principal then decided to call district office immediately. He spoke to the assistant director who advised him that he had just finished speaking with the parent of the second student involved in the incident. He could not understand why this parent was pursuing this issue and supported the stand the school was taking. He indicated that he would call the parent and advise him that he supported the school's decision.

This incident illustrates how unreasonable parents can be when they become upset. There is no way to come to a mutual understanding and all an administrator can do is to listen and stand firm regarding their decisions. To try to push one's views will only inflame the situation because a so called "parent from hell" will not view the situation objectively. Often, they will not support the school no matter how hard the latter tries to resolve the situation. They feel that protecting their child is their number one priority. In the case cited above, the parent of the second child was inclined to be highly protective because the student had recently been diagnosed with diabetes. But this is not a sufficient reason to act the way he did.

As teachers and administrators we must realize that certain situations do occur and that we may be helpless to resolve them. We must not let them dampen our enthusiasm for our profession but look to the supportive parents for our energy. "Parents from hell" will always be with us but we must act as professionals and go about our business of educating children undaunted.

Conclusion

Random Island Academy has definitely been successful at building and maintaining positive, meaningful relations with their parents and communities. This has taken time. It appears that the school, students and teachers have all benefitted from parental involvement. The educators at Random Island Academy now know if they want to get and keep parents on their team they must provide an opportunity for

meaningful, purposeful involvement. We would encourage other schools to do the same. Remember, "they're out there, you need 'em, now go get 'em" (Warner, 1997).

One of the interesting points noted by the authors is the effect the seasonal nature of work in Newfoundland and Labrador has on the fathers' availability to assist with their children - not only from an educational perspective, but from a full family perspective. Work in the fishing, logging and construction industry, for example, sees most males away for extended periods of time during various points throughout a year. During these times, it is the mother who provides almost all support to the children. A noted increase in fathers' spending time with their children occurs when the males are at home.

The depth of fathers' involvement in school helps to strengthen the school-community-family relationship in diverse ways. The authors recommend further research to compare the provincial differences in fathers' involvement with their children. Perhaps the Canadian Government could undertake a survey to expand on the one carried out by the Department of Education in the US. It is not easy to build school-family-relationships since there are many obstacles to overcome, but the potential benefits certainly make the effort worthwhile.

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SOME OBSERVATIONS ON SCHOOL-COMMUNITY-FAMILY RELATIONS IN SELECTED SCHOOLS IN NEWFOUNDLAND

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This paper draws upon several years of our observations and experiences as teachers in Newfoundland schools and communities. In it we describe many ways some schools in this province have attempted to build positive family, community and school relations by involving parents in several school related activities. In doing so, we briefly (1) highlight the importance of the notion of producing local knowledge and local theories to educational change processes, (2) review literature on the benefit of parental and community involvement in education, (3) list 50 ways parents can help schools, (4) reflect on what local education reform means to parents and why parents believe that the school reform initiated by school boards will affect the culture of their schools in negative ways, and (5) suggest what needs to be done to avoid possible negative impact of school restructuring on the culture of the school.

Local Knowledge and Local Theorizing

Many writers recognize the importance of local knowledge and local theorizing. This form of knowledge and theorizing helps people to enhance their well-being in the concrete context in which they work and live. In the context of school-family-community relation, local knowledge and theories produced by teachers, parents, student and others help them to focus on the concrete relationship on which their daily lives depend (Geertz, 1983; Schibeci & Grundy, 1987; Tripp, 1987; Smyth, 1989).

Much information exists on the complex nature of the classroom in which teachers work with their students. Similarly, there is a dearth of literature on why and how parents want to get involved in their children's education in school, and how and why the school should encourage parents to get involved with their children's school.

There exist two sets of debates on the complexity of the classroom and on the partnership among schools, family and community. One discourse is "objective" and the other is "subjective". Both are important to fully understand the above relationships. The difference between the two debates, however, is that the objective discourse is generally perceived as a scientific discourse - meaning research based debates. In contrast, the discussions of the real classroom realities and the real relationship which the partnership among school, family and community builds upon makes different assumptions. These discourses maintain that the reflective observations of many stakeholders (students, parents, grandparents, principal, counsellors, members of the business communities, church people, politicians and

other school personnel) and the intuitions of experienced teachers are the major considerations for understanding the complex classroom relationship and family-school-community relationships.

In the context of the education change process, the debate of the real implies that sharing of local knowledge with others and reflecting on it critically is a necessary and useful practice, because it helps fine-tune the objective knowledge often used to initiate education reform. In this way, it is believed, using local knowledge will make education reform more effective and relevant in a given concrete community-school-family context.

Benefits of Parental (Family) and Community Involvement In Education

We make no attempt to review the massive literature in this area. Suffice it to mention that there is both a need and a demand for increased parental and community involvement in public education. While in the past evident mainly in private schools, parental involvement and the involvement of the community is growing in public education as well. Henderson (1981, 1987, 1994) has reviewed a total of 125 research studies which examine evidence regarding the effect of parental involvement on student academic achievement and the performance of schools. Schools that work well with families show improved morale, produce higher ratings of teachers by parents, and have better reputations in the community (Henderson, 1994).

Over the past thirty years many research studies have focussed on the recognition given to the crucial role parents play and have put emphasis on the rights and responsibilities of parents to influence educational programs (Henderson & Beria, 1994; Olmstead & Rubin, 1983). One of the most important findings which the research overwhelmingly indicates is:

When parents show a strong interest in their children's schooling, they promote the development of attitudes that are key to achievement, attitudes that are more a product of how the family interacts than of its social class or income. If schools treat parents as powerless or unimportant, or if they discourage parents from taking an interest, they promote the development of attitudes in parents, and consequently their children, that inhibit achievement (Henderson, 1981, p. 3).

Epstein (1983) reports that when teachers were committed to increasing parent involvement, the parents "...felt that they [the parents] should help their children at home;understood more about what their child was being taught in school;were more positive about the teacher's interpersonal skills, and rated the teacher higher in overall teaching ability..." This change in parents' perceptions is true even after socioeconomic status and student ability are taken into account (Epstein, 1983; Eagle, 1989). Furthermore, if increased parental involvement creates the perception that the school is more effective, it is likely that student achievement will increase (Caplan, Choy, & Whitmore, 1992).

Henderson (1987) points out seven key research facts we should know, based on some of the most important research findings about parent involvement. These are:

1. The family provides the child's primary educational environment.
2. Involving parents in their children's formal education improves student achievement.
3. Parent involvement is most effective when it is comprehensive, long-lasting, and well-planned.
4. The benefits are not confined to early childhood or the elementary level; there are strong effects from involving parents continuously throughout high school.
5. Involving parents in their own children's education at home is not enough. to ensure the quality of schools as institutions serving the community; parents must be involved at all levels in the school.
6. Children from low-income and minority families have the most to gain when schools involve parents. Parents do not have to be well-educated to help.
7. We cannot look at the school and home in isolation from one another; we must see how they interconnect with each other and with the world at large.

It should be kept in mind that not all types of parental involvement lead to improved performance. As Epstein and Connors (1992) state: "Research is needed that provides information on the effects of specific practices so that schools can more purposely choose practices to help them obtain specific benefits from their involvements in school and family connections" (p. 13). Henderson (1988) states, "...parents involvement works better when parents are given a variety of roles to play" (p. 150) and "For the wheel to turn, parents must play all the roles. The conclusion of this series of studies is that the better planned, the more comprehensive, and the longer lasting the parent involvement, the more effective the schools in the community become" (p. 151). Becher (1984) agrees that "all forms of parent involvement strategies seems to be useful. However, those ...that offer more types of roles for parents to play, and occur over an extended period of time appear to be more effective" (p. 18).

Henderson and Epstein have developed several models of classification of parental involvement. Henderson (1987) mentions three, namely (1) improving the parent-child relationship in the context of the family; (2) integrating parents into school programs; and, (3) building strong relationships between school, family, and the larger community. Epstein (1994) notes six types of parent involvement, namely (i) school help for families in the area of basic family responsibilities; (ii) school-home communication (e.g. basic obligations of schools for communication from school to home); (iii) family help for schools (involvement of parents to assist teacher); (iv) involvement in learning activities at home (homework, etc.); (v) involvement in governance, decision making, and advocacy (school improvement or school site councils, etc.); and, (vi) collaboration and exchanges with the community (support services, etc.).

50 Ways Parents Can Help

The parents can help schools and students in following the 50 ways:

Come to School to Assist.

1. Share information with a student or class about a hobby.
2. Share information with a student or a class about a career.
3. Share information with students about a country you visited or lived in.
4. Tutor one or a small group of students in reading, math, or other area.
5. Help coach an athletic team.
6. Help check a student's written work.
7. Help put out a school or classroom newsletter (can also be done at home).
8. Help sew or paint a display.
9. Help build something (such as a loft in a classroom or new playground).
10. Help students work on a final exhibition or project (can also be done at home or workplace).
11. Help answer the schools' phone.
12. Help plan a new playground for the school.
13. Help plan a theme-based presentation for students.
14. Help present a theme-based program for students.
15. Demonstrate cooking from a particular country or culture to students.
16. Share a particular expertise with faculty (such as use of computers, dealing with disruptive students).
17. Help students plan and build an outdoor garden or other project to beautify the outside of the school.
18. Help coach students competing in an academic competition (such as Odyssey of the Mind, Future Problem Solving, Math Masters).
19. Help bring senior citizens to school to watch a student production.

Help Arrange Learning Opportunities in the Community.

20. Help set up an internship or apprenticeship for a student at your business, organization, or agency.
21. Host a one-day 'shadow study' for one or a small group of students about your career in business or some other organization.
22. Go on a local field trip with a teacher and a group of students.
23. Go on an extended (3-5 day) cross-country field trip with a teacher & students.
24. Contact a particular local business or organization regarding possible cooperation.
25. Help to create a natural area outside the building where students can learn.

Serve on an Advisory or Decision-Making Committee.

26. Serve on the school-wide site council.
27. Serve on a school committee that reports to the site council.
28. Serve on a district committee representing the school.
29. Serve as an officer in the school's PTA.
30. Help organize a parent organization for the school.
31. Help design a parent and or student survey for the school.

32. Help conduct and or tabulate results of a parent survey regarding the school.

Share formation or Advocate for the School.

33. Serve as a member of a 'telephone tree' to distribute information quickly.
34. Write a letter to legislators about the school.
35. Write a letter to school board members about the school.
36. Go to a school board meeting to advocate for the school.
37. Go to another school to provide information about this school.
38. Help design a brochure or booklet about the school.
39. Help translate information from the school into a language other than English.
40. Help translate at a parent-teacher conference for people who don't speak English well.
41. Provide transportation to a parent-teacher conference for a parent who needs a ride.
42. Write an article for publication in a magazine about the school's activities.
43. Help arrange for a political leader (mayor, city council, state representative, member of Congress) to visit the school.

Increase Financial Resources Available to the School.

44. Help write a proposal that would bring new resources to the school.
45. Donate materials to the school.
46. Arrange for a business or other organization to donate materials to the school.
47. Help with a fundraiser for the school.

Help Other Parents Develop Their Parenting Skills

48. Help teach a class for parents on ways they can be stronger parents.
49. Help produce a videotape for parents on ways they can be more effective parents.
50. Help write, publish, and distribute a list of parenting tips.

School, Family and Community Relations in Newfoundland

From personal observations and based on local knowledge we provide examples of programs offered in some urban schools in this province. Many of these programs have been quite successful in connecting schools, families and communities.

Clerical Support

Time constraints make it difficult for teachers and staff to complete many clerical tasks demanded in the delivery of programs. Community volunteers provide supports to allow staff the time to focus on the academic needs of children.

- Photocopying service
- Laminating
- Typing

- Answering phones - this would occur prior to school, lunchtime or after school hours
- Mail - stuff envelopes or prepare mail to go home to parents
- Phone Tree - starts a chain of home notification in the case of a major event or emergency
- School enhancement - this incorporates tasks such as decorating bulletin boards, creating signs and painting murals

Fundraising

Fundraising efforts have become an integral part of the school organization. The financial limitations placed on schools and the services they are able to provide dictate the necessity for community involvement in terms of providing financial assistance and supports to the school. The level of support provided determines the extent to which the school can effectively provide programs and initiatives to enhance the educational environment within our schools. Some schools conduct many activities throughout the year while others direct their focus and energy to one or two larger activities. There are a number of suggestions and ideas for community and school participation that have proven to be effective means of conducting fundraising efforts.

- Community and/or Family Fun Bingo
- Card parties
- Bottle drives
- Chocolate/bar sales
- Gift wrap sales
- Raffle tickets
- Dances
- Walk-a-thon/3 mile run
- Lap-a-thon - many schools focus on this activity as a major fundraiser for the year
- Collection of grocery tapes - The major grocery chains reimburse \$1.00 per every \$500.00 proof of purchase
- Pizza day - this provides a treat to the children and also provides extra revenue to the school

Program Supports

The integration of students at varying academic levels, as well as the methods by which curriculum must be delivered, have changed during the past several years. This makes it difficult for teachers to give the amount of individual instructional time students need. To enhance educational opportunities, volunteers support the programs in a variety of ways.

- Classroom helpers - Volunteers, individually or in small groups, complete reading activities, assist with learning centers, art classes, or any tasks required by teachers.
- Resource centre - The role of "librarian" is assumed by the volunteers to allow the resource teacher time to collaborate with other teachers and team teach units.

- Oral testing - Volunteers are trained to oral test and scribe for students who require this service.
- Computer lab - Volunteers, who have basic knowledge of computer use, work with teachers to monitor and trouble shoot when students experience difficulties.
- Field trips - Extra supervision is required for functions that occur off school grounds.

Extra-Curricular Events

Many extra-curricular activities would not be implemented in schools without the support of parents. School spirit is an important aspect of the everyday running of a school. It builds a sense of ownership and commitment to the goals and overall creation of a positive environment for the school. The following list provides ideas and suggestions by which parents can be involved in building school spirit.

- Reading Club - Parents, care givers, etc... are invited to do fun reading activities with students.
- Drama club - Parents are involved with direction, set, design, costume design, etc... for school performances.
- Newspaper Club
- Chess Club
- Computer Club
- Writer's Club
- Art Club
- Intramural Groups
- Sports teams/Aerobics
- Cheerleaders
- Beavers/Scouts/Cubs/Brownies/Girl Guides etc.

Social Supports

Many schools offer various supports to students so that they can become more involved in school activities. Due to restrictions placed on parents in today's society, some students' basic needs are not being met in the home environment. Schools have taken the initiative to provide supports so that these students reach their potential. These include school wide programs and specific initiatives to ensure that all students have the opportunity to learn in a positive and productive environment.

- Breakfast Program: Schools have recognized that many children are coming to school not properly nourished and felt it was affecting their progress in school. Breakfast programs can be implemented to address hunger and eating disorders. They may involve teachers and parents volunteers.
- School Lunch Program: Lunch programs are offered to students in many schools. The confidentiality of these programs allow high risk students to have lunch without being stigmatized. It allows students to increase their self-concepts.

- Kiss and Ride: Parents are encouraged to drop their children off at a designated place. Volunteers direct the flow of traffic so that students may enter school safely.
- Transportation: Schools provide transportation to students who normally go home on the school bus so they can participate in after school activities.
- Parent -Teacher Socials: These allow parents and teachers to interact in a non-threatening, social environment.

Services For Parents

Parenting is the most important job given to individuals in today's society. Parents face many complex issues each day. Many parents are lacking appropriate skills to help them face these challenges. Schools have recognized this need and have undertaken the initiative to offer services to parents, such as the ones listed below. Parents become more confident in taking an active role and providing a commitment to the education process.

- Educational and parental skills improving programs
- Computer classes for parents
- Parent Career Night - offers an opportunity for parents to avail of information on careers
- Parent resource room with literature for parents - provides an informal setting whereby, parents may view and discuss educational literature and current initiatives
- Drug awareness programs for parents - provides information and tips parents should be aware of in understanding children and the use of drugs
- Literacy programs delivered to high risk parents of pre-schoolers - prepares parents on procedures to prepare children for the commencement of school

Reflecting Locally: The Culture of the School and School-family-community Involvement in the Context of Education Reform in Newfoundland

What does education reform mean to parents, students, and communities in this province? How does it affect them? We reflect on these questions and provide an analysis of the education reform scene in this province as it relates to parental involvement in schools. We have already described in this paper how parents are involved in some schools in this province. But in addition to this information, we looked at the comments made by parents and students about education reform in the local newspapers, mainly *The Telegram*, in the last several months.

We also listened to comments parents made during school council and town hall meetings. It is our impression that many parents perceive that the current plans adopted by school boards in this province to restructure schools will negatively affect the school culture, which in turn will have an adverse impact on students and on school-family-community relations. We start with a brief description of education reform in this province, (Newfoundland, 1992).

Historically schools in Newfoundland and Labrador had been organized on religious denominational lines and were funded by the government. This has now changed. It is an historic change. Starting in September 1998, there was no publically funded denominational school system in this province. This change has taken place against the will of many parents who cherished the traditional denominational school system in this province. As a result of this, efforts are being made to establish private denominational schools in this province.

Furthermore, the provincial government and school boards wanted to rationalize the educational system as well. This has led to the policy of downsizing. This in turn, has triggered school and program closure, as well as cuts in teaching positions in many parts of the province. Also, school boards have implemented a new neighborhood attendance zone policy. For this purpose new neighborhood boundaries were created by using GIS computer program.

Many parents consistently protested against this restructuring plan for their neighborhood schools for many reasons. In spite of these protests, the school boards have restructured the neighborhood school boundaries, effective September 1999.

To be sure, school reform is nothing new in this province and elsewhere in the world. The school system everywhere has undergone numerous changes in policy and procedure in the past two centuries. It is true that although the basic structure of education has changed very little, reforms have had an influence on the direction of education in North America, including in this province. For example, historically schools have seen the introduction of the lesson plan, learning objectives, and student goal setting. At present, many school reforms are driven by the idea that students need to be more competitive. The schools must prepare all students to be productive in the world market place. Universities want applicants who do not lack skills and competencies needed to succeed in a tough program of study. Business leaders are concerned about the future of the workforce in a highly competitive global economy. Students are expected to have a good understanding of the core academic subjects. They must also be able to solve problems, make decisions, and be prepared for responsible global citizenship. Students are expected to prepare for productive employment in our province's and nation's modern economy.

There is no doubt that parents realize that education reform is needed and that it will affect parents and their children in many ways. It will depend on the type of changes that are made in their distinct, neighborhood and communities. If reform is related to the subject area, it would mean that their children may be introduced to new content, materials, standards, and ways of learning and teaching. These changes are usually made as a result of a particular education goal or objective adopted by their schools or the school board. On the other hand, if reform is related to the administrative process, they and their children may not even notice it. If a decision is made to close their schools, it will affect their communities in a fundamental way.

Finally, many parents have noted that school reform in this province may also affect school-family-community relationship. As mentioned earlier, a sizeable number of parents in this province believe that restructuring plan adopted by school boards, and endorsed by the provincial government, will negatively affect the culture of their

schools. In their views, and we are paraphrasing here, schools develop pervasive cultures which include shared attitudes and beliefs about the families of children who attend them. These beliefs, in turn, shape the school's patterns of interaction with families and children. Parents realize that it takes a long and persistent effort to build school-family relationship. It is a long term process. The current school restructuring plan adopted by school boards requires moving of hundreds of students from one school to another and from one neighborhood to another within a very short period of time. It will also require new bussing arrangements. Parents see moving their children from one school to another as having negative impact on them - academically, socially and culturally. They see the whole process as demoralizing for themselves as well for many reasons.

They feel that, as parents, they have worked hard to establish friendly working relationship among themselves and school personnel. This warm relationship made it possible, according to them, to equip their schools with needed resources and programs. Most of these things, if not all, will be lost during the fast-paced school restructuring process.

Also, as mentioned earlier, parents see their involvement in schools as a cultural work through which they have been able to build a particular school culture to their liking and the liking of their children and school personnel. Now they perceive that school restructuring, which they oppose, will negatively affect the school culture, which in turn will affect students achievement, aspiration and expectation - occupational and educational. They also believe that many other aspects of school restructuring, for example crowded classrooms, will adversely impact their children's social relations, self-esteem and well-being.

To conclude, we believe it is necessary to monitor the impact of school reform on the culture of the school. If the impact is going to be negative, as so many parents believe, the challenge is to ask ourselves what can families, schools and communities learn from this experience? What would it take to rebuild a new form of positive school culture? How would parents, children and school personnel be motivated to re-establish friendly and warm relationships? Hope and despair are nothing but two sides of the same coin. We must build on the hope side, taking into account the despair side.

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**CULTURAL AND SOCIAL CAPITAL, PARENTS' INVOLVEMENT AND
ACADEMIC AND SOCIAL ACHIEVEMENT OF CHILDREN IN SCHOOLS:
REFLECTING ON SOME SUGGESTIONS FROM A SOUTH ASIAN AMERICAN
MOTHER**

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This paper presents excerpts from a conversation I had last summer with a mother from India who lives in California. I was deeply impressed by her enthusiastic outlook on family-community-school relationships, her uncanny ability to describe nuances surrounding things that matter most in understanding these relationships, and how these relationships impact on achievement of children in schools. I will identify this mother as 'Channi'. Channi, I believe, in Punjabi - one of north Indian languages - means a loving person and sometimes it also means that soothing light from the moon that shines on Mother Earth. This conversation was about her involvement in the education and schooling of her four children. It is a success story which provides many insights which may be useful for parents and various stakeholders interested in the educational success of children, particularly in the context of school, family and student engagements. I try to present aspects of my conversation with Channi in the context of current research orientations (discourses) in the sociology of education. These discourses make use of such concepts as "social capital" and "cultural capital", and other related concepts. This variety of sociology of education orientations focus on explaining school and college achievement and occupational attainment among some Asian immigrant children and other minority group immigrants in North America. Below I provide a very brief and selected review of research in sociology of education, describe the background in which my conversation with Channi took place, and then present the excerpts from that conversation. Finally, I draw attention to some elements in Channi's story which invite us to reflect on the role Asian American Indian grandparents could play in their grandchildren's academic, social and cultural lives.

A Review of Research in Sociology of Education

Various stakeholders in the education of children - parents, families, teachers, the state; religious and social institutions representing interests of various cultural, class and gender groups; neighbourhoods and communities; school boards and other local authorities; educators, reformers, social scientists of all stripes; mass media, popular cultural groups, business and other interest groups - show concern with raising children's achievement in schools and the effectiveness of schools as public institutions in increasing the achievement levels of children of various social and cultural backgrounds who attend them. Unfortunately, research study after research study, as well as observations by the lay public, especially parents, point to the unequal levels of achievement among children who attend schools. Two explanations are generally offered, among others, to account for unequal levels of achievement in schools. One explanation focuses on what happens within the walls of schools - that is, such things as negative student - teacher interaction, lower teachers' expectations, bigger class sizes, teachers' lack of training, infrequent testing of students, etc. - as factors associated with unequal student achievement. The second explanation is that families' and communities' networks matter more in the raising of children (children's

socialization) and in motivating them to engage schools in their neighbourhood and teachers in them for high academic achievement. To be sure, such explanations do not ignore findings of many studies in sociology of education which show that a student's social-class background and neighbourhood attributes still remain the main predictors of achievement in schools. However, social class-based explanations of school achievement fail to fully explain the high level of achievement among students who face high barriers to schooling, such as youngsters from working-class families and ethnic groups in American schools and, also, in schools in other countries. The studies making use of the concepts of social capital and cultural capital (Bourdieu & Passeron 1983, Bourdieu 1977, 1983, Coleman 1990, 1988, Fuller & Hannum 2002) - the two concepts which have lately come into vogue - help explain the mechanism involved in the class reproduction (as well as individual being exceptional: exceptionalism) when children from those backgrounds do get ahead in schools. Thus, Wong (2002, p. 161-62) stated that:

"the past ten years have seen a surge of research how non-standard forms of capital affect various sociological phenomena, including educational inequalities, labour market outcomes, and voluntary associations in community..."

Wong further explained that:

"while the relevance of these two forms of capital (especially social capital) is still open to debate --- , they have been incorporated into a unified neo-capital theory that combines various theoretical traditions such as Marxist class theory, neo-classical microeconomic theory, social network analysis, and social reproduction theory... In sociology of education, the rising interest in cultural and social capital reflects a desire to go beyond conventional measures of socio-economic background to gain a better understanding of the quality of social environments that parents provide to their off-springs, as past research shows a weak relation between conventional indicators and the quality of family environments C The weak relationship suggest that besides tangible material resources, the family provides more elusive forms of resources that can foster cultural and social skills, motivations, and commitment to learning."

Our own research and research conducted by our graduate students on parents' involvement in their children's education in small communities in Newfoundland show that parents engage in a variety of activities at home and in their communities to help their children read well and achieve high in schools (Oldford-Matchim & Singh 2002, 2001; Lynch 2000). This they do through their networking with other people and social and cultural service-providing agencies in their reach. Moreover, our research shows that mothers and fathers engage in different types of social networking in communities to help their children do well in their school and in home learning. Other researchers have made similar observations as Wong (2002, p. 165) stated that:

"past research has found that parental social networks and their involvements with teachers, students, and other parents have important implications for educational outcomes in the United States...".

Another related study by us and many other researchers has shown that students consider their parents, grandparents and other members in families and their communities (such as teachers, church and religious leaders) as their academic significant others. Positive social and cultural expectations held by significant others help students cultivate high/positive social and academic self-concepts. Positive self-concepts, including positive self-concept of academic ability, helped students to achieve high in schools (Singh 1977, 1984, 1986; Brookover & Erickson 1969). Further, in the context of Asian Indian families, our research showed that grandparents were deeply concerned with the education of young people in their communities and in homes. In general grandparents were "sponsored" by their younger family members already living in North America to join them and, thus, were part of the "first wave" of Indian immigrants in North America. These elderly (grandparents) themselves did not grow older in the context of North American society but strongly believed that formal higher education was the main route to social mobility for their youngsters in North America. They also believed that young people in their community needed to be involved in their religious institutions so that they could strike a balance between their material aspirations and spiritual needs. These elderly thought that in traditional Indian family and community settings they had a relatively better chance to influence young people in spiritual and educational matters, because of the connections the elderly had developed with larger religious and social institutions available to them at the time they immigrated to Canada or the United States. (Singh 2000). As their sons and daughters grew older in various North American social and cultural contexts and began to have their own young children, the elderly believed that their status in families and communities had also changed (Singh, Martin & Singh 1991). With this change, they believed, the value of the social and the cultural capital which they once held had decreased. Many "first wave" Asian Indian elders now say that they have been regularly subjected to various types of abuse by their sons, daughter-in-law and other care-givers in their families (Singh, Mutta, Kaur and Singh, 2004). On the other hand, the new generation of older parents, who are getting older in North American social and cultural context, seem to have more extended and locally rooted networks in their communities, neighbourhoods and in larger North American society. This is so partially because this group of aging people are relatively more educated and most of their education has been in North American schools and universities. They seem to be in a better position to use the social capital and the cultural capital to help their children to succeed educationally and socially in North American contexts.

However, helping their children to improve social status through educational attainment via the use of the social and cultural capitals one possesses is not that straightforward, because there is sharp distinction made between the concept of social capital and cultural capital. The latter focuses on particular values, attitudes, or knowledge that families hold and pass on to their children. In contrast, the concept of social capital focuses on the trusting and positive qualities of the existing networks families have managed to create in their communities and neighbourhoods which are useful for the child's social or cognitive development. It is the schooling-focused relationships that are important.

In everyday practice what the social capital focused research, the significant others/self-concept/achievement research, and the roles of elderly in families really means is that mothers, fathers, grandparents and other "significant others" must learn to use the schooling-focussed networks effectively; just the existence of any set of networks is not sufficient in improving their children's position in the social stratification system. In today's society improving one's position in the social stratification generally means getting well-paid jobs and other things which are considered by a society as worth having at a given time.

Coleman and others (1988) have elaborated on these two concepts - the social capital and the cultural capital - in much detail. Points made by them further clarify the importance of parental networks and their involvements with various educational stakeholders in improving the educational outcomes of children and schools. For example, Coleman (1988, S110) pointed out that "if human capital possessed by parents is not complemented by social capital embodied in family relations, it is irrelevant to a child's educational growth." Bourdieu (1983, p. 248) defined social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintances and recognition - in other words, memberships in a group." Bankston III and Zhou (2002, p. 15) explained that:

"Coleman defines social capital in terms of network closure. Social capital exists, in Coleman's view, when there are close and closed networks among a set of individuals, promoting advantageous behaviour. When parents, for example, maintain close contacts with their own children and with other adults who affect the lives of their children, parents and other adults in the parental networks can impose consistent norms and standards to direct the behaviour of young people."

However, Bankston III and Zhou (p. 13) suggested that:

"the commonly used familial closure version of social capital does not provide an adequate explanation for the school achievement of children in immigrant families. Instead, we suggest that extra-familial institutions, notably immigrant religious institutions, contribute to the school performance of children."

The Conversation with Channi

Background information

As background information, Channi and her husband have been living in the United States for more than thirty years. People enter into marriage relationships in many different circumstances and in different ways. My parents always told me that marriages are made in the heaven and, at best, can be appreciated as chance events. The word in an Indian language is "SANJOG", I was told. That is to say individuals get married by chance, but it a spiritual chance. This way of seeing marriages may look odd to mainstream individuals living in North America, where the emphasis is on knowing each other before one gets married. Many mainstream North

Americans talk about dating, dating relationships, date rapes, rapes in marriages and living together for years before committing to legal marriage or common law marriage. After all this, people still have to face the possibility of separations, divorces, custody of children and the well-being of children and families. To day there are many forms of families that are legally recognized in North America. A great number of relationships carefully crafted, arranged or not arranged, go sour everywhere. Indian families are no different. Contrary to stereotypical beliefs, in Indian families conflict in marriages is always there and separations and divorces are now a common scene in Indian households. Channi's marriage was an arranged marriage. It is still a very much common practice in India. In most well educated middle class families this practice is rampant. However, in North America, some still see Indian style arranged marriages as exotic and repressive for women. So many movies have been made and novels written lately on the subject of Indian style arranged marriages. These films and novels have become part of the popular global culture, fetching big sums of money for successful movie producers and writers. Channi holds college degrees from India and got married to a man who holds a graduate engineering degree from the University of Chicago. After marriage she immigrated to the United States. They were married more than thirty years ago and are still happily married. They have four children. All of them were born in the United States. At the time when the children were young, only Channi's husband worked. His position was relocated by his employer several times and as a consequence the family was made to move to various parts of the United States. Channi found this situation very stressful. She realized at the very early stage of parenthood that constant moving the family from one place to another place was dysfunctional for children's schooling and growing up. Although each move fetched more income for the family, Channi decided that this should not be the main concern of the family. The first concern should be the well being of the children and the whole family. So she was instrumental in convincing her husband and children to move to California. The husband accepted a less well paying job with the State of California. This is not to say that economic capital was not a concern for her and her husband. The point is that as a mother and partner to her husband, she had the foresight to think of the value of other forms of capital B social and cultural - as being important for her family, particularly for her young children. The move to California was well coordinated. She and the family looked at many neighbourhoods, surveyed the schools in the surrounding areas, the mix of the population and availability of religious and social institutions suited to the tastes of a young and growing Indian family in the American context. The children went to local schools. In time they all earned good scholarships to further their education. As the time went by, the children grew up in the chosen community and the couple themselves became middle-aged parents. As things stand now, one daughter received scholarship to attend University of California at Berkeley and graduated from there with a B.Sc. degree in biology and is now working with a famous health organization. The older son is studying at Stanford on scholarship. The next younger daughter is studying medicine in Granada. The youngest son is finishing high school and has already published a book in the area of computer technology for children. This sort of achievement for a family is remarkable from any standard. However, it is not solely because it is an Asian family, as many families of diverse backgrounds excel in this direction. We are not talking here about Asian American as a "model minority". According to Kaufman (2003, p. 143) this theory:

"argued that Asians should serve as a model to other minority groups of how to succeed in US society. Asian success was attributed to hard work, a high value on education, and a propensity to not engage in political movements that challenged racism. Asian Americans were portrayed as politically passive and economically successful."

Asian activists and scholars began to challenge this concept as "the myth of the model minority" as soon as this theory was put forward by social conservatives (Lowe 1996, Moya 2002, Prasad 2000, Wu 2002, Zia 2000). Kaufman (p. 144) explained that:

"the myth of the model minority implies that while members of other minority groups have agitated for their liberation, Asians are doing fine simply by keeping their noses to the grindstone and not complaining. This ignores both the extent to which Asian Americans have agitated for their rights and against discrimination, and the extent to which they have benefitted from the agitation of other groups."

And further Kaufman says:

"the idea that members of other groups of people of color should act like Asian Americans in order to succeed in the United States ends up working to divide people of color and pit them against one another."

The Conversation

The actual conversation started when one morning I drove with Channi to drop her son at the local high school. She happened to say that this was a high achieving high school in the area. I just asked her, simply out of curiosity; what makes this school a high achieving school and how come her children had proven themselves to be high achievers. She articulated answers to my questions in a form of an on-going conversation during my two-day stay with the family. While driving through the neighbourhood during the early rush hour she kept responding to my queries. She spoke in the first person using such phrases as *I do CA*, *I have done this CA* *I believe CA* and *I think CA*. I listened to her with great interest. When she was away teaching during the day, I reflected on the long conversation and made some notes. During the process of making notes I discovered the salient points she was trying to make. I jotted down ten points which I believe she made. They provide us with some insights into the operation of the social capital and the cultural capital in the context of an Asian American family. More specifically, it provides insights into an immigrant Asian mother's role in the high academic and social achievement of children in a two-parent family setting.

Insight number 1: Get Involved with Your Children's Life in the Very Beginning of Their Growing up And Remain Involved. This is what Channi said:

"I have been involved in my children's life activities, everything they have done -including their lives in the school, at the soccer field, football games, etc. From early swim lessons to gymnastics and all the way up to high school soccer game, I have made it a point to sit through every

single event of each of my children. I was there when my children swam their first stroke or shot their first basket. When they turned around to see if I were watching, our eyes always met, even if just for a moment, telling them that they were being given the 'thumbs up'."

Insight number 2: Volunteer Your Time Generously. This is what Channi said:

"I have volunteered time for kids' school and for the community in many ways. I volunteered unlimited hours in their classrooms; I drove on field trips, and I worked and helped on their school projects and made everything a fun event. When I found out that their school did not send a representative to the Spelling Bee, I organized a school-wide ... Spelling Bee Competition and made sure the tradition of sending a representative continued every year after that. I was there when the children received awards or recognition no matter how small it was."

Insight number 3: Make Your Family a Loving, Caring place by Sharing Leadership, Planning, Decision Making and Management Functions of the Family. Here is what Channi said:

"I have not neglected my family. My family had always been and will always be my first priority. We sat together several times during the week and discussed the happenings, time management and everything in our lives. Planning is the best tool to put everything in place. Planning makes organized events occur in a smooth way. Sometimes after these discussions, certain events were let go of because of their lack of interest, time, or importance compared to other events."

Dinner and other meals were always a top priority in my life and no matter how simple these meals were, they were always nutritious and well balanced and related to our children growing likes and dislikes. Traditional foods were always included with American foods for our family.

Insight number 4: Don't be Timid or Shy to Voice Your Desires and Needs to be Recognized by the Family Members. Here is what she said:

"May be I have a need to be recognized - my contribution to the family appreciated. I feel hurt sometimes when other people look at our successful family and make comments such as, "The children have an intelligent father," or, "their father gave his all to the betterment of his family." Even though this is partially true because my husband, J, has never restricted my involvement in our children's growth, I still do not agree with their comments. I have done all the work, every single minute of every day. I feel I need to be recognized in the way I want to be, like be given a trip to a place of my choice, when and where I want to go. Sometimes I simply want to buy an object of my choice."

The above insight can be added in here. I have never had trouble being openly communicative with everyone. I have disclosed my feelings, needs, and desires for all. This has sometimes led to friction because in my culture, women are generally not

supposed to express emotions openly. If one is married to a respectable man and has a good set of healthy children, what more could she ask for? She is already blessed. I think differently and my need for appreciation is growing as I get older.

Insight number 5: Be Willing to Communicate and Disclose Your Feeling and Opinions Openly and Squarely with Your Family Members and Others in The Community. Here is her voice:

"I have good communication with J, my husband, and children. We talk and discuss things. There have been times when I have felt that all of this is one-sided. Whenever I have requested that my family provide me with more appreciation, they don't understand my desire. For many years, they have seen only the receiving side B I spent time on them, listened to them, and did everything they wanted."

It is my fault for forcing me to totally fit the needs and desires of others. I should have catered to my wishes on my own, but it always feels good when others notice and appreciate. Maybe some day they will realize my need.

Insight number 6: Don't be Timid to Share Your Success Stories with Others by Providing Useful Information willingly and freely to others. In her words:

"I share my success stories with others. I give others information freely and willingly, so that their children can reach their goals. Families can do things they want to do for their children and for themselves." Where I came from, anyone's successes and achievements were generally met with negativity. In fact, the closer I was to anyone, the higher the level of negativity and put downs. Words such as, "Oh, she doesn't cook proper dinners and lunches and does not have much to do so she's doing all this useless stuff which is going to get her nowhere," or, "she will never get married because she doesn't have any homely or wifely traits," or, "she is from an average family, so she has to find the limelight somewhere else."

These put downs hurt me and I saw that for every positive step I took in my country [of origin, India], there were hundreds of steps that I had to move backwards. It was "who you knew" or "how rich you were" that made all the difference. I was determined to get away from all this and find a new life in the U.S. My wish came true when I married my husband who had been a student in Wisconsin and had come home to find a wife.

That was a new start in my life. I quickly realized that you don't need to know someone important or high up on the ladder to move on. I could make contacts with people over the telephone and get things done. People were very helpful, kind, and polite. This gave me the much needed boost that I had lacked when I was back in my culture.

I was appreciated, encouraged, and always looked upon as a special person. My morale was high, my husband let me do my own stuff, and there were no interruptions or negative remarks. I was on my way up.

When I had my first and second daughter within two years of each other, my energy was at its prime, and my future was unlimited. I was free to venture my way out into new paths. Everything I had missed out as a child, I gave to my children B not material things, but experiences, time, and energy. I was a fireball, always on a roll.

My family was completed when I had 2 sons later. God and good fortune have always been on my side. I have made many mistakes, but I have learned from them. I have grown with my children and have been able to sit back and smile, thankful that all my efforts have borne sweet fruit. I am thankful to this wonderful society, my husband, and to the all powerful force up there that gave me freedom, help, courage and blessings.

I am waiting for one more thing B when my children get married and bring me grandchildren. I will be ready to run again. Right now, I am happy being myself.

Insight number 7: Don't Be Timid, or shy Celebrating Each And Every Little Achievement of Your Family and Children. Here is what she has to say:

"I have been celebrating things my children have achieved in their lives so far. I have always believed in the saying, "Do unto others as you would others do unto you." I have celebrated with joy and enthusiasm any achievement my family has gone through. We had celebrations such as a picnic in the park, or a family barbeque in the backyard, or even baking brownies and giving a small gift. Sometimes we would have a huge party and sometimes we would have a religious get-together. Every event, no matter how small, has been celebrated over the years. We have celebrated Valentine's Day, Lost the First Tooth Day, Rode a Bike on One's Own Day, and Improved Scores on a Test Day. The list is unlimited. I always feel that a reward always increases the amount of fun one can have during any situation to the maximum level. I can see the joy on my family's faces and that is my reward."

Insight number 8: Learn Positive Ways of talking and Acting about Your Family and Community. Here is her voice:

"I have always had positive attitude towards life, always wanted to be free to do things. I wanted to be free from other people's negativity. They (my children) now take great pride in cooking and sharing their knowledge with others. In this quickly growing fast food lifestyle, they have learned that sharing time with family and friends and feeding them meals, cooked with pride and time, is unbeatable. I have always listened to my family members, sometimes given advice, and sometimes lent my ear. That is all they need B someone to talk to."

Insight number 9: Find Positive Inspirations in Your Own History and Culture and Mix It with New Cultures and Histories of Others. In her own words:

"In India I was not happy. I couldn't do things I wanted to do. There was too much judgemental interference by others in my life. Here in the U.S., I feel free do what I want to do. My husband, J, understands this. We

have good communication in this regard. Here I am free from others' negativity. Sunday mornings were always "getting ready for religious learning" time. Everyone got dressed in traditional clothing and we drove to Gurdwara where our children had one hour of Sunday school, one hour of services, and the rest of the morning eating traditional langar (lunch) and socializing with other similar families."

As the children grew, they were involved in fun events like Indian dancing and music and playing instruments like the dhol, the vaja (harmonium), and the tabla. They felt pressured and forced to play these instruments then, but have since learned to cherish their knowledge and proudly play them on college campuses, where they share their culture and diversity.

Insight number 10: Get Involved in Your Community and Neighbourhood and Build Networks with Other Parents: Here is her response:

"I was a soccer mom B I organized treats for soccer and basketball games. I networked with other parents. I set up car pools and school trips. I was involved in the Parent Teacher Associations (PTA), the district educational policies, and the improvement of activities in our school and place of worship.

I also set up neighborhood play groups so mothers could get time off from their children for an afternoon of shopping or other methods of treating themselves. I also organized small multicultural dance and drama groups in my neighborhood for children. I facilitated the children, adorned with different colorful clothing, to perform for local retirement homes and hospitals."

I faced a few problems. Many mothers did not want to put in too much time or effort in their children's activities, but that did not stop me. I did all I could, sometimes with the help of nobody. I would always provide appropriate snacks and treats. I took immense pleasure in that I strongly advised parents to spend time with their children. They grow up very fast and the "I wish I had done it" syndrome should never creep up in their minds

Conclusion

In the sociology of education research, an understanding of individual educational attainment is gained through the analysis of the role of achievement, aptitude, and expectation, as well as race, gender, and socioeconomic status. However, studies conducted in this tradition often have focused on individual attributes at the expense of negating the role played by the educational organizations and parent-school-community relationships in individual educational attainment. Recent and earlier works (Brookover et. al. 1979) in these areas suggest looking at the organizational culture and climate, as well as schools' organizational structures, resources, and contingencies present in given situations. Cultural theorists suggest looking at the interaction between structure and a group's habitus. This idea points to beliefs and values a group holds based on its class position in a society (McDonough 1998, 181-182). Solorzano & Villalpando (1998, 220-221) pointed out that "from critical race and critical pedagogy theoretical perspectives, both the public and higher

education systems in the United States reflect the structural and ideological contradictions that exist in the larger society." For example, even though most colleges recognize the importance of multiculturalism and diversity on campuses and have provided educational opportunities to students from non-white cultural groups during the last three decades, these students are still stratified based on their color and race. (Hurtado 1990) In this context, students from marginal groups develop valuable "navigating skills" which lead them to success in educational institutions. Some students and families decide to benefit by acquiring dominant cultural capital and completely conforming to this contradictory environment. On the other hand, some families and students resist and oppose expectations of the dominant group for total conformity and still succeed in attaining higher education. Studies done by educational anthropologists suggest that pedagogy is linked to the cultural beliefs, practices and training of teachers. In this way the idea of pedagogy differs from the term "instruction". In the framework of pedagogy, culture, class, gender, race has a great deal to contribute to our understanding of teaching. Teaching and teacher education has been traditionally dominated by psychology. The psychologically driven paradigm see instruction by teachers merely a technical undertaking. Thus, teachers just need to acquire requisite skills to be successful.

Channi and her husband had to consider this maze of factors, work hard and "navigate" school success for their four children. Obviously, with the input by her family and, through her involvement in her children's activities, she is successful in linking family-schools-community interaction networks. So far, in her own ways, directly or indirectly, she has done very well in helping her children's social, cultural and academic success. Now she says " ... my need for appreciation [by her family] is growing as I get older" and " I am waiting for one more thing - when my children get married and bring me grandchildren. I will be ready to run again. Right now, I am happy being myself." It remains to be seen how her American born children "navigate" in carving out their life styles (attaining jobs, getting married, having children, educating them, and so on) and their general well-being through the maze of contemporary post-9/11 American society as Asian American citizens. As well, it remains to be seen what role Channi would be able to play as grandmother as her children set up their own households, whether her and her husband's status change in the extended family structure as they age in the United States, whether it would be different from Indian people who grew older in India and are now living with their North America born grandchildren. Unlike those Indian grandparents who experienced the aging process in India before they moved to North America to join their children, Channi's social and cultural capital include well established parental social networks. She and her husband are highly educated and experiencing aging process in North American contexts. Given all this, is it more likely that Channi and her husband will be able to provide schooling-focussed relationships to their grandchildren in changing North American social, political and cultural context in which her children are becoming adults? These are the questions not only for Channi and her husband to reflect on, and not only for Asian Americans, but also members of other cultural groups, including the non-mainstream cultural groups, who are anticipating to be grandparents soon, and are looking for culturally competent practices, skills, interventions and evaluations at this stage of their lives (Fong & Furoto 2001). A healthy inter-generational relationship in Asian American Indian families will go a long way to encourage grandparents to remain active in their children's education. This is another lesson we can learn from Channi's story.

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SPECIAL EDUCATION

WHERE ARE WE GOING ON *PATHWAYS*?

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Inclusion - the process of integrating students with disabilities into general education classes - has been a buzz word since the mid 1980's. This movement to integrate all students with mild to moderate or even severe mental retardation, students with learning disabilities and students with emotional or behavioral disorders into general classrooms rather than special education classes has been a hotly debated issue in our province since the introduction of the *Pathways* document in the mid-90's. Historically, these students, for the most part, received their education outside the regular education classroom.

Approximately 40 percent of students K-12 will require instructional support beyond what has traditionally been offered in a general classroom (Salvia & Ysseldyke, 1995). Inclusion has been strongly supported by research, professional organizations and parent advocacy groups, who hold the view that students with special needs will blend into and become a part of the general education classroom community (Mamlin, 1999). Idol (1997) lists the purposes for integrating students with disabilities into the general classroom:

- to allow students with disabilities to benefit from the general education programmes (with appropriate teaching strategies and support).
- to give students with disabilities the opportunity to interact with age-appropriate peers without disabilities.
- to let students with disabilities take part in all aspects of school life, and to better prepare students with disabilities for life within the social community.

Many general education teachers in Newfoundland, with a passion for our profession and committed to holistic student learning, do not feel ready for inclusion. It is difficult for them to carry on with traditional duties and yet free up the energy, time and good will needed for new ones, especially given the feeling that they have not had sufficient time to prepare. Many of these teachers, who feel overloaded with work to begin with, support some inclusion but feel unskilled, untrained and lacking in the expertise to work with mild-moderate (and sometimes severe) disabilities. (There is no requirement to take even one course in special education to graduate as a teacher from Memorial University). Resources to accommodate these students, who are accustomed to a special education format, are not widely available. Many teachers are skeptical about the benefits for such students, fearing that lack of training and expertise in implementing the best practices for these students will lead to frustration on both sides. In addition, they fear the "dumbing-down" of curricula. They have voiced their concerns at meetings, through the Newfoundland and Labrador Teachers' Association (NLTA) and on Teachers in Cyberspace (TIC).

Most of the research on inclusion has been focused on K-6 and very little has been written with High School students and teachers in mind. The transition of students from special education classes to general classes and, even more so, from

Junior High special education classes to High School general classes demands further research. The move from Junior High to High School is difficult for many students but for those who rarely have been outside a special education setting it may be traumatic. Adolescence is a difficult time at best, a time when social pressures increase and self-esteem fluctuates. Margalit (1993) has shown that intellectually disabled children are more likely than their non-disabled peers to be deficient in social skills and knowledge. Therefore, social relationships are more difficult for them (Roberts & Zubrick, 1992) and, unable to form close friendships, they tend to feel lonely (Parker and Asher, 1993). Kobe (1994) goes further, stating that these adolescents should be considered at higher risk for developing depression.

As more students with moderate and severe disabilities are integrated into the mainstream at school it is essential that each person on staff understand the part he or she is to play if this is to be a successful venture. The concern is no longer whether this is a good plan but, rather, how a programme can be implemented that is workable and effective, ensuring success for all - from the child with a disability to one who is considered gifted. Added to concerns about inclusion are the responsibilities arising from the new Atlantic Provinces Educational Foundation curriculum standards, which place an emphasis on enhanced academic performance for all students.

Braaten and co-workers (1998) have written that this type of reform poses a problem for students with disabilities. They argue that "in general, current reform movements that stress higher, and more inflexible, academic performance requirements do not bode well for students with mild to moderate disabilities, such as learning disabilities". We are already losing at-risk students in High School because "hands-on" programmes at the lower end of the academic scale have been reduced to the degree that there is little remaining at which they can be successful.

The challenge to meet the needs of an academically diverse student population is especially great at the High School level. High School teachers work with more than 130 students daily and the time for individual students is quite limited. Despite studies which show that special needs students, educated in regular classes, perform better academically and socially than their special needs peers in non-inclusive settings (Wang & Baker, 1985-86; Baker (1994), Shumaker and Desher (1994) conclude that "the manner in which strategies are taught to students, especially students with disabilities, can significantly affect the degree to which students actually change as learners". Further, they advocate taking great care when including students with disabilities and other at-risk students in regular class settings. They go on to say that we must ensure that:

- "Students' achievements are commensurate with average or above-average classmates, and they do not receive passing grades as gifts.
- Students do not depend on others for their success. They function independently or interdependently as members of the learning community.
- Students do not negatively affect classroom instruction.
- Students, parents and teachers are satisfied with the outcomes of the learning situation.
- Disabled students are not singled out for special treatment but are integral members of the class".

Zigmond and Thornton (1985) caution as well that disabled students (e.g. *Pathways 3*) included in regular classes have a high rate of failure and tend to drop out. Many students with disabilities are passive learners without the necessary skills to process information given in a traditional manner and many, while physically included in a regular classroom, may feel intellectually excluded and acutely inferior to peers. Some studies have shown that students perform better in a special needs class than in a regular class (Kaufman, 1994). The literature on educational change tells us that many factors influence the levels and patterns of improvement outcomes.

If we include students with disabilities (e.g. *Pathways 2, 3, 4*) in the regular classroom we must ensure that they will continue to achieve at a level **at least equal to or higher than** when they were in a special needs classroom. Additionally, all students, regardless of their ability, should benefit from changes made and alternate educational methods practised in their classroom. We must ask ourselves:

- What will allow this student to function to his or her greatest capability?
- Can this student participate in this lesson with the same learning outcome as all the other students?
- What supports and/or modifications are necessary for this student to participate fully?

Staub and Peck (1994), who studied the outcomes of inclusive classrooms for non-disabled students, asked the following questions:

- Will inclusion reduce the academic progress of non-disabled students?
- Will non-disabled children lose teacher time and attention?
- Will non-disabled children learn undesirable behaviors from students with disabilities?

The answer to all questions was NO. In fact, they believed there were potential benefits for the non-disabled students. Murray-Siegert (1989) found the same results when she conducted a similar study in an inclusive High School. She went on to show that non-disabled students became more tolerant of their disabled peers and more aware of their needs and after spending time with them reported more positive feelings about themselves.

Currently, students are to be given non-inclusive placements for special services only if they can be accurately classified through a psychological assessment. Unfortunately, classifying children accurately is a difficult task at best, as has been shown in many studies (Baker, Wang & Walberg, 1994). Assessment information must be examined taking into consideration the needs of the student within current environments if the desire is to develop relevant ISSP goals. Norm-referenced approaches cannot be used exclusively. Traditional assessment summaries emphasize the weaknesses and limitations but strengths-based assessments can be used effectively to identify the needed supports and offer valuable information for the teacher. Schwartz, Staub and Peck (1995) report that we should pay close attention to all aspects of the student's life-memberships in organizations and clubs and their social relationships with non-disabled peers if we are to foster the development of competence in relevant functions. We must ask ourselves, "What, exactly, does this student need"? And then, "How can we best provide these services"?

Between 1958 and 1995, Scruggs and Mastropieri (1996) surveyed 10,560 teachers in the United States, Australia and Canada regarding their attitudes toward mainstreaming or inclusion of students with disabilities. Consistently, they found that teachers require support when teaching students with disabilities alongside their non-disabled peers. Further, they found these needs may be greater, for a variety of reasons, for High School teachers than for Elementary teachers. Supports needed were as follows:

- Time - Teachers report a need for time each day to plan for students with disabilities.
- Training - Teachers need systematic, intensive training, either as part of their certification programmes, as in-services, or as an ongoing process with consultants.
- Personnel resources - Teachers report a need for additional personnel assistance to carry out mainstreaming objectives. This could include teacher-aides and regular contact with special education teachers.
- Materials resources - Teachers need adequate curriculum materials and other classroom equipment appropriate to the needs of students with disabilities.
- Class size - Teachers report that their class size should be reduced if students with disabilities are included.

Consideration of severity of disability - Teachers are more willing to include students with mild disabilities than students with more severe disabilities, apparently because of teachers' perceived ability to carry on with their teaching mission for the entire classroom. By implication, the more severe the disabilities represented in the inclusive setting, the more the previously mentioned sources of support would be needed.

There is much to be said in favour of *Pathways*. But at the same time, it poses many problems, challenges and concerns. At the moment, the role of special education teacher and that of the regular classroom teacher have become confused to most teachers. The introduction of *Pathways*, without clear explanations of the benefits or methods of implementation, has added to this confusion. The required support models are not yet fully in place. The role of team teaching (special education teacher and classroom teacher sharing the class) which is implied, but not prescribed, in *Pathways*, adds further confusion. Many teachers have reservations or concerns about *Pathways* and believe that further support and in-service are necessary if this model is to succeed. **Every teacher and student is a stakeholder.** It is clear that the ultimate success of *Pathways* will depend on the extent of support provided by the Department of Education and School Boards throughout the province.

II

Inclusion is both a philosophy and a process. As a process, it is an on-going learning experience through which we all work together to prepare students with exceptionalities for life and work. This requires a co-operative effort between administration, regular and special educators, parents and students themselves. Our

goal is to provide a classroom environment in which all children can learn together, be supportive of one another and yet remain aware of individual differences.

Stainback and Stainback (1996) ask the question "What kind of training must be provided to the regular education teachers so that s/he can meet the demands of the inclusion process, the needs of the regular education children within the classroom, and the individual needs of the children with disabilities within the classroom?" They advise us that inclusion cannot be accomplished all at once, that the first step should be the plan, not the programme. Pre-planning and staff training are critical to the success of inclusion within the general classroom.

The majority of teachers are new to *Pathways* (inclusion) and need as much support as, or more support than, individual students. We need to network with our colleagues, sharing methods, materials, and activities, giving advice and support in order to assist one another as well as our students. In spite of the challenges and the barriers in front of us, much can be accomplished if we support each other and if we have support and leadership from our board office and The Department of Education.

Implicit in the implementation planning for inclusion is a good resource library in every staff room. The References section below contains a number of annotated selections, reviewed by this author, which will be of great assistance to all teachers whether they are new to the profession or are experienced educators. We must insist that such a resource is provided for us as one of the beginning steps in the implementation of *Pathways*.

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INCLUSIVE EDUCATION: REVIEWING THE CRITICISM TO FIND DIRECTION

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Introduction

School systems have long grown comfortable with concepts and terms such as "least restrictive environment", "individualized planning", "mainstreaming", and "integration", following years of intense lobbying to place special education on the agenda of educational leaders. These terms reflect not only a changing educational system but an evolving society that is more accepting of disabilities. The last part of the 20th century has clearly witnessed rapid changes in society's treatment of citizens with disabilities, especially in areas of human rights provisions, residential programs and educational services (Heward, 2000; Weber, 1995). While discrimination continues to exist (Neufeldt & Mathieson, 1995; Rioux, 1984), few can argue that services have improved significantly. This is clearly reflected in the educational system where special education is not only firmly entrenched in law but is also core to the array of programs offered by many schools (Weber, 1994). Central to contemporary special education is the concept of inclusive education, a philosophy of student placement and program delivery that has tended to dominate discussions in recent years. In Newfoundland the issue of inclusion moved to the forefront of special education with the release of *Pathways to Programming and Graduation* (1998). In addition, the draft *Special Education Policy Manual* (1999) strongly promotes a collaborative decision-making process that helps ensure a "willingness of all personnel to be responsible for all students [and] the full acceptance of diversity within the student population" (p.3.1).

The 1990's witnessed a growth of criticism of special education, fuelled in part by the educational reform movement, which brought close scrutiny of programs (Kaufman, 2000). While the motivating force may well have been cost-effectiveness, it has resulted in a plethora of literature on both the virtues and vices of the special education system. The result of this examination is a wealth of information that can provide direction to special education leaders, especially as they manoeuvre through the remnants of reform and the often-controversial issue of inclusion (Kauffman, 1999). What themes emerge from this literature? Can a review of our past practice improve future delivery? Will revisiting the roots of inclusion offer clearer direction to program planners and special education leaders? This paper will attempt to answer these questions by reviewing the literature on inclusive education, paying particular attention to the criticisms that may offer hope for improvements. The intention is to identify the lessons, if any, which have been learned from this model of delivery and how this knowledge can improve practice, with specific focus on the Newfoundland model.

Definitions

The placement of students with disabilities in a continuum of educational settings, ranging from the regular classroom without supports to a specialized facility, is a practice long-established and anchored in legislation such as the American

Individuals with Disabilities Act (1997) and the Canadian provincial Schools Acts (Heward, 2000; Rothstein, 2000; Weber, 1994). The Newfoundland School's Act assigns responsibility for special education to the establishment of a policy manual. The current draft version of this manual (1999) does not prioritize inclusion over other placement options. It does state that regular and special education are inextricably linked services that "represent a full continuum of services to meet a full continuum of needs expressed by the total student population...As part of the education continuum, special education is based on the same educational principles and practices as regular education" (p.1.5). Subsequently, a continuum of placements based upon the best, and evolving, interest of the student is outlined as both policy and practice. While the practice of inclusion is an approach to meeting the needs of students with disabilities, it is a concept far more complex than either placement options, social supports or delivery models might imply. Bloom, Perlmutter, & Burrell (1999) attempt to define it as " a philosophy that brings students, families, educators, and community members together to create schools and other social institutions based on acceptance, belonging, and community" (cited in Salend, 2001, p.5). While this definition is broad and philosophical in nature it does reflect the belief system that all students, regardless of need, belong in an environment of acceptance and tolerance. It references a belief structure more than a placement option, introducing the difference between an inclusive attitude/philosophy and an inclusive setting. More specifically, inclusive education has been defined as "the belief or philosophy that students with disabilities should be integrated into regular education classrooms, regardless of whether they can meet traditional curricular standards (O'Brien, Snow, Forest, & Hasbury, 1989, cited in Friend, Bursuck, & Hutchinson 1989. p.6). It is this rigid belief in one placement for all children regardless of severity of needs that defines inclusive practices. Salend (2001) elaborates on this notion of complete acceptance of all students in the regular classroom and the resulting need to alter the educational system to meet that goal. He outlines a series of underlying principles of inclusion, which include diversity, individual needs, reflective practice and collaboration.

However, inclusive education has become more complex than any of those terms imply. Crockett & Kauffman (1998), in reviewing the roots of the inclusion movement, examine both the strengths and weaknesses of the approach. They state that the broadness of the term is perhaps its biggest weakness, as it results in such diverse implementation practices that critiquing it is impossible:

The notion of inclusion poses a challenge for those wishing to study it more systematically because practices described as inclusive differ markedly from setting to setting. Some models propose the inclusion of literally all students with disabilities and define this as full inclusion. Others define full inclusion as regular class placement for all students with disabilities, but on a part time basis for some; still others propose the inclusions of students for whom it is appropriate or even suggest that separate, special schools are part of their inclusion plan (p. 74).

Nonetheless, looking to the origin of this movement and its evolution in program planning for special needs students not only assists with understanding the concept but also provides clarity in examining its effectiveness.

Revisiting the Roots of Inclusive Education

Inclusive education is a notion born in the evolution of society's changing views of the disabled. As educational systems began to accept students with disabilities, best placement concepts were debated (Friend, Bursuck, & Hutchinson 1989). From the residential schools for the visually impaired of the 1880's to our current regular classroom initiatives, special education has a history that is as colourful as that of residential care for disabled citizens. Smith, Polloway, Patton & Dowdy (1998) outline that educational services for disabled students evolved in three distinct phases, from relative isolation, to integration, and finally to our current phase of inclusion. Interestingly, these phases mirror society's evolution of treatment for all citizens with disabilities. Society became increasingly concerned with human rights following World War II and during the 1950's and 1960's educational placement based upon minority and/or disability status was hotly debated (Smith, Polloway, Patton & Dowdy, 1998). While the desegregation of American schools solidified human rights for African-American children, for example, it also helped ensure educational programming for disabled students (Friend, Bursuck, & Hutchinson 1989). A landmark American court case of 1954 (*Brown vs. Board of Education*, cited in Friend, Bursuck, & Hutchinson 1989), "contributed to the development, in Canada and the United States, of the perspective that fighting for the rights of the minority with disabilities parallels fighting for the rights of racial minorities" (p.9). These early events helped establish that human rights legislation and the Canadian Charter of Rights and Freedoms of the Canadian Constitution (1982) would help protect against discrimination based upon mental or physical disability.

Wolfensberger's (1972) theory of normalization added momentum to the improvement of educational services for students with disabilities and is often viewed as the catalyst of the move from segregated settings to inclusion (Salend, 2001). Kirk & Gallagher (1989) state: "Special classes, which segregate students with disabilities from their non-disabled peers, cannot be considered a normal school placement" (p.20). Prior to this period, most special education students were contained in separate programs and classrooms and had limited contact with age peers or regular school initiatives (Weber, 1994).

The 1970's resulted in two other major events that solidified educational programming for children with exceptionalities. The first was the release of the *One Million Children* report; the second was the passing of specific American legislation.

The Commission of Emotional and Learning Disorders in Children (CELDIC), formed by the Canadian government in 1966 to address the growing concern of parents and teachers about the quality of educational programming for children, tabled their final report titled *One Million Children*. The report called for increased integration and improved programming based upon individual needs and not diagnosis (Smith, Polloway, Patton, Dowdy & Heath, 2001). Three main educational concepts grew out of this report that would go on to contribute to the formation of inclusion:

1. Every child has the right to the education required to realize his or her full potential;

2. The financing of education for all students is the responsibility of the educational authorities; and
3. Students with exceptional learning needs should remain integrated with other students as long as possible (Lac & Lupart, 2000. p.35).

While the CELDIC report would have dramatic influence on future models of education, it was the United States that first solidified the educational rights of disabled students in legislation. While both Canada and the United States give full responsibility to the regions (provinces and states) for passing and implementing educational legislation, federal funding laws in the United States were passed in 1975 to help ensure the education of all students. Public Law 94, "The Education for All Children Act", would call for a free and appropriate education for all children in the least restrictive, non-discriminatory environment by using a cascade of delivery models with written individual plans to meet their needs (Salent, 2001). Following its inception in 1975, the law would be revised four times before reaching its current version known as IDEA (Individuals with Disabilities Act, 1997). Canadian provinces would eventually follow suit with provincial legislation that ensured similar programs and delivery models (Weber, 1994).

Accompanying this, and strengthening the cry for stronger inclusion, was the demand of parents for their perception of the rights of their exceptional children. Parents have been developing a growing sense of their legal and social right to be involved in this process for some time (Rothstein, 2000). Weber (1994) identifies this growing trend of parental awareness of their legal rights. He states that,

Political activism by parents and other advocacy groups on behalf of students with special needs, had - and continues to have - a powerful effect on the provincial governments...At the same time, it became an accepted, indeed encouraged, practice among professional educators, especially by the nineteen nineties, to involve parents far more extensively in day by day educational decision-making (p.10).

Legislative Provisions for Inclusion

Models of special education in 2001 are more clearly anchored in human rights and educational legislation and are also more firmly supported by philosophies of integration. Interesting, however, is the fact that the concept of inclusion, though widespread in practice, is not reflected in legislation. As Crockett & Kauffman (1998) state,

In law, the argument for least restrictive environment has never been an immutable rule of placement, but a rebuttable presumption favoring inclusion of children in regular classes and allowing segregation in certain instances...courts have given an equivocating answer to whether placement of a child with a disability in a regular classroom is, indeed, the least restrictive environment. The ambiguous answer, in each case, is this: It depends (p.75).

One Canadian case involving the issue of inclusion has done much to define the legal provision and interpretation of its practice. The case of *Eaton vs. Brant County Board of Education (1997)* was initially heard by the Ontario Trial courts but

eventually was appealed to the Supreme Court of Canada on grounds of discrimination under the Canadian Charter of Rights and Freedoms.

Emily Eaton was a severely disabled student who had been in the neighbourhood school with supports under a program for full inclusion. After three years of struggling to meet her needs in a regular class, the school board felt that Emily would be better served in a special segregated class. The parents appealed to the special education appeal board, which upheld the decision to place her in a separate program. They then appealed to the Ontario Divisional Court, which dismissed the application. A subsequent appeal to the Ontario Court of Appeal was heard and the decision to place her in a separate class was overturned on the basis of discrimination under the Charter. The school board then appealed to the Supreme Court, which heard the case and dismissed the decision of the Ontario court, re-instating the school board's original decision to place her in a separate class.

In rendering their verdict, the Supreme Court commented on adjudicating the issue of best placement:

The Tribunal set out to decide which placement was superior, balanced the child's various educational interests taking into account her special needs, and concluded that the best possible placement was in the special class. It also alluded to the requirement of ongoing assessment of the child's best interests so that any changes in her needs could be reflected in the placement. A decision reached after such an approach could not be considered a burden or a disadvantage imposed on a child. For a child who is young or unable to communicate his or her needs or wishes, equality rights are being exercised on that child's behalf, usually by his or her parents. Moreover, the requirements for respecting these rights in this setting are decided by adults who have authority over this child. The decision-making body, therefore, must further ensure that its determination of the appropriate accommodation for an exceptional child be from a subjective, child-centred perspective -- one which attempts to make equality meaningful from the child's point of view as opposed to that of the adults in his or her life. As a means of achieving this aim, it must also determine that the form of accommodation chosen is in the child's best interests. A decision-making body must determine whether the integrated setting can be adapted to meet the special needs of an exceptional child. Where this is not possible, that is where aspects of the integrated setting which cannot reasonably be changed interfere with meeting the child's special needs, the principle of accommodation will require a special education placement outside of this setting (at p. 244-245).

Emily's case was widely received among special educators. It was a powerful comment not merely on the issue of who has final say over educational placement but on the burden of responsibility placed on schools to demonstrate that all alternatives to segregated placement have been exhausted and there has been an attempt to balance the decision-makers wishes with the "best interests" of the child (Bowly & Wooton-Reagan, 1998).

Criticisms of Inclusion

Criticisms of inclusion, as well as of special education in general, must be framed within the overall context of the educational reform movements of the 1990's

(Salend, 2001). School systems were challenged to become more accountable in both financial expenditure and academic outcomes, demands from which special education was not exempt. The resulting streamlining of services and fiscal restraints, as well as the increased focus on higher standards, impacted special education dramatically. Hockenbury, Kauffman & Hallahan (2000), organize recent criticisms of special education into seven emergent themes:

1. It is a place that should become a service;
2. It is a separate system but should be an integrated system;
3. It identifies and stigmatizes students but should be offered without labels;
4. It has no particularly effective methods and could be replaced by good general education;
5. It returns few students to general education but should return most;
6. It has changed incrementally but should be radically reformed;
7. It is needed now but should not be needed if general education is reformed (p.4).

The concept of inclusion, however, was criticized long before educational reform or special education became topical and was, in fact, divisive from the start. Initially called the Regular Education Initiative (REI), inclusion was first presented and supported by groups such as The Association for Severely Handicapped (TASH) and the Association for Retarded Citizens (ARC). At the same time, groups such as the International Council for Exceptional Children (CEC) advocated a continuum of placement options, based upon individual needs and in the best interest of the child (Smith, Polloway, Patton & Dowdy, 1998). While inclusion continues to receive wide support, the rigid philosophical belief that one setting fits all children has proven its strongest liability. Zigmond & Baker (1995), in examining this extreme thinking and resulting practice concluded that "special education in inclusive programs is, by design, no longer special" (p.245). Kaufman & Trent (1991) suggest that inclusion was fraught with confusion over how to support these students in regular classes and which curriculum to use. Scrubbs & Mastropieri (1996) add that school administrators were ill prepared and untrained in inclusive models, a concern underscored by the shift to site-based management where administrators assume the role of business managers. They state: "Administrators' skills, knowledge, and understanding are challenged as they attempt to accommodate increasing numbers of students with disabilities into general education classrooms. They must cope with their own and their faculty's lack of preparation for educating students with special needs" (cited in Crockett & Kaufman, 1998. p.76). Salend (2001) found that many schools were being forced to blend regular and special education into one streamlined service. Cook, Gerber & Semmel (1997) found that the call for streamlining and reforming the general educational system had overpowered the individualized nature of special education, to the detriment of the students. Likewise, Crockett & Kauffman (1998) reported that cuts to educational funding resulted in teachers fearing a loss of effectiveness for disabled students. In an editorial published in the *Journal of Special Education* (1996) the editors compared recent funding cuts resulting from educational reform to the funding cuts in social welfare programs. The authors questioned the growing use of inclusion as a cheaper way to accommodate special education students with little concern for their learning. In a scathing criticism of inclusion the editor wrote: " Full inclusion ignores what we do know about instructing students with disabilities: that effective instruction is systematic, explicit, intensive, and

individualized and requires continuous progress monitoring" (p.231). Meanwhile, educational reform and the resulting funding restrictions were adding renewed energy to the need for educators to be accountable for their programs and streamlined in their models.

Inclusion has also given rise to growing concerns from teachers over the effectiveness of the approach as well as their preparation to implement it. While research reported that teachers willingly tried inclusion, meeting with various degrees of success, (Salend, 1999; Semmel, Abernathy, Butera, & Lesar, 1991; O'Shea & O'Shea, 1998) they were voicing reservations about the practice and felt that greater resources were needed in order for it to succeed (Scruggs & Mastropieri, 1996). Among those resources were additional training, sufficient preparation time and appropriate curriculum materials. In a similar study of teacher support personnel, such as student assistants who are often assigned to assist with the placement of students in regular classes, Marks, Schrader & Levine (1991) found that these "para-educators" held too much responsibility and were too ill trained to be effective.

Teacher concern for inclusive practices was greatest when students with severe disabilities and behavioural/emotional problems were involved (Taylor, Richards, Goldestein & Schilit, 1997). Researchers identify this population of students as being the most difficult to place in regular classrooms. Teachers, administrators and the parents of other students have grave concerns for safety, the maintenance of the learning environment, and their ability to handle the issues that surface (Kauffman, Lloyd, Baker, & Riedel, 1995; Martin, Lloyd, Kauffman & Coyne, 1995; Schwan, Saklofske, Shatz & Falk, 1996). However, like most issues concerning inclusion, there is not universality of opinion. Gibb, Allred, Ingram, Young & Egan (1999) found that there was support for inclusion of students with emotional/behavioural disorders. The authors did find considerable concern, even among these ardent supporters, for teacher training and collaboration, levels of support, and technical help in planning and adapting curriculum. Concern was also identified for the social implications of inclusion. Researchers were finding that the approach was not resulting in the increased acceptance among peers or heightened self-concept of students with exceptionalities that proponents had originally anticipated (Fox & Ysseldyke, 1997; Sale & Carey, 1995).

Directions Needed

While much has been written on the benefits and pitfalls of inclusion, there has recently been an emergence of literature calling for a new direction in special education. Educational reform served to instil a sense of accountability in educators, a move that did not bypass special education. In the midst of this criticism, Sabornie (2000) calls for a renewal of professional identity with stronger leadership. He voices concerns that while many of the criticisms of special education are well founded, they should serve as a challenge for renewal and not a death toll. Hockenbury, Kauffman & Hallahan (2000) support this challenge and express the hope that, "the negativity of the critics of special education will be replaced by a more accurate appraisal of special education's past and a more optimistic outlook on its future" (p.10). To this end they outline three lessons to be learned from these criticisms that can assist in redeveloping special education. They suggest, "(a) constructing a defensible philosophy of special education, (b) providing effective and intensive instruction, and

(c) improving the quality of teacher training" (p.4). Fuchs and Fuchs (1995) add to this list by calling for more research into special education and a bridging of "the divide between research and practice" (p.526). Crockett & Kauffman (1998) support these recommendations and, stemming from the call of teachers for additional training, suggest a revisiting of teacher training practices for both special and regular education programs.

While inclusion is a philosophical goal to which many educators aspire, including the Council for Exceptional Children, it is only one option along a continuum of alternatives. The CEC recognizes this by outlining in their 1993 policy statement: "Access to programs and experiences should be based on individual educational need and desired outcomes. Furthermore, students and their families or guardians, as members of the planning team, may recommend the placement, curriculum option, and the exit document to be pursued" (cited in Smith, Polloway, Patton & Dowdy, 1998. p.26). Zigmond & Baker (1995) add support for this continuum of placement based upon the individual needs of the child. They state:

Place is not the critical element in defining special education; theoretically, relentless, intensive, alternative educational opportunities could be made available in any venue of a school...Putting place in its place - as only one element to be considered within the broader context of what needs to be taught, at what level of intensity, with what materials and strategies, at what pace, and in what place - leads one to challenge the meaningfulness of the mainstream curriculum for all students and to define the goals of special education as individual achievement (p.246-247).

Zigmond & Baker recommend what they refer to as "inclusion plus", a process of supporting students through strong programming in a setting that blends inclusive and pullout models. They outline four key features of this process as, "Adding resources to strengthen continuum of services, joining general educators to recreate schools, focusing on individual needs, and preserving the unique preparation for special education educators" (p. 248-249).

This notion of partial inclusion, or full inclusion with support, has gained significant attention in recent years. Macmillan, Gresham, & Forness (1995) in examining the effectiveness of full inclusion for emotional/behavioural disorders state: "Special education historically has been dedicated to individual differences and has recognized that not only do children differ but so do teachers, schools, parents, and peers. We defy proponents of inclusion to identify a single educational treatment that benefits all children" (p.150).

Newfoundland Concerns

As stated earlier, the Newfoundland model of special education strongly promotes a continuum of placement options for students with special needs. While this population of students is the responsibility of all educators and the goal is to support them on the regular curriculum through the Pathways model, inclusion is an ideal that both parents and teachers aspire to. Given the long-term career implications for students who are taken off the regular curriculum, few will disagree

with this goal. To this end, the Newfoundland system offers categorical and non-categorical teachers, as well as student assistants, to assist students achieve to their fullest potential. In fact, the Newfoundland government reports that they allocate more resources, per capita, to special education students than any of the other Atlantic provinces (Smith, B. Personal interview, March 28, 2001). A student with special needs can have several teachers and an assistant working with them during their school day. In addition, *The Model for Co-ordination of Services to Children and Youth* (1996) stipulates that this service be outlined in a written plan that is developed by an interagency team, including the parent, child and all service providers from the school and community. While inclusion is a philosophical goal in Newfoundland, there is a significant management system in place to ensure that placement and service is optimized.

Newfoundland teachers share the concerns identified in the literature. Younghusband (1999) voiced some of these concerns for the implications of the Pathways model for the regular classroom teacher and, consequently, for the students themselves. Her concerns were underscored by the categorical model that Newfoundland has adopted where students have to be diagnosed through comprehensive assessments before special education services can be initiated. As a result of this policy, students who do not meet the criteria for special education will remain in regular education, regardless of their ability to cope there. These concerns are additionally significant at the high school level where the higher content and faster pace result in greater pressure on teachers and students. Younghusband (2000) reports on teacher stress in Newfoundland and found that "Ninety-five percent of the teachers described their job responsibilities as increasing (Q2) yet 74% felt they did not have the resources they need" (p.4).

High school special education illustrates the need for appropriate teacher training and effective resources. The training of special educators is juxtaposed against regular education teachers, where the former are heavily trained in principles of exceptionality and have little training in content while the latter have the opposite focus in their degree programs. Younghusband (1999) identifies that a part of this problem is the lack of special education courses in the degree programs for regular education teachers.

The literature on inclusion is as conflicting as public opinion and as diverse as the practice. This diversity is well established in Newfoundland with teachers and parents raising demands that can conflict. If the entire planning process follows the belief of "best-interests" of the child, what happens when perceptions differ? *Supporting Learning: The Report of the Ministerial Panel on Educational Delivery in the Classroom* (Government of Newfoundland and Labrador, 2000) recognized this diversity and controversy in a system that is growing itself. The report identified that 14% of the provinces students are receiving special education, up from 9% ten years ago, while expenditures on student assistants have grown 150% in a similar time frame. (p.23). They state: "While there are many cases where children require sustained and intensive educational supports, there is a growing expectation of "one-to-one" service that, in some cases, is neither in the best interest of the child, nor fiscally sustainable" (p.23). The panel called for a reassessment of special education to balance resource deployment with the needs of the child. Interestingly, the panel also spoke about the growing challenge of inclusion for students with severe

emotional/behavioural disorders and recommended "alternate education programs...in appropriate settings" (p.34) to meet the needs of this population of students. While no recommendation spoke specifically to a philosophy of inclusion, the panel appeared to respect the provinces' continuum of placement model, based upon the best interests of the child.

Summary

Special education has received much positive attention in recent years and continues to enjoy an examination of delivery models. While the issue of inclusion continues to provide food for thought in the midst of this reflective process, it appears that there is little debate as to whether it will survive as a core principle and preferred goal in the continuum of programming options (Putnam, Spiegel, & Bruininks, 1995). What is debatable is whether or not it is indeed in the best interest of all students, especially those with emotional/behavioural problems and severe developmental delays. Also questionable are the type and degree of supports required. A review of the literature clearly reflects the divisiveness of the topic; rapid moves to inclusion may not be in the best interest of the student, the teacher or the school. Special education is not a place but a process of individualizing service based on the needs of the student (Hockenbury, Kauffman, & Hallahan, 2000) and is, as the Supreme Court of Canada implied in the Emily Eaton case, the primary responsibility of decision-makers.

The literature can guide us well in ensuring that future practice is made more effective. Teacher training, teacher support, appropriate resources and additional research are required to assist with special education in general. In Newfoundland, these themes are as salient as in any other area and have been long identified by stakeholders. An additional challenge here appears to be the diversity in what is in the best interests of the child and the growing demand for more services in a system that reports to be generous as is. Perhaps this reflects more on the planning process for these children and whether it truly is participatory in nature, resulting in mutual decisions. Perhaps what is needed is the application of what has already been learned from research, that special educators do best by teaching and that energies should return to quality instruction and move away from the system management that has dominated the special education agenda in recent years (Kaufman, 1994; Zigmond, Jenkins, Fuchs, Deno, & Fuchs, 1995). One area that may well provide direction with this process is planning for students with severe emotional/behavioural needs. The literature reflects the belief, as recommended in *Supporting Learning* (2000), that placement requires a careful planning of the needs of the child as well as the other children and the ability of the regular classroom to balance this. Newfoundland's model of special education introduces the difference between alternate programs and alternate sites. From the experience of this writer, having established an alternate school and administered it for three years, alternate sites is a complex way to meet a child's needs. At the same time, programming for children with severe emotional/behavioural needs in the regular classroom is also complex and not possible for all. Perhaps, the answer is in finding a middle ground between the two extremes by focusing on diverse strategies, improved instructional planning, and alternate programs based on individual needs.

In examining the gap between research and practice, Heward (2000) underscores this focus on classroom approaches by stating, "While there is a significant gap between what is relatively understood and what is poorly understood or not understood at all, the more distressing gap may be between what research has discovered about teaching and learning and what is practiced in the classroom" (p.38). An increased focus on what is needed to prepare all teachers, special and general education, to enter the classroom and support them appropriately once there might well be the true reform that is needed.

Nonetheless, the intensity of educational reform, the criticisms of special education, and the rigidity of radical inclusionists have placed special education at a crossroads (Kauffman, 1994; Kauffamn, 1999; Zigmond and Baker, 1995). In negotiating a path through this crossroads the following advice may prove helpful:

As we begin to understand the pragmatics of educational reform, it is clear that we are as far from solutions as we have ever been. We must find a way to balance the values of inclusion with the commitment to teaching individual students what they need to learn. The full inclusion that we have studied tips this scale. Future reform efforts that combine inclusive schooling with the additional resources and specially trained personnel needed to achieve the individual educational goals of students...in whatever service option is appropriate, might achieve that elusive equilibrium (Zigmond & Baker, 1995. p.250).

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WHEN “PATHWAYS” CROSS

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The mainstreaming of students with special needs in the regular classroom became a focus of debate in the Canadian school system during the 1980s, when the Regular Education Initiative was implemented (Winzer, 1999). This initiative focussed on combining general and special education to provide a diverse education system for all learners. Special education teachers were expected to adopt a consulting role, and classroom teachers were expected take a greater responsibility for the teaching of all students, including those with special needs (Hallahan & Kauffman, 1991; Winzer, 1999). As a result, the proportion of students remaining in segregated educational environments was at its lowest by 1991 (Winzer, 1999).

In Newfoundland and Labrador, the roles of special education teachers and classroom teachers have been changing with this shift toward inclusion. One notable trend is a new emphasis on a collaborative interagency team approach, as evidenced by the development of student support teams at the school level and provincial guidelines which emphasize team collaboration (Pathways to Programming and Graduation [Pathways], Government of Newfoundland & Labrador, 1998; Individual Support Services Plan [ISSP], Government of Newfoundland & Labrador, 1997; Special Education Policy Manual, Government of Newfoundland & Labrador, 1987; Special Education Policy Manual [Draft Version], Government of Newfoundland & Labrador, 1999).

Collaboration

Two essential members of student support teams at the school level are the special education teacher and the classroom teacher. However, provincial guidelines provide little in the way of practical support for their effective daily collaboration. At the same time, there is an abundance of literature about collaboration within inclusive environments which provides a range of models and descriptions of collaborative practices and perceptions.

In one model, the focus is on collaborative consultation. This term goes beyond both collaboration and consultation to emphasize “mutual trust and respect and open communication” and the “belief that all educators can learn better ways to teach all students” (Robinson, 1991, 446-447). Similarly, collaborative consultation can be seen as a scientific art distinct from simple cooperation in its emphasis on notions of shared responsibility, authority and mutual empowerment (West & Idol, 1990). Other views of collaborative consultation are more flexible about role equality. Carr & Peavy (1986), for example, describe a collaborative consultation model in which the special education teacher works as an expert consultant, acting as both an instructor and a consultant participating in a model that begins with establishing

relationships and ends with an action plan. As well, collaborative consultation can be seen as both a way to deliver services within schools, and a process based on discussion (West & Idol, 1990). Another approach to collaborative consultation centres on the communication between teachers through the use of open-ended questions (Vargo, 1998). Vargo states, "The ultimate goal is for general educators to feel comfortable and open to involving the special educator with more active instructional planning for a given student, which may lead to team planning for the entire class (55)."

The trans-disciplinary interactive teaming model goes beyond collaborative consultation to emphasize a team approach guided by the principles of participation and leadership, goal development, communication, decision making and conflict resolution (Coben, Chase Thomas, Sattler & Voelker Morsink, 1997). Co-teaching (Ripley, 1997) and the enrichment remediation team-teaching model (Angle, 1996) are variations on the team approach. These models are based on the idea that all students benefit when special education teachers and classroom teachers work together to provide direct service within the regular classroom environment, permitting a full sharing of goals, decisions, responsibility, assessment and classroom management. In general, teaming models are based on the idea that teachers should commit to using what Phillips & McCullough (1990) term a locally defined collaborative ethic. A school-wide collaborative ethic is defined by developing a consensus collaboration in terms of shared responsibility and accountability, confidence in mutual benefits and a valuing of its worth and benefits.

The claim that service delivery involving collaboration and consultation is both practical and realistic is supported by a number of recent studies (Howells, 2000; Bradley, King-Sears and Tessier-Switlick, 1997, cited in Carey, 1997; Karge, McClure & Patton, 1995; British Columbia Department of Education, 1997); yet concerns about collaboration have arisen in several jurisdictions. In Newfoundland and Labrador, Younghusband (1999), found that Pathways has provided little in the way of information about implementation and that support systems have not been set up effectively. Similarly, Philpott (2001) concluded that while "inclusion is an ideal that both parents and teachers aspire to" (9), it is still necessary to offer a full continuum of flexible student placements.

Support for inclusive practices often appear in the form of calls for further teacher training at both the preservice and inservice levels (Monahan, Marino & Miller, 1996; Din, 1996). In one design, a curriculum with dual certification in both general classroom and special education is proposed (Ludlow et al., 1996). Another example is the development of a field-based program, with cooperation between the involved university and school district (Carey, 1997). Cooperative professional development (Glatthorn, 1990) is another suggestion aimed at the establishment of special education-classroom teacher teams, with both parties having role parity, using a flexible approach and professional dialogue as possible options. Hollingsworth (2001) focuses on improving collaboration with a communication network. She believes collaborating teachers need to discuss their challenges and successes by carrying out a local needs assessment and professional development suited to these needs.

How teachers feel about their collaboration is essential to its success: "The relationship between the general education teacher and the special education teacher is the most crucial one in terms of effective collaboration for delivery of service to exceptional students who are mainstreamed or integrated in general education classrooms" (Stanovich, 1996, 40). Too often, teachers indicate that they are satisfied with the quality of their collaborative roles but not with the quantity. As well, while teaching together is considered less than ideal, classroom teachers tend to think highly of instruction done by the special education teacher in the special education classroom, and prefer collaborative support in the form of verbal exchange (Voltz, Elliott & Cobb, 1994). Still, perceptions of collaboration vary. Favourable attitudes towards collaboration may be tempered, for example, by the expectation of a greater work load (Bedi, 1996), by the lack of appropriate materials and support (Minke, Bear, Deemer & Griffin, 1996; Din, 1996), by concerns about role definition (Din, 1996), and by issues of scheduling, time and training (Minke et al., 1996; Din, 1996). Studies of collaborative practice reflect some of these concerns. Issues of control, roles, styles, professional territory, differences and feelings of not belonging seem to predominate in the early stages of collaboration. Often, these difficulties are resolved over time as classroom teachers and special education teachers learn to share and blend their skills, while developing respect for one another and finding renewed joy in teaching (Salend, Johansen, Mumper, Chase, Pike and Dorney, 1997; Wood, 1998).

Although even the need to collaborate itself can be a barrier to inclusion (Monahan, Marino & Miller, 1996), and while practices vary widely between regions and within schools (Howells, 2000), most collaboration models and studies of the perceptions and practices of teachers suggest that teachers should collaborate. The special education teachers in this study are no exception. In fact, every participant indicated that collaboration is a necessity under Pathways and the inclusion model. Special education teachers seem to be caught in a struggle, though, between their desire to collaborate, and the reality of putting their wishes into practice without much support in the school environment.

To gather information about how special education teachers in Newfoundland collaborate when working with Pathways, seven special educators working in one region of the province were interviewed and asked to describe their involvement in day-to-day collaboration with classroom teachers. This information is presented here through a description of the participants, the study and the resulting themes that emerged from their opinions and reflections.

Special Education Teacher Collaboration

The seven participants were all full-time teachers, either working in full-time special education positions or, more commonly, working as both regular classroom and special education teachers. They included two males and five female teachers, ranging in experience from that of Elizabeth, Faith and Samuel, all in their first year of teaching special education, through Rose, Olivia and William, each with less than five years as special educators, to Leah, a special education teacher with more than twenty years of teaching experience, almost all within the special education field. Only Olivia, Leah and Faith were fully qualified in special education, but both Rose and William were working on their qualifications at the time of their interviews. All of

them had training in Pathways, through their academic work or in-service training, but none reported completing a course or in-service devoted to collaboration. They were first interviewed by phone to share their views and practices on inclusion, Pathways and collaboration. Each participant then completed a week-long journal to outline their actual day-to-day collaboration with classroom teachers, along with their reflections and suggestions.

Typically, the participants' conversations and reflections seemed to centre on areas of concern about collaboration, especially issues with time, isolation, and even power. Overall, they supported the idea of collaboration with classroom teachers as it is presented in provincial policy and did practice collaboration to a limited extent. As a result of barriers created by a lack of practical supports in the schools, though, they did not practise collaboration in ways typically recommended in the literature, or even to the extent that they desired.

In or out?

Reflecting their faith in inclusion, these special education teachers typically approved of their students remaining in the regular classroom for most of the school day. At the same time, though, most seemed to have no difficulty with the idea or the practice of pulling students out to an alternate classroom for a limited part of the day; in fact, they preferred this practice over teaching in the regular classroom. Faith described it this way: AI do think they need some time in a self-contained classroom where they can get the instruction they need. The direct instruction.

Only a few teachers mentioned that they teach their special education students in the regular classroom from time to time, and only Leah confirmed actually more commonly teaching side by side in collaboration with classroom teachers. In her opinion, there are definite advantages to working in this way: They [the children] don't only see me as their teacher, I'm everybody's teacher. Perhaps, in choosing not to teach together regularly, these teachers are attempting to bypass the difficulties associated with shared teaching, particularly the practical challenge of trying to schedule groups of students together.

Even when these special education teachers did collaborate at times by teaching together with classroom teachers in the regular classroom environment, it was more likely to end up as simply just being together in the same room, or what one research team terms as parallel teaching (West & Idol, 1990), rather than truly teaching collaboratively. As Olivia reflected in her journal, AI think some teachers fear having another teacher in the class with them. I suppose they find it a bit intimidating. Further elaborating, she went on to say: Usually the special education teacher is just the special education teacher and that's that. And he or she is just for slow students and that's her domain, and the regular teacher has her domain or his domain, and a lot of people assume that it's two separate things.

Pulling students out for instruction was carried out for a number of reasons beyond that of teacher preference and student need. For example, William was directed to use a pull-out model by local school administration: AI didn't make the choice, I didn't ask for the choice, that's what I was given. That was my assignment when I came: the principal said, Your job is special ed.... this is how we do it in the

school. These students are being pulled out and they're going to come to your classroom. Faith asserted the sheer logistical impossibility of working the regular classes of all the students on her caseload: AI just can't go into all their classes. Leah, Olivia and Samuel all noted that classroom teachers seem not yet prepared for full collaboration in the form of teaching together. Leah said, Some people ... I don't think you can do anything to make them comfortable with it. And I don't think we can force it. Olivia wrote: AI think some teachers fear having another teacher in the class with them. I suppose they find it a bit intimidating, and Samuel reflected that some teachers give the impression that they feel the need to have control in their own classrooms. Perhaps this is why special education teachers working in the regular classroom are informally referred to pushing in to classrooms when they are not pulling out students (for example, United Federation of Teachers, 2002).

For members of the educational community who are satisfied with using partial pull-out to supplement inclusion, the withdrawal of students seems to be a non-issue. But for those who do wish to participate in collaborative teaching, supports need to be provided to remove barriers such as those indicated by special education teachers. According to these special education teachers and others, this can happen through the encouragement of instructional innovations and changes to existing organizational arrangements (Robinson, 1991). Such changes, though, are not always possible at an individual level: they must be supported by school administration and district policy, in both theory and practice.

Fortunately, as West & Idol (1990) suggest, in addition to teaching together, collaboration is also considered to be a process that focuses on shared decision-making and problem-solving. In other words, collaboration is also talking together. This talking together is how teachers in this study preferred to collaborate B although it also came with its own challenges. One of these problems was time.

Where does the time go?

An examination of how teachers spend their time together also provides insight into what they believe is important. The special education teachers in this study typically talked together during meetings which they usually described as spontaneous or informal. For example, William said, So I just consult with the teacher then, just outside her door about what they were doing. Likewise, Olivia noted that, It just comes out of the blue Somebody could say something and then somebody will say something else. Before you know it, you're in a deep conversation about a certain child. You might pop into a teacher's classroom reflected Rose, or simply mention back and forth to each other to collaborate, said Faith.

Clearly, these teachers preferred spending their time focussed on discussing their special education students and their program needs. Rose recounts such everyday conversations as going something like this: How was Joe today? I did this with Joe today; what do you think about it? and Why do you think that is? We discuss the students in her class quite a bit and generally try to work together on solving problems that arise, is how Elizabeth described a common focus of her chats with classroom teachers.

During conversations, the main priority of the special education teachers seems to be about trying to create some continuity for students who are switching back and forth between different classrooms for instruction. Rose emphasized that these informal conversations are essential: It's actually impossible to do justice to a child's education without understanding how that child is performing and behaving in all other aspects of his education as well. And to do that you need to be constantly in collaboration with the regular classroom teacher. William agreed that, What one teacher's doing certainly leads into what another should be doing, and it's also... more beneficial.

These meetings generally take place in the staff room or in the regular classroom. With limited or no formal preparation time, what might seem a natural time to collaborate becomes virtually impossible. As William laughingly considered, When you get a prep period ... somebody else is working. Elizabeth echoed the consensus when she summarized that, There's really no time during the day. Instead, teachers seem to find some time to meet either during instructional time or after school.

Like many teachers, special educators are always busy carrying out the usual duties of their teaching role (Younghusband, 2000), including the assessment demands and paperwork that come with Pathways,¹; yet the teachers in this study did manage to find limited time to collaborate at least by talking with classroom teachers. However, what is conveyed here is that they have to create time to collaborate by taking the time previously allocated to other aspects their work, or by adding the collaboration time to their workday. Time for collaboration appears simply not to exist in the typical school, although finding time to collaborate is both an expectation and a necessity with the current practice of special education. Although Dettmer et al. (1993) assert that constraints of time should not hold back collaboration planning, the lack of time for these teachers and others (Voltz et al., 1994, Kauffman & Trent, 1991) is clearly a key inconsistency between the theory and reality of collaboration under Pathways. Rose summarized this discrepancy well when she wrote, As for the collaboration itself, it would be nice to sit down for a while and discuss further what to do about this particular student. But the question I keep asking myself constantly is: Where do I get the time to do all the things that need to be done? Indeed, finding any time to talk together is a frustrating and unwelcome challenge for many special educators.

If special education teachers believe that talking together is an essential type of collaboration, and policy stands behind this belief, schools need to support its practice. Rather than expecting individual teachers or pairs of collaborating teachers to create collaboration time, schools need to find a creative way to provide such necessary time. As Rose again reflected, Well, again, that's always a big problem I've sort of had with Pathways and all those types of things is that fact that ... I believe it is a good system, but the problem is when you're not provided the resources to carry it out as successfully as it can be carried out. And I always find that very frustrating. Like for example they talk about how important it is to collaborate with teachers.... but if you don't give me the time to do that, how do you expect me to do it? Finding time, though, is not the only area where special educators are in need of practical supports: challenging isolation is another.

Alone in a crowd

Dettmer, et al. (1993) noted that often a teacher might feel stranded on a crowded island that is devoid of adult interaction and stimulation (4). Special education teachers seem even more vulnerable than classroom teachers to these feelings of isolation since they are often separated from normal school routines. This certainly appeared to be the case for Olivia, who mused that, Special education can be isolating at times. Others were able to point out numerous instances of dealing with some form of isolation, either physically or psychologically. In part, this seems to be the inevitable result of withdrawing students to a special education classroom for instruction. Although withdrawal does not inherently have a negative effect on the quality of instruction and learning (Hallahan & Kauffman, 1991), it can have a negative effect on teachers (Hollingsworth, 2001). Any adverse effects of this physical isolation, though, are obviously not so negative that teachers are willing to discontinue its voluntary practice. As well, even in situations where special education teachers choose to teach alongside classroom teachers in the regular class setting, they were often still isolated to the extent that they generally limit most of their attention to the special education students in order to, as Leah noted, meet the needs of the students that I have ISSPs for, or my students, I call them.

It is of course impossible to avoid the irony here: although special education teachers express their great desire to collaborate, they are making a choice that contradicts this desire and leads, instead, to isolation. Indeed the idea that collaborative, inclusive classrooms have been a factor in preventing the isolation that occurs when teachers typically work alone (Salend et al., 1997) is not being fulfilled. Perhaps, then, it is not that isolation is inherently negative enough to avoid, but rather that there is not enough motivation to lean towards collaboration (Dettmer, Thurston & Dyck, 1993).

When participants reflected on talking together with classroom teachers, a recurrent theme was the noticeable lack of direct feedback to special education teachers from the classroom teachers with whom they were working. Leah, for example, noted that classroom teachers have not said anything directly to her, such as, This collaboration bit is great. She wonders instead if maybe we don't praise each other enough. When writing about her collaboration, Elizabeth reflected positively on one experience of talking together with a classroom teacher, but obviously felt this was outside of the norm when she wrote, Maybe others need to be more like her [the classroom teacher]? The important point is that this lack of feedback may lead to a feeling of isolation, in addition to the reality of physical isolation.

These feelings, though, seemed to be somewhat mediated by other kinds of positive feedback. These favourable impressions usually centred on the development of positive relationships between collaborating teachers. Rose, for example, cited a classroom teacher as being very respectful of her opinions and having open and honest interactions, Elizabeth noted that another was very easy to talk to, and William discussed his positive feelings about a good rapport. As well, these teachers seemed to rely on their own intuition when no direct feedback was made available to them, and determined most relationships to be positive.

Overall then, feelings of isolation arose when these teachers were not provided with direct feedback about their efficacy, but their isolation appeared to be mediated by indirect feedback. The special education teachers in this study usually purposefully chose physical isolation over in-class collaboration with classroom teachers against the typical recommendations of educational researchers. To improve the likelihood of special education teacher isolation, teachers need to be given motivation to teach together through the provision of practical supports, encouragement and feedback. Although collaborative teaching is one way to support both inclusion and the provision of direct special education services, it seems obvious that schools do not expect their teachers to use this method. Perhaps schools could provide modelling and practice in teaching collaboratively, and emphasize the importance of positive feedback from all involved members, including school administration. Individual school staffs may need to consider a group consensus to begin to implement collaborative teaching. If special education teacher and classroom teachers do in fact attempt teaching together, though, further issues do continue to arise, such as negotiating authority between these teacher pairs.

A struggle for command

Although Dwyer & Patterson (2000) assert that it is now time to view the classroom as a shared space including all key members of the educational community, the teachers in this study indicate that the sharing of space and roles does not come without a struggle. For example, as William described it, The home room teacher may not mind you coming in and suggesting things ... [but then] there's someone else who doesn't want you to tell them how to do their job. And you don't want to do that anyway it took me a while to figure out who I could say what to. Similarly, Rose wrote that, Teachers working together is much more effective than teachers dictating to one another. I feel it's very important to establish a good rapport with each teacher and to make one another feel comfortable in expressing [our] beliefs and their concerns. Faith lamented: Sometimes I wonder if what I have to say is as important or whatever? So I sort of keep my mouth shut a lot more than perhaps I should.

Clearly, some special education teachers avoid similar struggles by withdrawing students for instruction rather than teaching together with classroom teachers, as the teachers in this study typically did. These choices seemed to give the special education teachers greater independence and eliminate the difficulties associated with resolving day-to-day boundary struggles. For example, William noted, I think that both of us would be more comfortable working on our own that way [because then] they're mostly out and they're my students on my course, And Rose stated, I find it hard sometimes when people say you should do this, this and this with kids, but I always feel very strongly that what you should do depends on the individual student and the individual situation. Similarly, Samuel noted a common attitude among classroom teachers when he said, Some totally whole-heartedly, yes, collaborate. More others are just sort of, Well, okay, that's a good idea, but you take the student outside of my class or that, She's got her students in her class, and she teaches the way she ... wants to teach, and I'm there and I'm working with that student. William acknowledged that difficulties in working out role boundaries can come from the special education teacher as well as the classroom teacher when he maintained that, It could be me too. I mean, it can, it can go both ways right? It

could be just something that I'm not comfortable with, and would not rather approach it.

Thus, although these teachers supported the ideals of collaboration, they simultaneously withdrew from the challenge of developing appropriate role boundaries in their teaching relationships. Once again, these special education teachers seemed to be voicing their willingness to fulfil the demands of collaboration B in theory B but they appeared to be unwilling, on their own, to take the personal risks needed to put these ideals fully into practice. Clearly, school administrators will need to consider that teachers need to be supported in attempting new initiatives in an environment that supports risk-taking. More importantly, it will be necessary to create an environment where teaching together and negotiating new relationships is not seen as a risk, but rather understood as a worthwhile challenge in the fulfilment of best teaching practices.

Three wishes

The teachers in this study described a number of serious barriers to their collaboration with classroom teachers, but none of them reacted to these barriers by suggesting discontinuing or even minimizing their attempts to collaborate. Just the opposite attitude existed: these teachers consistently confirmed Howell's (2000) idea that collaboration helps to solve problems, improve situations and meet challenges and needs that would not be otherwise met individually. When asked to provide their thoughts on what would be needed to support collaboration, the teachers were quick to point out three areas: formal, planned time to talk together with classroom teachers preferably during the instructional day, in-service education on collaboration, and additional training in the interpersonal skills necessary to carry it out successfully.

The ideal of planned collaboration time was summarized by Olivia who suggested that it "would be beneficial to set a particular time aside once a week to discuss student progress with teachers. Even once a week or every couple of weeks would be great. She had heard of times when the special education teacher Awill actually slot in a certain amount of time, probably after school, to talk to specific teachers, probably once a week. Apparently skeptical about whether this in fact was a real possibility, she added, Or is that too much I wonder? Is that asking too much? When considering an ideal school in an ideal world, Rose mused that she would have, three periods a week where I could sit down with a teacher and we could discuss the students' progress and where we feel we could go on from here. She imagined that ideally schools would provide time allotted to actually sit down and discuss those things. William, on the other hand, imagined ideal time for collaboration unfolding this way: First thing in the morning ... after the good mornings are said, we can sit down do you have anything pressing that that kid needs to be doing right now? If not, this is what I'm doing. Any suggestions as to anything I should be doing more or extra or am I doing too much that that kid can't handle. Leah envisioned that, ideally, we have time in the evening before. Samuel believed that an ideal model would be to Ameet with the other teachers ...before we actually have the student that the two teachers can have off, and we can discuss and talk about different ideas.

Like Olivia, though, Elizabeth thinks that being provided with time to collaborate during the instructional day is unlikely. In fact, she responded with: I think

that's funny! [laughter] Because I don't think we'll ever get it pardon me for being so sarcastic [laughter continuing] but I don't think, I really don't think that's going to happen. Clearly, time is a critical issue, for these teachers and others (Phillips & McCullough, 1990; Robinson, 1991).

As a number of researchers agree, special education teachers who choose to collaborate also need a venue to develop the skills that area necessary for collaboration (Bedi,1996; Dettmer, Thurston & Dyck, 1993; Robinson, 1991). The majority of those in this study agreed, indicating that they would benefit from some type of professional in-service training in collaboration. Olivia suggested that this could be accomplished by using Aa moderator, or someone, like I said, that could give us even an hour, or a couple of classes in how they use it [collaboration] , or a couple of classes in how they use it, or what it's used for, or how it can be used. Faith reflected, Aeven if it was just on Pathway Two, just to stress the importance of it. And the importance of documentation and collaboration with the classroom teachers, to help this child.

Some indicated that even time to talk with other special education teachers would be welcomed in the form of William's suggestion of periodic get-togethers or Leah's wish to be able to sit down sometime, and say, Look, this is how we collaborate. Others emphasized the necessity of including training in collaboration at a preservice level; for example, as Elizabeth pointed out, I don't think special education should be like a separate thing that you go in and like a degree that you go in and get. I think that there should be some parts of it included in your programbecause you deal with things like that every day in your classroom.

Finally, teachers in this study seemed to be in agreement with Robinson's (1991) view that effective collaboration needs knowledge and skills in the process of collaboration and knowledge and skills in effective teaching practices (448). The most common focus of knowledge and skills for collaboration training suggested by these special education teachers fell within the bounds of training in interpersonal skills. This wish was summarized by William who reflected, You're learning people skills. And a lot of us, even though we are supposed to be teaching people, we lack that. In addition, Rose noted that, It's always nice to get some ideas about how to get along better with other people, because there may come a time when my collaboration with the regular classroom teachers may not run so smoothly as it is right now. She observed that it is important to learn to respect other people's ideas even if you don't agree with them sometimes, a feeling echoed by William who indicated that he wanted to know how to approach someone when you're sure that what you could suggest is going to benefit this kid, but you know that a certain teacher is just going on a different wavelength altogether.

Rose referred to the importance of learning Aideas and things on how to deal with teachers that are more difficult, and Olivia linked this with parent-teacher relationships as well, by noting that she would like to focus on Ahow to collaborate with parents so you don't sound like you're the know-it-all ...you want to make the parents feel like they're your equals and that their opinions are just as important as yours, which they are and how do you handle certain situation, or what would you do if a parent said this, or a parent disagreed. These skills could also benefit classroom teachers, if they could help motivate classroom teachers to share their

teaching tasks. Faith suggested that she would like to learn to assist classroom teachers in knowing that that they can come to the special education teacher for help and advice; that you don't have to do it all on your own. Overall, then, they seem to be suggesting that interpersonal skills training, although ultimately targeted at enhancing student learning, can also be applied to teacher-teacher and parent-teacher relationships in collaboration.

Overall, special education teacher wishes for collaboration in an ideal world centre on the need for formal, planned collaboration time, inservicing in collaboration, and training in interpersonal skills development. To meet these objectives, teachers are quite surely in need of support, leadership and advocacy from school administration. It is interesting that for most, these ideals seemed to be viewed as little more than wishful thinking.

Looking ahead

Overall, the special education teachers in this study seemed to agree in theory with the ideals of inclusion and collaboration. In practice, they do carry out inclusion for the majority of the instructional day, and engage in collaboration in a limited manner. It seems clear, however, that without support, they are not likely to be able or willing to explore fully the potential of true collaboration, as described in the literature. To support special education teachers better, provincial policy needs first to emphasize day-to-day collaboration between the teachers who are responsible for students with special needs, for example by expanding on the collaborative roles each is expected to play in the step by step process of implementing an ISSP plan. More particularly, the Special Education Policy Manual (Draft), Pathways and ISSP documents need to be modified to more explicitly recommend effective approaches to teaching together and talking together. As well, provincial and school board policies must provide individual school staffs with the authority to implement supportive, practical changes.

At the school level, principals need to consider a commitment to collaboration, perhaps through the use of more flexible scheduling. This could be accomplished by reorganizing the school day, for example, or by having local school administrators assign collaboration time, or by making use of student grouping, support staff, volunteers, student teachers or substitute time as suggested by West & Idol (1990). Similarly, perhaps school staffs need to consider their overall attitude towards collaboration and work towards developing a collaborative ethic initiative to ensure that staff have consistent expectations and goals for collaboration (Phillips & McCullough, 1990). School faculties could network locally and with a wider community, sharing information through the use of text, technology or teacher conferencing (Brown & Sheppard, 1997). In this way, teachers who are geographically dispersed could share, learn and reflect through modes such as Acomputer links, newsletters, fax machines, and occasional seminars and conferences (10) as a flexible model for rural regions. Making use of a centrally-located teacher centre for the collaborative development of innovations in skills, materials through dialogue is another possibility. Similarly, accessing an on-line community such as the Virtual Teacher Centre (Newfoundland and Labrador Teachers Association, 2001), a new provincial initiative, is another alternative where groups such as Online Learning Teams can be utilized. Here, the focus is on the

professional development needs of a small group of self-paced, networking teachers who are focussed on meeting goals to find the best classroom practices.

To resolve power issues, school administrators might consider implementing interpersonal skills development training and in-service training on teacher collaboration. A focus on both of these areas should provide teachers with a greater knowledge of possible roles for collaboration and ideas about how to carry out these roles professionally, deflecting potential conflict and building a collaboratively community of teachers. Such training could be provided through involving all staff in a model of staff development, which centres on long-term commitment to professional growth towards a goal (Dettmer, Thurston & Dyck, 1993). As an alternative, programs of skills development, described by Brown and Sheppard (1997) as periodic workshops over a given period of time, including classroom coaching to help transfer skills that are learned to the classroom environment, could be implemented. Other possible ideas include mentoring programs or teacher institutes (Glickman, Gordon & Ross-Gordon cited in Brown & Sheppard, 1997), distance education, or making use of school administration days. As well, these plans could be linked with other existing district initiatives involving school improvement or teacher growth.

It will be interesting to see how collaboration will change and develop over time under Pathways. Further research seems indicated in a number of areas: comparative studies of novice and experienced teachers; regional and provincial differences in support and implementation; and the perspectives of classroom teachers, to name just a few.

What this exploratory study shows, however, is that if collaboration is to be successful in its initial stages, the province will need to begin by providing school boards and local schools with the authority and practical means to implement supportive, practical changes. If schools and school systems plan for their special education and classroom teachers to practice effective inclusion, the demands of its implementation in turn necessitate teacher collaboration. Teacher collaboration, in turn, demands the provisions of time and training that special educators clearly require.

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Informed Consent In Special Education Conceptual Definitions And Implications For Practice

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Abstract

Central to special education planning is the involvement of parents at all levels of decision making. Provincial legislation and ethical standards dictate that signed and informed parental consent must be obtained before assessment, adaptations to curriculum and or placement decisions are made. Informed consent is a legal concept that emerged from medical practice to become a central construct in education, especially within the current paradigm of collaborative case planning. Given the legal significance of informed consent, this paper will review its place in education as well as its interpretation in the legal system. An exploration of this construct is particularly timely as the literature documents that, despite the development of policy that strives towards greater empowerment of family, a break between policy and practice continues. While an examination of court interpretation of informed consent will be conducted, particular focus will be given to the Newfoundland policy, affording educators an opportunity to reflect on their practice within a legislative framework.

Introduction

Special education is, at its core, a process of individualized planning to support the unique needs of students with exceptionalities. Teachers and parents meet regularly to cooperatively design a support plan based on the identified strengths and needs of the child, often referred to as an Individualized Education Plan (IAP) (Heward, 2000; Winzer, 2002). Legislative provisions for special education placement and planning stipulate informed consent and parental involvement at all levels of decision-making (Brown, 1998; Rothstein, 2000). In fact, increasingly popular is a shift towards family centered, interagency approaches of case management that strives to optimize parental involvement in the decision-making process (Philpott, 2002; Dunned, 1997; Lipsky & Gartner, 1997; Maclean & Marlett, 1995). Kirk, Gallagher, and Anastasiow (1997) identify this as a growing trend and states that, "A major movement in the United States is under way to give parents more authority in decisions related to their child with disabilities. Called parent empowerment, this movement aims to increase parents' control over decisions relevant to their child" (p.120). The effectiveness of this role can depend on several factors, including the sincerity of the parents to partake in the process and the willingness of the school to welcome them (Fielding, 1990).

Tiegerman-Farber (1995) state that, "It is in the best interest of education, its reform, and its success to educate parents and focus their skills as child advocates" (cited in Tiegerman-Farber & Radziewicz, 1998, p.176). Riley (1994) posits that parental involvement in education has been a growing trend with an increased focus on education of parents to facilitate active and effective involvement. The result has

been a stronger voice of parents as advocates for the needs of their children. Loxley and Thomas (1997), in an international review of special education policy, found a "consistent development towards the democratization of special education" (p.288) with parents having a larger input into decision-making processes through an increased focus on collaborative practice.

Fine (1991) outlined four key objectives of collaboration with parents such as including parents in decision making for their child, educating parents for participating in decision making, helping parents better cope with certain issues that may interfere with their participation in the educational process of their child and, enabling and empowering parents to actively participate in their child's education. Davern (1996) stressed the need for strong and clear channels of communication between the student's home and school in order to maximize the effectiveness of this process.

This need for better communication between home and school, as well as the growing parental involvement in special education planning, is not rooted solely in the philosophy of a collaborative decision-making model. Parents have been developing a growing sense of their legal and social right to be involved in this process for some time. Weber (1994) identified this trend of parental awareness of their legal rights:

Political activism by parents and other advocacy groups on behalf of students with special needs, had - and continues to have - a powerful effect on the provincial governments.....At the same time, it became accepted, indeed encouraged, practice among professional educators, especially by the nineteen nineties, to involve parents far more extensively in day by day educational decision-making (p.10).

Canadian schools have long recognized the right of parents to be involved in the education of their children. Mackay (1984) states that, "The primary responsibility for educating and raising children rests with the parents, not the state" (p.58). In fact, any actions of educators in Canadian schools follows a doctrine of "in loco parentis" (in place of parent) where teachers' actions are guided by what are perceived to be those of a reasonable and prudent parent.

In Canada, the adoption of The Charter of Rights and Freedoms (1982) has done much to inform parents of the legal rights of children with disabilities. Weber (1994) states, "...the Charter also gave impetus to a practice that had developed a momentum of its own: namely, recognition not only of the rights of parents, but of the potential value of their contribution to an exceptional student's education" (p.12). Indeed, parents of students with exceptionalities are more involved and legally informed than ever before. Winzer (2002) outlines that Canadian judicial activity in special education is currently centered around three concerns: the principles of inclusion; the willingness of advocacy groups to support parents; and interpretations of the Charter of Rights and Freedoms.

Despite this protection of parental right to be involved, Smith (1990) found there were differences between the legislated intent and practice. Lloyd (1995) reported that dealing with parents is often cited as the most frustrating aspect of the job for special education teachers and school personnel. Likewise, parents reported frustrations in having school personnel recognize the needs of their child and in them

having only a token role in the decision making process (Philpott, 2004; Gable, Korinek & Laycock, 1993; Harry, 1992; Leyser, 1985; Yanok & Derubertis, 1989; Voltz, 1994). Rock (2000) further comments on this by stating that the barriers to true parental participation are complex with “parents entering the process with a distinct disadvantage” (p.35). Case (2000) polled parents of special education children and found that the “parent-professional relationship remains one of disparity, with the professional persisting in the expert role” (p.287). Case also concluded that with interagency planning teams this problem was exacerbated by a lack of information sharing and a fragmentation of services.

Turnbull and Turnbull (2001) state, “Too frequently, professionals interact with families in a way that connotes expert power and many parents believe that they can contribute little to educational decision making” (cited in Turnbull, Turnbull, Shank, Smith, & Leal 2002, p. 96). Yanok and Derubertis (1989), in a comparative study of regular and special education parental involvement in education, found that legislative provisions had done little to ensure the increased involvement of special education parents. Vaughn, Bos, Harrell, & Lasky (1988) found that parents assume a passive and minimal role in the meetings.

This finding was consistent with an earlier study by Goldstein, Strickland, Turnbull and Curry (1980) in which it was observed that meetings tend to be short (36 minutes on average) with parents contributing less than 25% of the discourse. In a later study, Able-Boone (1993) found it was usually the child’s mother who attended the IAP meeting. Harry, Allen and McLaughlin (1995) conducted a three-year observational study and identified what they referred to as a token role for parents. They found that parental participation declined over time and their involvement was usually limited to securing signatures for consent purposes. This “securing of signatures” approach to parent participation was identified by Philpott (2004) in which parents reported that participation in interagency school meetings is often characterized by their being asked to sign documents without knowing what they are signing. If parental involvement is indeed central to educational planning and is legislatively mandated, full understanding of the process and possible implications of their decisions is crucial. Subsequently, an examination of the legal concept of informed consent is warranted.

Informed Consent

Given the responsibility of parents in the education of their children, there is little doubt that their approval is required for special education planning. The implications of adapting instruction and curriculum to meet the needs of exceptional students raises the stakes for higher accountability to parents. Signed parental consent forms have become an integral part of the documentation process for special education. While the legal concept of informed consent had its origin in health care, it has long since found its way into the special education vernacular. With inclusion being the predominant philosophy in Canada (Winzer, 2002; Philpott, 2002; Weber, 1994) placement decisions, and the process used to arrive at those decisions, are taking on a greater importance. Brown and Zuker (1998) speak to this issue of procedural fairness in educational planning:

One must, however, distinguish between moral fairness and procedural fairness. Procedural fairness does not mean that everyone must believe that a board's decision was right. It refers to the procedure used to arrive at the board's decision. The statutory power invested in boards to make decisions which affect the rights of others carries with it a heavy responsibility to ensure that those decisions cannot be successfully challenged in court on the basis of procedural fairness, or on the grounds of bias, lack of jurisdiction, or error law (p.21).

Today special education policies, procedural guides or provincial statutes outline the concept of informed consent and articulate clear methods to ensure that such is followed. The doctrine of informed consent references the recognized right of an individual to consent to treatment or actions which may limit or affect their fundamental constitutional rights of life, liberty and security of the person. Given that school systems deal primarily with children who have not reached the age of consent, parents are responsible for granting such consent. Canadian law stipulates that the doctrine of informed consent have three elements including: competency to give the consent; full knowledge of the nature of the procedure being consented to; and that the consent be voluntarily obtained. Case law has also stated that the patient needs to be fully aware of all viable options before the consent can be given (Malette v. Shulman, 1990). When parents are giving consent for their child a fourth element enters into consideration, that being whether or not the procedure is in the best interest of the child. What emerges in practice is an awareness that informed consent is much broader than a parent's signature. The implications of this for educators are numerous.

American Law

Special education in Canada is largely affected by movements in the United States (Weber, 1994). In the United States, as in Canada, education is primarily a regional (state/provincial) responsibility. The American Constitution, like its Canadian counterpart, serves to establish national standards of equality and fairness for its citizens. In America, the Constitution empowers the national Congress with the right to set federal statutes that will help implement principles set out in the Constitution. Subsequently, a number of federal statutes have been passed that deal specifically with special education. Chief among these is The Individuals with Disabilities Act (IDEA) which was approved by Congress in 1990 and replaced its predecessor, Public Law 94-104. Rothstein (2000) clarifies this by stating "Although education is primarily state controlled, special education, in practice, has become federally controlled by the IDEA. Although states are not required to follow IDEA requirements, they must do so if they wish to receive federal funding for special education. The federal budgetary support for special education is of extreme importance" (p.40) and, as such, tends to establish a standard of practice.

The IDEA statute references the parental right to be informed of and to consent to interventions for their child. It is closely linked with the concept of due process, where parents must also be made aware of their right to appeal decisions affecting their children. Rothstein (2000) states:

A key element to procedural due process is notice. Without notice of plans and proposed decisions, parental involvement would often be nonexistent. The IDEA requires written notice before the agency (i) proposes to initiate or change, or (ii) refuses to initiate or change, the identification, evaluation, or educational placement of the child or the provision of an appropriate public education. notice must be in writing and must be in a form understandable to the general public. It must be in the native language of the parents or other mode of communication if that is not feasible...the content of the notice must include not only a description of the action proposed or refused, an explanation of why, and a description of options that were considered and why they were rejected, but it must also include a full explanation of all of the procedural safeguards available under IDEA (p.237-238).

Rothstein goes on to expand on the need for notice by stating:

It is not sufficient for the educational agency simply to provide notice to the parents. The parents must consent to the placement decision before it can occur. Consent is required whenever the educational agency wants to conduct a pre-placement evaluation or make an initial placement in a special education program. Consent is not required, however, for changes in the child's program after the initial placement. Although consent is not required, the notice requirements are still in place.....And if the parents, upon receiving prior notice of the proposed change, object to it by filing for a hearing, the change will not take place until the dispute is resolved (p.238).

While Canada does not have federal statutes similar to IDEA (nor the accompanying funding mechanisms), case law can serve a similar function of nationalizing standards of practice in this country. While education is a provincial responsibility in Canada, conflicts are often settled by court rulings in similar cases from other provinces and/or the federal Constitution.

Canadian Case Law

Case law is an important concept in the Canadian judicial system and one that often crosses provincial boundaries, thereby serving as a national legal standard. Mackay (1984) defines case law as, "...a seamless web; it is essentially an accumulation of judicial rulings over time. Once a judge establishes a legal rule, it is binding on lower courts." (p.5). Subsequently, in defining what is meant by informed consent in Canada, courts often look to other cases that have previously dealt with this issue. While policy is set provincially, judicial rulings have a huge impact on policy development in that no policy can override law – either legislated statute or case law. Educational policy and practice therefore, is greatly influenced by judicial ruling from educational and other legal cases. One leading medical case offered a judicial interpretation of consent. *Malette v. Shulman* (1990) that went before the Ontario Trial Court and was later appealed to the Ontario Court of Appeal in 1990. In the case, Malette was injured in a car accident and was unconscious upon her arrival at the emergency room. The attending physician decided that a blood transfusion was required. However, a nurse discovered a card indicating that the patient was

Jehovah's Witness and, based upon Malette's religious convictions, refused a blood transfusion. The doctor decided that the transfusion was necessary to save the patient's life and proceeded. The plaintiff's daughter requested that the transfusions cease, but the doctor proceeded nevertheless. Upon recovery, the plaintiff filed charges of battery against the doctor to the Supreme Court and won. The case was later appealed to the Ontario Appeal court and subsequently dismissed, in support of the lower courts ruling. In their verdict, the court stated :

The doctrine of informed consent has developed in the law as the primary means of protecting a patient's right to control his or her medical treatment. Under the doctrine, no medical procedure may be undertaken without the patient's consent obtained after the patient has been provided with sufficient information to evaluate the risks and benefits of the proposed treatment and other available options. The doctrine presupposes the patient's capacity to make a subjective treatment based on her understanding of the necessary medical facts provided by the doctor and on her assessment of her own personal circumstances. A doctor who performs a medical procedure without having first furnished the patient with the information needed to obtain an informed consent will have infringed the patient's rights to control the course of her medical care, and will be liable in battery even though the procedure was performed with a high degree of skill and actually benefitted the patient.The doctrine of informed consent is plainly intended to ensure the freedom of individuals to make choices concerning their medical care. For this freedom to be meaningful, people must have the right to make choices that accord with their own values regardless of how unwise or foolish those choices may appear to others (p.327-328).

This definition of informed consent and the right of an individual to decide his or her course of treatment could be applied to educational circumstances. The court referenced that in giving consent the patient needed to be made aware of all the possible consequences of the treatment as well as other possible courses of treatment. Other cases such as Johnston v. Boyd (1996) and Van Mol v. Ashmore (1999) reinforces this legal concept and strengthens the need for the patient to be made aware of alternatives.

Given that informed consent in education is granted by a parent because the child is a minor, the case of B.® v. Children's Aid Society of Metropolitan Toronto (1995) is of relevance. The case speaks to the need for parents to make decisions that are in the best interest of the child. In this case, Jehovah's Witnesses refused to give consent for their critically ill daughter to have a blood transfusion. The hospital sought and obtained a wardship for the child, during which time she received the transfusion. Her parents subsequently sued and the matter ended up at the Supreme Court of Canada, who upheld the decision. In their verdict they stated:

Although an individual may refuse any medical procedures upon her own person, it is quite another matter to speak for another separate individual, especially when that individual cannot speak for herself. Parental duties are to be discharged according to the "best interests" of

the child. The exercise of parental beliefs that grossly invades those interests is not activity protected by the right to liberty in s.7. There is simply no room within s.7 for parents to override the child's right to life and security of the person. To hold otherwise would be to risk undermining the ability of the state to exercise its legitimate *parens patriae* jurisdiction and jeopardize the charter's goal of protecting the most vulnerable members of society.

This concept of "best interests of the child" has important implications for educational practice, especially within a concept of who, in the decision-making process, has final say. While it is generally considered that parents must consent to accommodations and supports for their children, they do not necessarily have final say in what is best for their child. Many provinces, Newfoundland included, practice a strong team decision-making model to help delineate what is in the best interests of the child. In this way, conflict is usually settled at the school level. However, cases can be taken to the courts to help determine who gets final say and/or what is in the best interests of the child. One well known case is that of *Eaton v. Brant County Board of Education* (1997), initially heard by the Ontario courts but eventually appealed to the Supreme Court of Canada on grounds of discrimination under the Canadian Charter of Rights and Freedoms.

Emily Eaton was a severely disabled student who had been in the neighborhood school with supports under a program for inclusion. After three years of struggling to meet her needs in a regular class the school board felt that Emily would be better served in a special segregated class. The parents disagreed and appealed to the special education appeal board which upheld the decision to place her in a separate program. The parents then appealed to the Ontario Divisional Court who dismissed the application, in support of the ruling for placement in the separate class. A subsequent appeal to the Ontario Court of Appeal was heard and the decision to place her in a separate class was over-turned on the basis of discrimination under the Charter. The school board then appealed to the Supreme Court which heard the case and dismissed the decision of the Ontario court, re-instating the school board's decision to place her in a separate class. While the majority of the ruling dealt with the issue of discrimination under section 15 of the Charter of Rights and Freedoms, the court did reference issues of decision-making bodies and parental consent. Their ruling, though long, holds direction for educators:

The Tribunal set out to decide which placement was superior, balanced the child's various educational interests taking into account her special needs, and concluded that the best possible placement was in the special class. It also alluded to the requirement of ongoing assessment of the child's best interests so that any changes in her needs could be reflected in the placement. A decision reached after such an approach could not be considered a burden or a disadvantage imposed on a child. For a child who is young or unable to communicate his or her needs or wishes, equality rights are being exercised on that child's behalf, usually by his or her parents. Moreover, the requirements for respecting these rights in this setting are decided by adults who have authority over this child. The decision-making body, therefore, must further ensure that its determination of the appropriate accommodation for an exceptional

child be from a subjective, child-centred perspective -- one which attempts to make equality meaningful from the child's point of view as opposed to that of the adults in his or her life. As a means of achieving this aim, it must also determine that the form of accommodation chosen is in the child's best interests. A decision-making body must determine whether the integrated setting can be adapted to meet the special needs of an exceptional child. Where this is not possible, that is where aspects of the integrated setting which cannot reasonably be changed interfere with meeting the child's special needs, the principle of accommodation will require a special education placement outside of this setting. For older children and those who are able to communicate their wishes and needs, their own views will play an important role in the determination of best interests. For younger children and for persons who are either incapable of making a choice or have a very limited means of communicating their wishes, the decision-maker must make this determination on the basis of the other evidence before it. The application of a test designed to secure what is in the best interests of the child will best achieve that objective if the test is unencumbered by a Charter-mandated presumption favoring integration which could be displaced if the parents consented to a segregated placement. The operation of a presumption tends to render proceedings more technical and adversarial. Moreover, there is a risk that in some circumstances, the decision may be made by default rather than on the merits as to what is in the best interests of the child. That a presumption as to the best interests of a child is a constitutional imperative must be questioned given that it could be automatically displaced by the decision of the child's parents. This Court has held that the parents' view of their child's best interests is not dispositive of the question (at p. 244-245).

Emily Eaton's case is important for many reasons. Placement is often a point of disagreement between parents and schools and one in which consent can be withheld. Proceeding to place a child without consent is a strong move for a school board. However what was central to the court's decision was that alternative placements (treatments) had been explored and were not successful. This proven failure of the regular classroom to meet Emily's needs is central to the verdict. The school district was able to successfully argue that it was not in Emily's best interests to continue with a program of inclusion. With this proof they were able to override the parents' wishes and negate parental consent; however, one can only speculate on the court's decision if the separate class was to be the initial placement for Emily. "Best interests of the child" would then have been a much more arguable construct.

Bowlby and Wooton Regan (1998) in commenting on the implications of the Eaton case for educators in conflict with parents over placements state:

There is a significant difference between differential treatment directed toward an individual with a disability for the purpose of attempting to provide that individual with an equal opportunity based on abilities, and differential treatment based on stereotyping which treats an individual differently simply because he or she has a disability, without any consideration of abilities or merits. The latter is discrimination: the

former is not.Accordingly, a child-centered approach to placement which assesses the individual special needs of a particular child and determines a placement which best meets those special needs from an educational perspective is not likely to be found discriminatory (p.166).

It is cases such as this that help guide educational teams, including parents, as they strive to develop comprehensive and effective plans for exceptional children. Case law can only be considered relevant if the facts of the cases are similar with the decisions rendered being binding to all lower courts (Mackay, 1984). In defining informed consent for education, and in particular, for options for students with exceptionalities, courts would look for precedent in other provinces and from disputes in other professions.

Provincial law

It is with this legal interpretation that educators define informed consent for their practice in each of Canada's provinces through legislation specific to education and schools. In the province of Newfoundland and Labrador The Schools Act (1996) (Statutes of Newfoundland, 1997) references both informed consent and due process. This includes section 20, "(1) A parent of a student attending a school is entitled to (a) be informed of the student's attendance, behavior and progress...". The Act also references the need for consent to be obtained when releasing information on a child. Section 12(b) states that information cannot be released on a child, "Without the written permission of the parent of a student, or the student if the student is 19 years of age or older...." Due process is more directly referenced under a section titled Appeal, Section 22,

1. Where a decision affects a student, the parent of the student or the student, if the student is 19 years of age or older, may appeal the decision
 - of a board employee employed in a school, to the principal and his or her decision may be appealed to the board;
 - of the principal, to the board; and
 - of a board employee not employed in a school, to the board, and the board's decision on the appeal shall be final
2. An appeal under subsection (1) shall be commenced within 15 days from the date that the parent or student is informed of the decision
3. An appeal under this section shall be made in accordance with this Act and the by-laws of the board
4. A decision made under this section that is final or that is not appealed within the appeal period is binding upon the student, school, board and other persons affected by that decision
5. This section shall not apply to expulsion decisions under section 37.

Special education is specifically referenced in this legislation in Section 117.b (v), "The Minister may issue policy directives, including policy directives with respect to...(ii) special education." It also outlines that each of the elected boards shall, "...ensure that policies and guidelines issued by the Minister relating to special education for students are followed in schools under its jurisdiction."

To this end, the Department of Education's Special Education Policy Manual - draft (1999) outlines 34 separate policy guidelines for meeting the needs of children with exceptionalities. Informed consent is referenced at several points in the policy manual and well-entrenched in practice.

Policy 6: It is directed that each school board obtain consent before the comprehensive assessment commences. (6.1) Children and youth, where appropriate, and parents are informed of the purposes of assessment, participate in the process and have assessment results explained to them. Policy 19: It is directed that each school board inform youth over the age of 19, where appropriate, and parents of their rights to appeal. Policy 18: It is directed that where ISSP teams make a minimum of three attempts, which are convenient for the parent, and the parent refuses to participate in the process, the manager will present the facts to the Director to determine whether permission is granted to implement the educational component of the ISSP(p.5.2-5.3).

Policy 18 references the delivery model for special education planning in Newfoundland and Labrador, named the Individual Support Services Plan (ISSP). This process of planning and writing an individualized plan to meet the needs of a child has parents and the student as core members of the planning team. Before the planning process can be initiated, referrals made, or special education delivered, the parents are required to sign consent forms as outlined in the document *Coordination of Services to Children and Youth: Individual Support Services Plans (1996)*. Consent forms are also mandated for adaptations to or accommodations for the provincial curriculum, as outlined in a second document titled *Pathways to Programming and Graduation: A Handbook for All Teachers and Administrators (1998)*. The entire model is one in which the role of parents is prioritized and provisions are implemented to ensure that they are fully aware of the process.

In addition to guidelines imposed by the provincial government, each local school district is mandated to develop its own policy guides to implement the provincial policy. The Special Education Policy Manual (1999) references this in policy 2: "It is directed that each school board will maintain a manual of policies, procedures and guidelines for the provision of programs and support services to students" (p.5.6). These manuals further outline procedures to inform parents of the programming supports for their child.

Each province has its own legislative provisions for consent to be obtained. Ontario, for example, mandates that each school board establish a board whose job it is to review referrals for special education and decide on placement. The IPRC (Identification, Placement and Review Committee) reviews all pertinent information on a child, including assessment and performance history, and decides if the child is "exceptional". Signed parental consent must be obtained for the IPRC to review the child, the parent must receive full information on the process, have 10 days notice of the meeting, and be interviewed by the committee. In adjudicating placement options or programming supports they must consider inclusion in the regular classroom with necessary supports. The committee must then send a written copy of the report to the parent immediately upon completion. The parent then has fifteen days to appeal the

decision. Placement and/or program recommendations are then implemented when signed parental consent is obtained (Brown, 1998).

Ethical Standards

While informed consent is well anchored in law and educational policy it is also reinforced in the ethical principles of many of the professions that deal with special education students. Psychologists who are often involved in the assessment process, counselling and programming supports have the concept of informed consent clearly defined in their ethics. The Companion Manual to the Canadian Code of Ethics for Psychologists (1991) states that, "...psychologists have a responsibility to develop and follow procedures for informed consent, confidentiality, fair treatment, and due process that are consistent with those rights" (p.27). The manual goes on to cite Principle 1: Respect for the Dignity of Persons of the Code of Ethics:

I.13 Obtain informed consent from all independent and partially dependent persons for any psychological services provided to them, except in circumstance of urgent need (e.g. suicidal gesture). In such circumstances, psychologists would proceed with the consent of such persons, but fully informed consent would be obtained as soon as possible.

I.15 Establish and use signed consent forms which specify the dimensions of informed consent or which acknowledge that such dimensions have been explained and are understood, if such forms are required by law, or if such forms are desired by the psychologist, the person(s) giving consent, or the organization for whom the psychologist works.

I.16 Recognize that informed consent is the result of a process of reaching an agreement to work collaboratively, rather than of simply having a consent form signed.

I.17 Provide, in obtaining consent, as much information as a reasonable or prudent person, family, group, or community would want to know before making a decision or consenting to an activity (p.31).

Similarly the Canadian Counselling Association, the professional group for counsellors in Canada, has adopted its own ethical guide for members. The Code of Ethics (1999) references the concept of informed consent throughout its ethical guidelines.

While both of these guides are not legislation, each professional group has disciplinary procedures for members who violate their guidelines. While there is no national teaching agency for special educators, the internationally based Council for Exceptional Children (1997) has a code of ethics for all professionals working with students with exceptionalities. In a section titled "Parent Relationships" the code references informed consent by stating that special educators:

Seek and use parents' knowledge and expertise in planning, conducting, and evaluating special education and related services for persons with exceptionalities; maintain communications between parents and professionals with appropriate respect for privacy and confidentiality. Inform parents of the educational rights of their children and of any proposed or actual practices which violate those rights.

Implications for special educators Within this framework of legal, procedural and ethical guidelines is the practice of the special education teacher. There is an inherent responsibility, ethically and legally, for teachers to be fully informed of the policies and procedures of their employer (local school board), policies of the provincial Department of Education, and the legislative guidelines in their province. Teachers would be well-advised to inform themselves of the ethical guidelines that may apply to them in their professional careers. In addition, an informed practitioner is one who is aware of recent court rulings on cases that could potentially fall within their field of practice.

This paper outlines that informed consent is much more than the securing of parent signature on the appropriate school district form. Rather it requires a recognition of the parents' competency to give consent, their full knowledge of what it is they are agreeing to – including all implications of and alternatives to the intervention, and that the consent is being given voluntarily. Case law also identifies that the procedures be developed in the best interests of the child and that an appeal process be available to the parents should they disagree. While this may sound rather straight forward, the reality in practice is not as simple. Competency of parents might well surface as a salient issue when parents themselves also have an exceptionality. Given that many of the disabling conditions witnessed in children are genetically linked, cognitive and emotional competency can be an obstacle that educators need to be aware of. Educators must also remain cognizant of the strong emotions that accompany raising an exceptional child and the ability of stress to cloud judgments.

In the field of education, understanding the consequences of decisions is complicated by the cumulative structure of the curriculum. Instructional decisions made at one grade level may limit the options available to the child at later grades, as well as career opportunities for the student. Additionally, a student's profile of strengths and needs is not static and requires close monitoring to ensure that decisions are based on current information.

The issue of voluntary consent can be biased by the parents' desperation for their child to receive help and a subsequent willingness to make rash decisions in an attempt to avail of a service. The school year is remarkably short and parents may feel pressured to consent to an intervention in an attempt to salvage the child's grades for that year. Finally, the requirement for all options to be reviewed with the parent prior to the consent is difficult. Options must be possible in order for them to be considered as viable. As educational resources are often scarce there may well be few options available. This final stipulation is one that is not strongly referenced in procedural guides, though stated by court rulings.

The case of Emily Eaton speaks to the best interests of the child as perceived by a team of decision makers after having tried alternative options. Maintaining strong communication with parents and documenting planning activity is essential in this accountability process, both to maximize the effectiveness of programming and to protect against malpractice. Teachers should be strongly advised to ensure that notes of meetings are kept in students' files and that parents are sent copies of those notes. Keeping parents informed of progress on a continuous basis will do much to enhance a collaborative decision-making model where all participants are aware of the child's needs and progress, thereby promoting a parent's understanding of the need for alternative approaches. Finally, educators should be proactive in encouraging both of the child's parents to attend meetings, by either scheduling them at more convenient times for parents or going to the family home. Where this is not possible, or in the case of single parent families, a relative or friend can be invited to accompany the parent as a support person.

In exploring this construct from the perspectives of the courts, legislation, written policy and ethical practice, educators are reminded of the need for diligence in their practice. Ultimately it is the courts who have final say in the planning process and who can determine whether consent is informed and/or required. This realization holds a challenge for educators to be informed, open and fair in the collaborative planning process for their students.

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TECHNOLOGY AND EDUCATION

**PERCEPTIONS OF EFFECTIVE WEB-BASED DESIGN FOR SECONDARY
SCHOOL STUDENTS: A NARRATIVE ANALYSIS
OF PREVIOUSLY COLLECTED DATA**

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Abstract

In this article, I present the findings of a study on the perception of course developers and electronic teachers on the characteristics of effective web-based design for secondary school students. Through interviews, the perceptions of these participants on the use of various web-based components, how to incorporate sound instructional strategies into the web-based material, and the effectiveness of both the asynchronous web-based content and the synchronous delivery of that content are investigated in a virtual high school context.

Introduction

In September of 1988, the Newfoundland and Labrador Department of Education implemented a program of distance education for rural high school students. The main purpose of this initiative was to provide access for students in small schools to secondary level courses that were important for post-secondary admission but were difficult to offer in rural schools due to low levels of student enrolment. Over the next decade, this program would grow from the initial Advanced Mathematics 1201 course to include eleven different courses with almost 900 rural students (Brown, Sheppard, and Stevens, 2000).

This same period would also see advances in information and communications technologies, with various distance education programs in Newfoundland and Labrador keeping pace with the introduction of asynchronous and synchronous web-based distance education. These web-based programs led to the recommendations of the Ministerial Panel, which called for the creation of a new virtual high school for the province (Sparkes and Williams, 2000, p. 65). In 2001-02 the Centre for Distance Learning and Innovation (CDLI) began its implementation year with ten courses being piloted in the ten school districts. The courses themselves were primarily text-based with some images. Only a select few of the courses contained any multimedia or audio components. After the pilot phase the CDLI began to expand its course offerings, where at present it offers twenty-seven different courses, with another eleven courses currently in development.

Research Design

In this qualitative interview study, I considered the characteristics of effective web-based design for secondary school students within the CDLI based upon the perceptions of teachers and course developers. The data collection process involved one 30-60 minute telephone interview with each individual from May 2004 to September 2005. To secure research participants, I e-mailed twenty-four e-teachers

(eight of which were also developers) and four course developers (four others were not contacted; three having retired from teaching and the fourth's e-mail address is unknown). Five of these individuals agreed to participate: three course developers and two individuals who were both course developers and e-teachers.

John was one of the original developers and was perceived as one of the stronger course developers until accepting a new job with the understanding he would not seek to be seconded by the CDLI. Norman, one of four original developers who went on to be an e-teacher, has also developed sections of two other courses and is teaching a second web-based course. Bill, about to begin his thirtieth year of teaching this September, is another of the initial developers with the organization for the past three years as an e-teacher.

Cliff spent twenty-nine years in the classroom before retiring, during which time he also spent about a decade on the provincial Government's curriculum committee creating the course outcomes for new curriculum, textbook, and course materials selection for his subject area. He is in the process of designing his first course for the CDLI. Also developing his first course, Sam is a principal of a small, rural school, where he has taught in almost every subject area at every grade level, even though he is trained as a Science teacher. Prior to becoming involved with the CDLI, he had been active in distance education, both as a school-based supervisor of distance education students and a teacher in the former TETRA/Tele-medicine system.

In addition, there was also an administrator with the CDLI interviewed. George has been involved in distance education in the province of Newfoundland and Labrador for the past decade and a half; first as a distance education coordinator in a rural school, then as an instructor and content developer, and later with a web-based program; making him a natural choice to fill one of the administrative positions in the CDLI.

Methodology

After having analyzed the data using the constant comparative method, a form of inductive analysis (see Barbour 2005a; Barbour2005b), I was open to alternative methods of data analysis that might confirm, deny, or add to the insights that I had already gained. According to the National Science Foundation, qualitative researchers tend to gravitate to the study of phenomena that are undertheorized or outside of the scope of existing theory. This attraction derives in part from a concern for the inadequacy of existing theory, but also from a desire to advance new theories and an interest in critically evaluating the tenets or assumptions of widely held explanations (Ragin, Nagel, and White, 2004, p. 11). However, Kramp (2004) argues that as a qualitative research method, narrative inquiry serves the researcher who wishes to understand a phenomenon or an experience rather than to formulate a logical or scientific explanation (p. 104).

Further in their own outline of the scientific foundations of qualitative research, Ragin, Nagel, and White (2004) suggest that one of the techniques that can be used to accomplish this advancement of new theories or critical evaluation is narrative analysis because it offers an important way to gain a more holistic view (p. 14). Supporting this belief, Cortazzi (2001) states that narrative analysis is useful for

systematic interpretations of others' interpretations of events (p. 384). Narrative analysis is also useful because it emphasises that the nature of an event or belief is not to be found in the event or belief itself, but in the relationship of the event or belief to a broader interpretive framework (Ezzy, 2002, p. 95). As Shank (2002) suggests stories are about meaning, and qualitative research is a systematic empirical inquiry into meaning (p. 147).

In addition, Kramp (2004) suggests that narrative inquiry assumes personal involvement as the very condition that makes it possible for you, as researcher, to gather and interpret narratives of participants in your study (p. 114). This is supported by Marshall and Rossman (1999), who suggest that narrative analysis requires a great deal of openness and trust between participant and researcher (p. 122). As a former teacher in Newfoundland and Labrador and having been involved with the CDLI during that time, I knew and was known by all but one of the participants. As such, I accepted these suggestions that a narrative analysis of the interview transcripts may offer a more complete or at least different view of the data.

Findings

Czarniawska (2002) suggests that there is no one way to conduct a narrative analysis, so I selected the Labov model (see Labov, 1972, pp. 362-370) as a way of organizing a series of narratives from the six interviews. The following are excerpts of some of the narratives from each of these six participants, outlined using the Labov model. In most instances, I have selected stories that are representative of the types of stories that were common among the participants.

The first story that I have selected comes from the interview that I conducted with John.

Table 1 – Problem of keeping students' attention when using primarily text

Abstract	<i>Interviewer:</i> Okay. Umm, thinking along the same framework, umm, things you've seen developed, reviewed, can you give an example of, of what you think was something you have seen that's a really ineffective lesson? Things that if you could change you would?
Orientation	<i>Interviewee:</i> Ineffective lessons, (pause - 1 second) and I, I know that there is some there for me for 1204. Some lessons that were ineffective were ones where students had to do investigations and, umm, I pretty much said to them Well, (pause - 1 second) it's explained well in your book, so go, go to the book and do it.

Complication	<i>Interviewee:</i> I don't know how effective that would be, I think you're, you're just telling the student that, ahh, yah, the book is fine here, go to it. I don't quite think that students got much out of those lessons and I would assume for the most part, ahh, they were probably skipped. Umm, (pause - 1 second) umm, something else that I, I have found to be, ahh, (pause - 1 second) ineffective, (pause - 2 seconds) umm, let me think, umm, I find a lot of the, like the, there does tend to be a lot of, of text on these sites and this comes true in, umm, in, (pause - 1 second) definitely in the math where, where there is a lot of text needed, but sometimes its too much and I find the science has a lot of text as well.
Evaluation	<i>Interviewee:</i> Umm, students just get bored with a lot of text. They need more interactivity. They need something to keep their interest or else it's just as well you did up textbooks and sent them out, naw, it's just as well you took these things, printed them off, put them in a book, sent them out and say Here go read them. Without the interactivity, ahh, a text-based lesson is just, is just, there's no advantage to having it on the web. The only advantage is I suppose the cost of production. Ahh, you don't have to print it and send it out .
Result Coda	<i>Interviewee:</i> So, ahh, sometimes, like the text just gets to, ahh, just too thick and, mmm, mmm, more interactivity definitely needs to be built into it.

The issue of students' use and interest in text-based material was a common theme in each of the interview transcripts, as almost all six participants talked about the lack of motivation provided by streams and streams of textbook-like content simply being placed in a web format. This theme is clearly illustrated in the story as it is told by John, where he describes the students getting bored with only textual information and suggested that interactivity or anything that can make it more than just a textbook on the web.

This theme of the perceived frustration that students have when they encounter text as a part of their web-based content is also illustrated in this story from Norman's transcript.

Table 2 - Using visuals in place of text

<p>Abstract</p>	<p><i>Interviewer:</i> Okay. (pause - 5 seconds) Alright. Umm, thinking about yourself as a, as a course developer. When you're developing a lesson, what are the things that are in the back of your mind, in terms of I want to make sure that I have these things in (pause - 2 seconds) pretty much everything I design because I know that they're useful to the students?</p> <p><i>Interviewee:</i> [O.C. The interviewee begins the response in a definitive manner] Definitely, ah, visuals</p>
<p>Orientation</p>	<p><i>Interviewee:</i> umm, I think that, ah, by providing students a visual cue with the written information it does provide a connection for them, (pause - 1 second) and, obviously those visual cues should be representative of the text-based material. (pause - 1 second) And, then, as I'm going down through,</p>
<p>Complication</p>	<p><i>Interviewee:</i> I'm not trying to re-write a text, ah, rather what I'm trying to do is I'm trying to draw them, ahh, to understand or to lead [O.C. The interviewee stresses the word "lead" them to an understanding of certain content, whether it be through real-life examples, ah, or, er, maybe setting up a scenario whereby then they would follow through with that scenario to, ah, to develop an understanding of a concept.</p>
<p>Evaluation</p>	<p><i>Interviewee:</i> Various things that can be down there, er, but visuals are, are in my mind something very simplistic and something that is very easy to incorporate, but yet, ah, it does provide a connection there between the, the written text, and then of course the, the, that, that visual. Also, video clips, anything that's interactive, things that are, especially in the two courses that I'm teaching with the, ah, economics, (pause - 1 second) there's got to be a lot of real-world examples. So, I do provide a lot of external links, whereby students can actually go out and actually see what's happening, ah, with regards to those specific contents whether it be something in, in the marketplace, ah, whether it be through business development, looking at case studies enter, of entrepreneurs, and what they have gone through, ah, for example, challenges [O.C. The interviewee stresses the word "challenges"] (pause - 1 second) is one of the concepts, ah, that is looked at with regards to developing a business and what do entrepreneurs have to overcome in order to be successful.</p>
<p>Result Coda</p>	<p><i>Interviewee:</i> And by providing students with real-life examples through video clips, through readings, ah, you know, and, and, and connections to those things, ah, I find it very effective.</p>

In this story, Norman also identifies the students' lack of interest in reading text online as a complication. In the evaluation portion of his story, however, Norman begins to describe a way to deal with this complication to make the web-based content more useful to students. In addition, Norman also describes other strategies that can be used by course developers to make the material more than just a textbook on the web. He indicates that video clips and the use of external links to expand the information available to a student from a single source.

This concept of providing insight into how the web-based content could be designed in a way that would make it more interesting for the students was something that four of the six participants described in narratives. Table 3 provides one such example from John's transcript.

Table 3 - Building in interactivity in place of text

Abstract	<i>Interviewer:</i> Okay. Umm, think about the, the, the distance education materials, you know the courses that, that you've created, that you've reviewed, that you've seen, can you describe what you think is, is one example of something that you've seen that you think is a really good example of something that would be really effective for the students?
Orientation	<i>Interviewee:</i> Ahh, there was this one in the physics course I saw where students were given, ahh, a Flash demo, and it had to do with, (pause - 1 second) I can't remember exactly the lesson, it had to do with force and momentum I do believe and what they were talking about was crumple zones in cars and (pause - 1 second) in the interactive demo they had two cars, and one was like a 1960 car, which was made primarily of steel and other was a, a new car made primarily of plastic and of course and as we all know, new cars have what we call crumple zones on them.
Complication	<i>Interviewee:</i> So what happens is you, you, in this Flash demo you end up crashing both cars (pause - 2 seconds) and of course the one without the crumple zone, the 1960 car, I mean there is hardly any damage done to the car and in the new car, the one with the crumple zone, the car almost demolished, even though both are sent in at the same speed. <i>Interviewee:</i> However, when you put a passenger in the car, the one that has no a crumple zone the driver takes all of the force and he goes flying, where the one with the crumple zone the force is, is, is deflected a lot into the car, so the driver doesn't get as much force.

Evaluation	<i>Interviewee:</i> I remember watching and saying I, I could see, you know, how students could really learn from this cause it was something that was directly related to the curriculum, it was showing them exactly how it works and... [O.C. School's public announce system begins to play in the background.] Hold on a sec please ... [O.C. School's public announce system finishes playing.] And it was, you know, it was showing them something that unless they, that would be very hard to demonstrate in the classroom.
Result Coda	<i>Interviewee:</i> ahh, I, I've seen similar things tried to be done with, ahh, oh I can't remember, those, ahh, air cars, but it, it never really worked quite as well. Very, very well done.

In this narrative, John describes the use of a Flash demonstration that was both interactive and something that would not be available to the students outside of a simulated environment.

Sam provides another example of how to make the asynchronous content more interesting to the students in one of his narratives.

Table 4 - Building in interactivity in place of text

Abstract	<p><i>Interviewer:</i> Thinking about the stuff that you've developed so far and for that matter the stuff that you've seen in the existing course, um, think about one lesson that you can think of that would, or you think is really effective with the students.</p> <p><i>Interviewee:</i> Ah, okay, pause, okay, and your questions is.</p> <p><i>Interviewer:</i> Describe it to me.</p>
Orientation	<i>Interviewee:</i> Okay describe it, well there's one lesson I did which involved the process of digestion, now again I'm surmising that it would be effective but obviously there's no student has taken it as of yet. So, this is new material in fact this will be the first time this course is available through CDLI.
Complication	<i>Interviewee:</i> So again, so it's only my assumption that it will be effective, I think it will be, but again with all teachers, when the students actually take it I maybe wrong. I mean lord knows I've been wrong before and I'll be wrong in the future but, the thing about this lesson in particular, what I've done with this one is looking at the digestive system and the process of digestion there is a QuickTime video in there that summarizes the whole process.

Evaluation	<p><i>Interviewee:</i> I think that's very important, students can obtain a lot of information from the video, obviously its much more interesting for a student to see an interactive video which is moving with color flashing and sound on the screen then it is reading about it, and I certainly believe that the more interaction the student has the better it will be.</p> <p><i>Interviewee:</i> Ah, this lesson again like I said incorporates that QuickTime video built in to it, there is a description of digestion which is again the same process but explained slightly different with a little different slant, ah and again I think that's a big thing there, in fact I would think that lesson itself will be, well done and well received. in terms of the activity section, there is a couple of worksheets that I have built in for them to download, print and work through, and again in going through the test yourself question, again all this is done based on the assumption that the students will actually do the material, I mean but that as you know from teaching, you can't always guarantee that.</p>
Result Coda	<p><i>Interviewee:</i> But I feel fairly confident that if a student works through that lesson as intended it be done, they should come away with a very strong understanding of that process.</p>

In this narrative, Sam describes how he used a video to describe a specific process to the student. This video provided an audio description, along with accompanying images to further illustrate the process. The use of this video was supplemented by traditional notes and student activities that the students can elect to use in addition to or in place of the video. This use of multiple ways to deliver the information provides students with choice as to how they will access the information, with the hope that they will use as much of it as they need in order to understand the process. Similar ideas about using interactivity were also described in narratives from Norman's and George's transcripts.

Another way to keep students' interested in the web-based content was outlined in this narrative from Norman's transcript.

Table 5 - Making the content personally relevant to keep students' interest

<p>Abstract</p>	<p><i>Interviewee:</i> To draw them in more, umm, (pause - 2 seconds) I'm of the mind, I guess Mike, that, ahh, I don't think that everything needs to be flashy, [O.C. The interviewee stresses the word "flashy"] if the student want to learn, if you provide the information, and you prov, you provide it in a, in a fairly [O.C. The interviewee stresses the word "fairly"] interesting way, now I don't mean all text-based. (pause - 1 second) But if you do provide it in a fairly interesting way and provide some motivation, (pause - 2 seconds) then, ahh, you know, they'll usually take it upon themselves to, to move ahead with it.</p>
<p>Orientation</p>	<p><i>Interviewer:</i> Okay. Can you describe to me what you think would be a fairly interesting way then? (pause - 2 seconds) Cause you said not sort of flashy, with all I guess the bells and whistles, but you said not text-based. (pause - 4 seconds)</p> <p><i>Interviewee:</i> Yeah.</p> <p><i>Interviewer:</i> Can describe what it would look like? (As interviewee says - For example)</p> <p><i>Interviewee:</i> Yeah, sure. Like, if you're looking at the development of, ahh, okay, say in the biology for example, (pause - 2 seconds) talking about, ah, biomass and talking about food webs and, ahh, things like that.</p>
<p>Complication</p>	<p><i>Interviewee:</i> Sure, you can simply provide them and say Okay, you know, this organism, ah, sits at this level in the pyramid, ahh, you know this is where most of the biomass is. and, you know, you can show the structure itself.</p> <p><i>Interviewee:</i> Now, most students can get that from a text (pause - 1 second) and, ah, they see the images and so on there.</p>

Evaluation	<p><i>Interviewee:</i> [O.C. The interviewee's speech begins to speed up, as if he is more excited or interested] but if you can provide them with something a little more sustentative and relate to where they are. (pause - 1 second) So, if for example, ah, if it's a Newfound, a student in Newfoundland and Labrador, you would use organism that would reside in the province themselves and provide that structure and then with that structure you could also provide examples of, say the amount. [O.C. The interviewee's speech returns to normal] So, if you're looking at, ah, the actual biomass, at the lower levels we know that of course, that you've going to have mostly your herbivores and things like that, that are, that are, you know, basically eating up the vegetation and these sorts of things. (pause - 2 seconds) As you move up the, the food chain, ahh, then you're going to have, you know, your tertiary, your higher order organisms that are going to be feeding on lower order organisms, but the amount of the biomass obviously is going to be decreasing as you go up the pyramid. So, what you could do is you could simply just provide them with a visual showing that as you move up the pyramid, the amount of, ahh, biomass that's there is going to be decreasing as you go through. So, it can be something as simple as that (pause - 2 seconds) and it would, you know, I guess, guess basically build upon, one upon the other.</p> <p><i>Interviewer:</i> Okay. So, it's not so much, (pause - 2 seconds) umm, how you present the content, it's more the type of content you present, trying to make things local to the student? (pause - 2 seconds)</p> <p><i>Interviewee:</i> Yeah, it, I, I think it's, it's a, a combination of a number of things. But I, I think that trying to be too flashy, ahh, really may [O.C. The interviewee's speech slows down in a deliberate manner] distract actually from the lesson itself (pause - 1 second) and students may miss the message by, (pause - 1 second) you know, simply just because they want to look at this or hear something, [O.C. The interviewee's speech returns to normal] ahh, or look at a particular video clip or, you know, move something around, you know, as fast as they can to see a car moving or, or, whatever.</p>
Result Coda	<p><i>Interviewee:</i> Ahh, all those things are great, but I think that there is certainly a balance there that should be, you know, looked at, right.</p>

In addition to using various devices that are offered by the technology to engage students, Norman suggests in this narrative that by providing material that is familiar to the students. A focus on content that is locally sensitive to the context of

the students' lives allows the students to make individual connections to content that touches them, making it personally relevant. By making the content personally relevant, it becomes easier for the students to understand and incorporate that content.

Bill also relates a narrative of his own that describes how in the course he designed he tried to provide the students with opportunities to personal the material themselves.

Table 6 - Making the content personally relevant to keep students' interest

Abstract	<i>Interviewer:</i> in dealing with the, the selection of topics, you mention that the familiarity with the, the, the topic was important. Umm, is that something that you, ah, ah, tried to include in, in, in your writing topics
Orientation	<p><i>Interviewer:</i> That they would (pause - 1 second) know things about, things that they would have personal connections to?</p> <p><i>Interviewee:</i> Yah, yah. (pause - 1 second)</p> <p><i>Interviewer:</i> Okay. (pause - 1 second) Umm</p> <p><i>Interviewee:</i> [O.C. Interjects quickly] But, but you try and balance as well, you, you want students to get out of themselves as well.</p>
Complication	<p><i>Interviewee:</i> Like I said, but it's the, ah, (pause - 1 second) ah, (pause - 1 second) ah, (pause - 1 second) you know, students were looking a lot at their own lives, their own communities.</p> <p><i>Interviewee:</i> And trying, a lot, a lot of it was the process, a lot of the activities are a process of looking at themselves and seeing that there are a lot of things in their own lives worthy of attention.</p>
Evaluation	<i>Interviewee:</i> And, ahh, (pause - 1 second) ah, yeah so, so, (inaudible word or two) activities, ahh, are we asking students to look at themselves (pause - 2 seconds) and discover what's there, so they have the, the topics in their own, their own experience. Incidentally, ahh, ahh, you know, for a lot of students, it's, some students find it a lot easier to just be given a topic (pause - 2 seconds) and told to that it, (laughs) they might curse the topic, but then, to have to try and look at themselves, and, and, and find those topics, (pause - 1 second) that's often very difficult.
Result Coda	<i>Interviewee:</i> Anyway, that's off, that's a little tangent.

In this narrative, Bill describes a process that he includes in his courses to have students looking inward. This process is designed to achieve the same goals that the local content described in Norman's narrative, that is to allow the students to make the content personally relevant to them and give them a better opportunity to remember that content.

Along a different theme, Cliff's narrative discusses how he feels courses should be designed for students based upon their ability levels.

Table 7 - Designing for the average and below average student

Abstract	<i>Interviewer:</i> As you're designing your, your, your courses or your course sorry, as you're designing the lessons in there, what's the one thing in, that you're keeping in mind for your own course, that you're trying to put into every lesson?
Orientation	<i>Interviewee:</i> Umm, (pause - 3 seconds) the idea that, umm, (pause - 2 seconds) umm, the students are still students (pause - 1 second) and, umm, and we shouldn't assume that they're all self motivated.
Complication	<i>Interviewee:</i> Therefore, umm, using some of the traditional ways of making sure that they are doing what they're supposed to be doing.
Evaluation	<i>Interviewee:</i> And it's much better to shoot, I think, for the average and below average student and, (pause - 1 second) umm, having enrichment for the brighter ones, the self-motivated ones, but making sure that the average, the below average student is.
Result Coda	<i>Interviewee:</i> There's a structure in place that guarantees they're doing their f--king work.

The basic theme behind Cliff's narrative is that the students of above average ability will find a way to be successful in the course regardless of how it is designed. However, students who are of average ability or below average ability tend not to possess the skills that will allow them to achieve success in any situation. Therefore it is important that course developers design their courses so that these students will be able to succeed. In this narrative, Cliff was probably the most direct when it came to the type of student that the web-based content needed to be designed for, although this theme was also discussed by John, Norman, and Sam.

Continuing the planning theme, a narrative from George's transcript also describes an aspect of planning important for course developers to consider when getting ready to design their courses.

Table 8 - Importance of planning in designing web-based content

<p>Abstract</p>	<p><i>Interviewer:</i> If you were, had to give a developer, new developer that was coming online, just one piece of advice about designing web-based lessons for high school students, what would it be?</p>
<p>Orientation</p>	<p><i>Interviewee:</i> Ah, Mike, you've just asked the easiest question I've ever had asked of me (interviewer laughs) because I can give a definite answer on that. (pause - 3 seconds) It is this, [O.C. Interviewee speaks in a very deliberate manner] do not attempt to write anything, do not attempt to construct anything, until you have designed your project out from end to end, from start to finish.</p> <p><i>Interviewee:</i> Don't construct a single item until you have designed your learning resource project out end to end, from start to finish. So you have to know the entire scope and sequence of what you plan to do before you do any portion of it. [O.C. Interviewee returns to normal speech pattern] Ah, we found this time and time again, umm, (pause - 2 seconds) we've been pushing this pretty, pretty much since the get go and, ah, we found (pause - 3 seconds) every time, every project that we've done affirms this as being good guidance.</p>
<p>Complication</p>	<p><i>Interviewee:</i> Look if you fail to do this, here's what happens. The, the instructor, I'm sorry, the instructional designer, er, or I should say this, the content developer wants nothing other than to get in there and get on with it. (pause - 2 seconds) The problem is, is that for the web, if you get in there and get on with it and make a misstep, you know, miss something important, undoing that mistake usually means changes that percolate right through the web of work that you've constructed. So, undoing you're mistakes is horrendously [O.C. Interviewee stresses the word horrendously] difficult.</p>

Evaluation	<i>Interviewee:</i> Second thing is that when you take the time to lay your project out from start to finish, the chances are you will confer with other people and that means that you will add layers [O.C. Interviewee stresses the word layers] of, of important content, layers of important, umm, (pause - 2 seconds) modifications [O.C. Interviewee stresses the word modifications] and alternatives to your project that would not otherwise have been there if you did not take the time. Now of course, last of all, from a time management perspective it makes a hundred percent sense, (pause - 1 second) you know, ah, before a project is started, ah, both me who's job is it to manage these projects and then the instructional designer who's job it is to do it, (pause - 1 second) know the ground rules.
Result Coda	<i>Interviewee:</i> So, I know what to expect, (pause - 1 second) the developer [O.C. Interviewee stresses the word developer] knows what to expect. And Mike (pause - 1 second) I could not emphasize that point too much and you can see my point.

In this narrative, George emphasizes the importance of planning prior to the beginning of the development process. While planning was an indirect theme that was common during the interviews from each of the five individuals that had actually developed courses, the CDLI administrator George was the only individual who described the planning process as a narrative that I was able to fit into the Labov model.

Discussion

While narrative analysis was an alternative method in which to analyze the data generated from this study, it may not have been the most suitable. In describing the type of interview questions that she utilized, Kramp (2004) states Amy interview prompt - "Tell me about a time you were aware of your students' stories of learning" - was an invitation to each participant to construct a narrative detailing the particularities of this experience and contextualizing them in a specific time and place (p. 114). Given the fact that this study was not designed with narrative analysis in mind from the beginning, many of the question prompts from my own interview protocol were not conducive to or limited the participants' ability to tell their own narratives. In many instances, it was the question prompt itself that formed the abstract portion (and in some cases the orientation portion as well) of the Labov model. In other instances, the questions allowed the participants to describe hypothetical stories, which due to the fact that they hadn't occurred would not contain a result or coda portion of the Labov model.

The two question prompts that appeared to have the most success with generating stories that would fit into the Labov model were: "Describe a web-based lesson you feel that was particularly effective?" and "Describe a web-based lesson you feel that was particularly ineffective?" It was from these two prompts that the

detailed examples provided by Norman and John in Tables 1, 2, 3 and 4 emerged. However, possibly due to the nature of the questions as well as perhaps the nature of the participants, the responses of Bill, Cliff and Sam were particularly difficult to fit into the Labov model because of their choppy speech and non-linear discussion of ideas.

However, during the process of analyzing the data using a form of inductive analysis, I was able to generate seven guidelines for courses developers to follow. These were when designing web-based content for secondary school students, course developers should:

1. prior to beginning development of any of the web-based material, plan out the course with ideas for the individual lessons and specific items that they would like to include;
2. keep the navigation simple and to a minimum, but don't present the material the same way in every lesson;
3. provide a summary of the content from the required readings or the synchronous lesson and include examples that are personalized to the students' own context;
4. ensure students are given clear instructions and model expectations of the style and level that will be required for student work;
5. refrain from using too much text and consider the use of visuals to replace or supplement text when applicable;
6. only use multimedia that will enhance the content and not simply because it is available; and
7. develop their content for the average or below average student. (Barbour, 2005b)

In the narratives that have been outlined, there is a great deal of fidelity between the themes of their stories and this list of seven guidelines. For example, George's story in Table 8 provides us with a great deal of description and rationale for the inclusion of the first guideline.

Another example would be how the learning object described in Norman's narrative outlined in Table 5 is an example of the third guideline. The notion of taking a concept from science, such as biomass, and simply using examples of insects and animals that the students would be familiar with to assist in both their understanding and interest in the web-based content. Bill's narrative in Table 6 about the using events from their own lives or their own communities as a writing prompt is an example how to design activities for the students to complete as a part of their web-based content that is in line with the third developer guideline.

Mentioned by just about every participant, and illustrated in John's (Table 1) and Norman's (Table 2) narratives above, is the fifth developer guideline. The fact that students' tend not to spend a lot of time reading text-heavy web-based content was a theme that was generated from the inductive analysis. However, John's

definite comments regarding the fact that it is just as well to give a student a textbook if all the web-based content includes is text and more text were not reflected in themes that were generated by the inductive analysis. Nor was the logical progression of alternatives to using text that Norman presented in his narrative.

The narratives from John (Table 3) and Sam (Table 4) are similar illustrative examples of the sixth guideline: only use multimedia that will enhance the content and not simply because it is available. In John's story, he describes how a simply learning object created with the software program Flash could provide the students with an experiential learning instance that simply couldn't be accomplished in a text only environment. Sam's story, on the other hand, describes a specific example of how he was able to use a QuickTime movie to get across information to the students instead of subjecting them to additional amounts of text-based information.

The final narrative outlined above was from Cliff (Table 7). In this story, Cliff is quite blunt in expressing his opinion on which groups of students he should be targeting as he designs the web-based content for his course. The specific target groups that Cliff references in this narrative are in line with the final of the seven guidelines for course developers. Finally, it is interesting to note that I was unable to locate any narrative that would fit the Labov model which corresponded with the second or fourth guidelines that were generated through the inductive analysis of the same data.

Conclusions

The narrative analysis that was undertaken generated stories that had a great deal of fidelity with the thematic guidelines that had been generated through the inductive analysis. What this narrative analysis has added to this particular study is a more complete view of some of the developer guidelines. In addition, understanding that each story has a point of view that will differ, depending on who is telling the story (Kramp, 2004, 108) allows for a variety of examples from the various developers' experiences in their different subject areas. In particular, these examples from many of the stories provided specific examples in which future practitioners can use to base their own interpretations of the guidelines.

As discussed in the previous section, a serious limitation of this analysis is the fact that the study was not designed with the use of this methodology in mind. Specifically, the questions that formed the semi-structured interview protocol were not designed to allow the participants to tell stories from their course development experience. Instead, these questions were largely designed to allow the participants to express opinions and insights that they had gained from their experiences, which for the most part did not lend themselves to the narrative model selected.

On a personal note, although this analysis only revealed a richer description of five of the seven guidelines that had been generated using the inductive analysis, as Shank (2002) reminds us, it is important to use research to understand the nature of research [and] it is equally important to keep in mind that our growing understanding of narrative can be used to expand our understand of the research process (p. 157). As a relatively novice qualitative researcher, this desire to consider the data in an alternative way provided me with an opportunity to utilize a method of qualitative

analysis that I would probably not have used in other circumstances. The opportunity has also afforded me the opportunity to see the importance that stories can serve in providing richer descriptions of themes generated from the data.

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K-12 VIRTUAL SCHOOLS AND SCHOOLING

Doug Furey and Elizabeth Murphy

Introduction

Virtual schools -- organizations that offer provincial or state curriculum programs to on-line students through web-based classrooms -- exist in all provinces in Canada (Haughey & Muirhead, 2004) and most states in the United States (Cavanaugh, 2004). To attend a virtual school implies that a student is taking a complete curriculum solely from an on-line organization; to participate in virtual schooling implies that a student is attending a traditional or conventional face-to-face school and supplementing course offerings with virtual classes (Barker, Wendel & Richmond, 1999). Participation in virtual schooling as a supplement to traditional schooling is the more common situation in the province of Newfoundland and Labrador where there are about 1,000 enrolments per year.

According to Monique Bélanger, the former Director of Policy and Projects for the Canadian School Boards' Association, there is no longer a need to question whether or not virtual schools can deliver on-line education to students. She believes that this is already proven and learning is being transformed in new and powerful ways (Barker & Wendel, 2001). The purpose of this paper is to present a descriptive review of the literature on virtual schools and schooling in a Canadian context. Virtual schools and schooling are defined and described and some of the factors enabling their growth are presented. The paper also synthesizes some of the literature related to the impact of virtual schools and schooling on teaching and learning in general.

Definition and Description

From the historical perspective of technological development, virtual schools are a contemporary form or variant of distance education (Aronson & Timms, 2002; Russell, 2004) and can be understood as a form of schooling that uses online computers to provide some or all of the student's education (Russell, 2004, p. 2). However, Smith (2000) suggests that virtual schools are more than the use of online computers and a series of technological innovations, and that they can be better characterized by the types of possible teacher-student interactions. Russell (2004) categorizes virtual schools by imagining where they might be placed on a scale of face-to-face contact between teachers and students (p. 3). His scale has a range from virtual schools where the teacher and student never meet, and there is no requirement for a student to enter a school building to conventional schools where students use online computers in classrooms or labs for some of their lessons (p. 3). In 1999, Barker et al. characterized virtual schools and schooling in a similar manner through the following definitions:

A virtual school is one that offers the mandated provincial instructional program to students through electronic means (i.e., computer-mediated and on-line via the Internet). A virtual school is characterized by: a structured learning environment wherein the program is under the complete supervision of a teacher; electronic delivery to students who

are at home or in a physical setting other than that of a teacher; and instruction that may be synchronous or asynchronous. (p. 5)

Virtual schooling meets the same criteria identified above, but the program is more limited in scope (i.e., not an entire program). It is an optional enhancement to a school's regular, face-to-face programming for access and choice purposes. Virtual schooling takes place at all levels (i.e., college, university, adult education, elementary and secondary schooling). (p. 6)

Clark and Berge (2003) state that, based on enrollments reported by leading virtual schools, it appears that most virtual school students are regularly enrolled public school students taking a course or two from an on-line school during the school day (p. 2). These part-time virtual school students usually enroll in only one or two courses, meeting the rest of their requirements in traditional classrooms (Carr & Young, 1999). In the Newfoundland context, where K-12 distance education falls under the mandate of the provincial Center for Distance Learning and Innovation (CDLI), students attend traditional schools for the majority of their courses and can enroll in web-based courses not available in their school.

School district, provincial, and consortia virtual schools are usually publicly-funded and do not charge students for enrollment. CDLI and Open School BC are examples of publicly-funded virtual schools. SOFAD (Société de formation à distance des commissions scolaires du Québec), a consortium based in the province of Quebec, develops web-based courses for use by private and school district virtual schools.

In contrast, private and charter virtual schools specialize in providing complete programs for students who are home-schooled full-time due to such factors as parent choice, religious needs, geographic limitations or physical disabilities. These for-profit schools are in the business of education. The Fraser Valley Distance Education School, located in British Columbia, is an example of a private school offering web-based and correspondence courses for profit, charging from \$250 per course and from \$2700 per school year. In Alberta, school district funding was restructured to allow parents to offset the costs of instructional materials and curriculum guides against a provincially designated amount for each student (Haughey & Muirhead, 2004, p. 52). Virtual charter schools differ from traditional charter schools in that they can enroll students across school districts, provinces, states or even countries (Huerta & Gonzalez, 2004; Thomas, 2002).

Hence, a virtual school is considered to be an organization offering partial or complete, government-approved, web-based curriculum programs to students. Virtual schooling is considered to be either full-time attendance at a virtual school or part-time attendance through participation in a limited number of virtual classes.

Factors enabling growth

The predominant factor enabling the growth of virtual schools and schooling is access to the Internet which enables the delivery of educational content to schools and to homes (Barker et al., 1999). The increasing capacity, flexibility, and suitability

of information and communication technologies to educational applications, together with the continuing decrease in the cost of hardware (Baker et al., 1999, p. 56) was identified by Farrell (1999) as a factor promoting the growth of virtual schools. Russell (2004) argues that as information technology continues to develop, there is a correspondingly increased capacity to deliver relevant curricula online (p. 6). In Canada, in response to societal demand, the federal government broadband initiative has provided financial support to local partnerships. Between 2003 and 2005, 11 regional broadband projects were approved for funding for Newfoundland and Labrador.

Another factor enabling the growth of virtual schools is their ability to provide curriculum equity to high school students with otherwise limited course options. As Zucker and Kozma (2003) argue, The growing insistence on a high-quality education for all students is just one factor that underlies a large increase in the demand by parents for alternative educational options (p. 126). In Canada, according to Haughey and Muirhead (2004), one of the primary issues faced by educators in the Atlantic Provinces, Quebec, Manitoba and Saskatchewan is providing quality education to students in small communities. In Newfoundland and Labrador, declining student populations in rural and isolated communities has led to provincial government cutbacks in the number of teachers in small K-12 schools. These cutbacks impact students' curriculum choices in two ways: fewer offerings on-site due to increased teacher workload; and a narrowed expertise among the teaching staff due to limited hiring options. Virtual schooling provides a solution to these problems that cannot be offered in a traditional classroom. In Newfoundland and Labrador, CDLI is mandated to provide such services to students located in rural communities (CDLI, 2004). All CDLI students are supplied with up-to-date computer hardware, communications software and broadband Internet connections through their schools.

Another factor enabling the growth of virtual schools is the growing variety of learners with alternate educational needs. Virtual schooling [is giving] flexibility to parents and students who, for a variety of reasons, [who want to be] free from the restrictions of in-school attendance (Haughey & Muirhead, 2004, p. 53), and new categories of full-time students are starting to enroll in on-line courses (Lorenzo, 2001). Besides public and private schooling, students may be home-schooled due to religious preferences, a fear of traditional schools, a disability, medical needs, travel requirements, etc. For example, at least two full-time students attempting to complete the provincial curriculum on-line through CDLI live in Boston on hockey scholarships (M. Barry, personal communication, November 30, 2004).

Hunter and Smith (2001) identified school violence as a factor: Parents in Smith's study (2000) believed that having children in a virtual school environment would decrease their exposure to bullying and violence and might, therefore, provide the potential for greater learning (p. 200). Litke (1998) also supports this argument, stating that students indicated they enrolled in the program because of problems at school such as harassment by other students, not fitting into the school setting, problems with teachers, and the "atmosphere" of public schools (The Student's Perspectives section, &1).

Two large scale surveys of home-schoolers and their parents conducted by Barker and Wendel (2001) and Optimal Performance (2001), both cited

dissatisfaction with public schools as a key reason for students attending a virtual school on a full-time basis. Through virtual schools, home-schooled students have an alternate source for completing provincial programs. Educational reform within Alberta guarantees parents the right to enroll their children in any school in the province, and government policy ensures that funding will be made available to the school jurisdiction in which a child is enrolled. As a result, according to Muirhead (2000), charter virtual schools seek out parents and students who would benefit from on-line schooling regardless of geographic location. As another example, religious groups are now able to offer home-schooled students on-line programs. For example, Kaldahl (2003) suggests that Seventh Day Adventist students can now interact with their peers in a virtual classroom and avoid the necessity of attending a boarding school.

Virtual schooling is also an option for sick and disabled students and students with special learning needs or behavior problems. Blomeyer (2002) suggests that the availability of an on-line course may mean that an injured and homebound high school senior can fulfill graduation requirements. Müller and Ahern (2004) suggest that significant numbers of students with disabilities are enrolled in virtual schools: one virtual school reporting 775 out of 11,700 students having disabilities; and another reporting 1,700 out of 18,000 students having disabilities.

Parent and public perceptions of the possible benefits of distance education have led to an increased demand for virtual schools and schooling (Blomeyer, 2002). Some parents believe that having children in a virtual school environment would decrease their exposure to bullying and violence (Hunter & Smith, 2001). In addition, while some traditional schools are experiencing overcrowded classes, a lack of qualified teachers, lower workplace quality for teachers and higher student dropout rates (Joseph, 2001), virtual schools offer students increased opportunities, such as anytime/anyplace classes (Chaney, 2001; Hassel & Terrell, 2004).

Another factor enabling the growth of virtual schools is cost-effectiveness and shrinking provincial budgets. Russell (2004) calls this philosophy economic rationalism (p. 7). While a traditional school that serves hundreds of students would cost millions of dollars to build, a virtual school can be started for a fraction of that cost (Blystone, 1993). Chaney (2001) argues that in an age when many schools are overcrowded or crumbling, cyber learning makes financial sense: schools that use distance learning may not necessarily need to modernize or build new buildings to provide quality cyber instruction (Considerations for Public Schools, &1).

Impact on Teaching and Learning

The teaching of on-line courses is no longer novel and experimental but has become an almost irresistible force in K-12 and post-secondary education (Freedman, Darrow & Watson, 2002) and can transform learning in new and powerful ways (Monique Bélanger, cited in Barker & Wendel, 2001). Fulton and Kober (2002) suggest that one of the most remarkable trends [in education] is the rise of virtual or Internet-based schools, which are transforming basic ideas about what a school is, what a classroom is, when and where education occurs, and how instruction is delivered (p. 7). Hunter and Smith (2001) describe virtual schooling as an educational alternative that has the potential to change conventional learning

contexts (p. 197) bringing together students, teachers, and information from around the world.

Some virtual schools no longer require physical structures for students and teachers - a school no longer needs to be defined as a group of classrooms housed in a building (Campbell & Guisinger, 2003). St. Paul's Academy in Alberta is an example of a charter virtual school that caters to home-schooled students and is operated by teachers from their homes. In contrast, CDLI students attend a mixture of traditional classes in a physical building and virtual classes through WebCT and Elluminate Live. Most CDLI teachers work in school district offices across the province.

Virtual schools also have the potential of operating outside the barriers of time. Virtual schooling has introduced notions of "anytime/anyplace" learning (Hunter & Smith, 2001, p. 197). Because virtual schools are web-based, schools can remain open twenty-four hours a day, 365 days a year, including summer school, if necessary. In describing the Electronic High School, Lang (2004) states that students are able to enroll any day of the year and work at their own pace until the course is completed, although the school expects students to complete courses within twelve months (p. 14). Asynchronous materials are available at any time. Synchronous classes and discussions are not limited by the availability of school buildings, but only by the availability of students and teachers. In Newfoundland and Labrador, it is not uncommon to find students in on-line classrooms although the local school building may be closed due to weather. The biggest time challenge for virtual schools is coordination of time-tabling with traditional schools to provide widespread access to virtual instruction. The delivery of virtual courses must take place during the time allotted within the conventional schools' timetables (Barker & Wendel, 2001).

Traditionally, schooling means the teaching to students of curriculum content developed by experts associated with government departments of education and curriculum development. The instructional design of traditional courses for the virtual classroom has resulted not only in media-rich multi-layered courses, but the development of instructional strategies to facilitate communications between teachers and students. For example, for the design of its web-based courses, CDLI hired content experts who were lead teachers in traditional classrooms to author web-based courses (M. Barry, personal communication, November 30, 2004). Because course authors are also teachers, course quality can be closely monitored.

Teaching can be different in virtual classrooms. Russell (2004) argues that virtual teachers will find that some new skills are required, while others are less important (p. 16). In some virtual schools, such as the Virtual High School, teachers develop a sense of professionalism, authority and ownership for online courses because teachers have considerable authority to create new courses and design educational materials and activities (Zucker & Kozma, 2003, p. 120). For teachers willing to take risks and meet new challenges, the benefits of virtual schooling include more flexibility to address individual learner's needs and teaching without the usual constraints of time and place (Kaldahl, 2003). Since students are not physically present with them when they work, teachers also cease to function as managers of classroom behavior (Hunter & Smith, 2001, p. 203). With decreased workloads through smaller class sizes, many teachers feel they have the time to be creative and

constructive for their students (M. Barry, personal communication, November 30, 2004).

One of the most noted and important changes being observed in virtual schooling is the transformation in the role of the student and in how he or she learns in this type of schooling environment. Kaldahl (2003) suggests that the benefits of virtual schooling include: not having to sit through topics already mastered, greater choice of courses, learning without the usual constraints of time and place, and being able to enroll in advanced and honors courses. Instead of students going to school, the virtual school comes to them through their computer screen. Students read lessons, take tests, ask questions and get answers "virtually" as they would do in a traditional physical school building but without leaving their keyboard. Virtual schools allow students to proceed at their own pace: Students can listen to lectures more than once and can take the time needed to think about a question without worrying about holding back the rest of the class (Chaney, 2001). If a student chooses to complete schoolwork at 2:00 a.m., the wait for the next scheduled class that would be required with a traditional school will not apply (Russell, 2004, p. 9) The collaboration between students of different grade levels who attend different schools creates an exciting dimension to the learning process. Students love to share what they have learned with a real audience (Campbell & Guisinger, 2003). Students and teachers have the ability to form friendships with people all over the world (Blystone, 1993).

In Smith's 2000 study of high school students from Alberta enrolled in virtual courses, she discovered that students received more personal attention when enrolled in virtual classrooms and that they reported positive changes in their social and emotional growth (Hunter & Smith, 2001, p. 206). Students working in virtual settings are reported to be more highly motivated than those working in conventional settings. Russell (2004) argues that changing notions of responsibility, accountability and student discipline are also likely to arise in virtual school environments (p. 15). According to Hunter and Smith (2001), virtual schooling has introduced new opportunities for independent learning in which students accept some of the responsibility for learning and they learn to govern their own learning: Teachers report that on-line students are more likely to negotiate the terms of their assignments and that they succeed in this because they make a good academic case for what they want to do (p. 204). In fact, participants in Smith's study reported role reversals in the virtual classroom, exchanging responsibilities and thereby triggering role changes for the students and teacher. Ultimately, changes to student roles and increased opportunities for learning may be the most significant impact of virtual schooling.

Alternatively, although some students may be successful in virtual classrooms because of personal strengths brought to the environment, from their study of the Virtual High School, Zucker and Kozma (2003) suggest that some students may be changed through participation in virtual classrooms. It is possible that other students may become motivated through shared ownership of the learning environment and collaborative development of rules of engagement for student-teacher and student-student interaction (Hunter & Smith, 2001). The collaborative and exploratory role played by students in virtual environments may facilitate the development of student autonomy, responsibility, intrinsic motivation and the skills necessary to be successful. Hence, the virtual classroom may be envisioned as an environment in

which some students may learn as opposed to an environment for which students have to qualify and be pre-judged.

In spite of the potential for teaching and learning made possible by virtual schools and schooling, there are nonetheless some limitations that should be recognized. Russell (2004) suggests that an important item relating to the quality of a student's educational experience in a virtual school is the recognition that not all students are suited to online learning (p. 17). Zucker and Kozma (2003) state that it has become apparent that there are teachers and students who will not flourish in virtual courses (p. 109) and that online courses demand greater independence and responsibility of students than face-to-face courses (p. 122). Zucker & Kozma (2003) maintain that it is apparent that interactions in virtual classrooms are not the same, in many important respects, as those in face-to-face classes (p. 100). Russell (2004) argues that some students struggle in virtual classrooms because the immediacy of student-teacher and student-student interaction is diminished and that multiple informal modes of communication are lost: When humans use technology in their daily lives, there are usually some disadvantages to be considered, there are some grounds for believing that face-to-face instruction can be superior to distance education (p. 10). Russell suggests that student independent learning skills, motivation, time management abilities and comfort level with the technology should be considered before a student is permitted to register for online courses.

Conclusion

Improved technological literacy and Internet access have enabled educators and governments to establish virtual schools as partial solutions to the problems of curriculum equity, changing demographics, shortages in specific teaching disciplines and the need to be cost-effective. However, although technologies are necessary for virtual schools, virtual schools are not necessarily successful because of the technologies. As Bailey (2001) suggests, on-line learning or e-learning isn't about digital technologies any more than classroom teaching is about blackboards. Virtual schooling is about technologically enabling constructive human interaction; it isn't about the boxes and the wires. It is about teaching and learning (&17).

In arguing that virtual schools and schooling can be better characterized by the types of human interaction associated with teaching and learning than the types of technologies used, it is important to reiterate that virtual schools are real schools, not isolated schools lost in cyberspace but part of an educational system with growth limited by many of the same factors as traditional schools - such as demographics, budgets, legislation, equity, staffing and technology.

In this light, it is interesting to speculate whether some aspects of virtual schools and schooling have developed as a model for change, a model for the reorganization of traditional schools and schooling. If virtual schools are seen as an experiment within an educational system (Zucker & Kozma, 2003), have they provided any insights or raised any questions of educational pedagogy which could benefit face-to-face teaching and learning? Russell (2004) suggests that the radical nature of the alternative that they [virtual schools] offer may yet lead to reconsideration of the nature of school education (p. 21). Hence, the future growth of

virtual schools and schooling may not only lead to there-design of existing school systems but also to the design of new forms for teaching and learning.

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Making Your Own Educational Materials for the Web

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Introduction

Well-prepared educational materials can remove the need to "wing it" in the classroom, by keeping your students occupied and helping them learn. Whether you are new to teaching or have been at it a while, you will know of the huge repository of educational material on the Internet that may meet this need. But however tempting it may be to borrow from the Web, downloading educational materials may be found to be an infringement of copyright, a violation of the moral rights of the author, and even plagiarism if you are representing their work as your own.

Although special exceptions of intellectual property infringement have been made for educational institutions, these exceptions do not as yet cover Internet programs or educational materials. Although most of us already know about copyright infringement, what isn't so well known is that the Copyright Act also has a provision for moral rights, to enhance and protect the reputation of authors. The moral rights of the author of the web material or Internet program lasts as long as the copyrighted work itself and can only be vested in the author, regardless of who owns the copyright (Durette, 2000). Furthermore:

- The author's work cannot be distorted or mutilated so as to harm the reputation or honour of its author;
- The author's work should not be used in association with any product, service, cause or institution where such association would have a negative effect on the author's reputation;
- Even where copyright has been contracted away from them, the author has the right to be associated with a work by name or by pseudonym, or alternatively, the right to remain anonymous, at the author's option.

Add to this the fact that your academic institution takes a dim view of plagiarism, such as representing someone else's work as your own, including any part of their website. Without exception, you should never represent someone else's work as your own. Some professors today have access to software that can assess the likelihood of plagiarism off the web and reserve the right to use this software in their evaluation of student assignments. Under these conditions therefore, at least provide a proper and full citation about your sources, complete with the full URL to the web page, web text, graphic, audio or video clip.

Making Your Own Educational Materials

The better alternative to borrowing educational materials from the Internet that may be well be violating copyright law, the moral rights of the author, and rules of the university, would be to make your own materials. It'll be good for you and good for them - good for you because it'll be a testament to your hard work and determination to support your students' efforts, even at home. It'll be good for your students as a

constant resource for them to learn from at home. Besides you know your students better than any Internet site. Only you can provide your students with real help and guidance. Don't rely on the Internet to do your job for you. Most educational websites are either too advanced or too game-like anyway for your students and as such won't serve them well enough to meet your standards.

Building Web pages is among the most constructivist activities that learners can be engaged in, primarily because of the ownership that students feel about their products and the publishing effect (Jonassen, Peck & Wilson, 1999, p. 28).

So let's get started. Let's assume that you'll want your materials to be available to your students on the web - an educational website, just for your students. So you'll first need to be able to distinguish an educational website from an informational one, and identify some of the key features of an educational website. And second, you'll need to know something about how to write a few codes in Notepad, display the web files in Internet Explorer, and manage them in Windows Explorer.

The Wrong Way: "Tell 'Em and Test 'Em

You should be able to distinguish an educational website from an informational website masquerading as an educational website. The impostor is easy to spot – mainly because they are technocentric, using a “tell ‘em and test ‘em” approach as they skip from one topic to the next without depth, opportunities to practice or meaningful feedback on that practice. Informational websites might have good design but aren't designed ‘too good’. We have found that the use of a paper mock-up as a pre-computer activity can promote more instructionally relevant, less technocentric educational website (Brown & Mann, 2001).

The Right Way - DECL: Considering All the Factors

Educational websites, unlike their informational counterparts, are comprised of at least four factors that under certain conditions will affect student learning, Delivery, environment, content and learner, or DECL. Before you begin – think about *where* you will be teaching – in a French immersion school, a military training college, a private school, a public school. DECL can help you identify all or at least the major factors we know affect to affect student learning. “DECL” was adapted for distributed learning environments (Mann, 2005a, 1995a, 1997a) from Richey's conceptual model of instructional design (Richey, 1986).

<i>Delivery</i>	<i>Environment</i>	<i>Content</i>	<i>Learner</i>
Scope	Setting	Mental Operations Required	Attitude
Presentation	Climate	Task	Capacity
Strategy		Domain	Demographics
Sequencing			Competence

Figure 1. DECL factors of educational website management and associated variables.

DECL stands for delivery, environment, content and learner factors that comprise student achievement. The “delivery factor” or “D” in DECL can be furthered sub-divided into the scope, sequence, strategies, and the presentation of the educational website. Two variables comprise the “environment factor”. Three variables comprise the “content factor”, and four more variables the learner factor. Student achievement is the weighted sum of the delivery, environment, content and learner factors (DECL). For an explanation of the variables under each factor in DECL see Mann (2005a). The importance of each factor in DECL can be weighted under certain conditions. The size of the circles in figure 2 indicates their emphasis and subsequent impact on student achievement.



Figure 2. Graphical comparison of educational materials development by emphasis.

The “Learner” emphasis (left) the “Environment” emphasis, and the “Balanced” emphasis right. In Mann, B. (2005a). *Research styles and the Internet*. In Bruce L. Mann (Ed.). *Selected styles in web-based educational research*. (pp. 1-11) Hershey, PA: Idea Group Publishing.

Notably the varying weights added to DECL can also be represented mathematically. The small “b” in subscript in the formula indicates the weighting that can be attributed to any of the DECL factors.

$$D_b + E_b + C_b + L_b = \text{Achievement} + \text{some error}$$

Generating Some Ideas

Now that you are able to distinguish an educational website from an informational one, and have considered the DECL, your first step in developing educational material is to generate some ideas. A bonafide resource of ideas would be the Curriculum Guide within the jurisdiction in which you wish to teach. Consult the curriculum guide for the grade level you want to teach. Curriculum documents are written by experienced teachers and researchers with excellent ideas from which to develop an educational website. If for example you are intending to teach in a province in Canada, you can find information about education in each of the provinces and territories of Canada from Education, Canada. Education, Canada is an information resource sponsored by the Council of Ministers of Education in Canada (CMEC), as there is no federal or national department of education in Canada.

If you are intending to teach in United States, Education America has quickly grown to become the United States' largest educational e-recruitment service with over 900 employers posting thousands of jobs. In the US, there is the "No Child Left Behind Act" which education leaders at state and local have developed to effectively employ technology to enhance learning and increase student achievement. There are many American educational policy websites that may provide some good ideas for your educational website.

If you are headed to Australia, the Australian Council for Computers in Education consists of representatives from the state-based Computer Education Groups. It publishes the journal Australian Educational Computing and authorises the Australian Computing in Education Conferences - a good source of information for your educational website. See (Mann 2005b) for more information on educational technology policy in the United States, Australia, Canada and the European Union.

Developing a Paper Mock-Up

Once you have a short list of good ideas for an educational website, your next step in the process is to make a paper mock-up. Developing a paper mock-up means making a hand-drawn replica on paper with coloured pencils. The layout should be uncluttered and appropriate to the student's abilities and reading level. Your foreground font colours and shading should have plenty of contrast against the background. Bright red and bright yellow backgrounds can make reading for average readers very tiring over extended periods of time. Please note however, that very bright background colours can be perfectly appropriate for in special needs situations.

Title. Make your title important, catchy and curriculum related. Add a missing or curious photo or graphic. Don't be redundant with your title, such as a title "Whales" and showing a photo of a whale. And don't give the answer away. Below the photo, add a statement of the curricular rationale. Say something about the school climate (K-1, grade 2-3, 4-6, 7-8, 9-10). Below that, write one or more stated objectives, goals, missions or challenges - *behavioural component* in "A-B-C-D" form (discussed below). Colour coding can help separate examples from instruction, and instruction from program directions. It is most important that your font colour is designed by instructional event, the colour of the text on the webpage matches the instructional event. The colours don't matter per se, but once chosen, they must always be consistent across the entire educational website, to prevent distracting effect in student learning. Here for example, is a colour design rubric for an educational website:

INFORMATIONAL TEXT will always be presented in a blue font colour, usually under the photo or graphic(s) and above the scroll line. Informational text presents a brief, informal rationale about the

NAVIGATIONAL TEXT will always be presented in a black font colour.

INSTRUCTIONAL TEXT will always be presented in dark green font colour, usually under the brief informational statement as "Learning Objectives, "Missions" or "Challenges". Instructional text presents the behavioural components to the educational website, that is the audience

(the learner characteristics), behaviour (add your verb "distinguish", "describe", "demonstrate", or "summarize in your own words"), conditions (how - using the art paper? the protractor? the atlas? in front of people?), degree (when? what criteria?).

QUESTIONING (i.e., procedural facilitation) will always be presented in dark brown font colour.

PARTIAL FEEDBACK will always be presented in a pink font colour.

HINTS will always be presented in olive green font colour. Hinting is presented before requesting responses from students, whereas partial answers require a statement from them followed by feedback.

Other considerations are that the figure/ground contrast is evident, all graphics are clear and representative, all multimedia are related to the topic, and that there are several links, for further study.

Similarly, the right way to apply audio to an educational website is to think of sound as having a purpose or function - to compliment formatted text, graphic or moving image and assist students in shifting their attention between the auditory and visual channels. When the primary intent of audio is to orient learners about a future event or give feedback about a past event between web pages, temporal speech prompts should be considered. Alternatively, point-of-view (POV) sound should be used to provide opposite sides of an issue, or as a function of character in objective, subjective points of view. There are a few of the sound design possibilities with the SSF Design Model (Mann, 1992, 1995b, 1997b). Research with the SSF Model (Mann, Newhouse, Pagram, Campbell & Schulz, 2002) suggests that we can expect good immediate results in student retention, and even better results following a latency period.

Domains of Learning. In developing your own educational materials it is helpful to keep separate the different domains of learning – behaviour, from cognitive, from affect, from social. Also within the cognitive domain, its good to keep separate declarative from procedural knowledge, and both of these from strategic knowledge. This makes it easier to articulate what you want your students to do with your educational materials.

Educational Objectives. Now that you know to keep separate the different domains of learning, as well as the types of knowledge in the cognitive domain, it's time to introduce "educational objectives". The field of Education has long been known for setting objectives. There are two basic types of educational objectives that we use all the time – behavioural and cognitive. Some educators say "learning objectives" to indicate intended performance or cognitive processes in their students. Others prefer to use the less rigid term "learning outcomes" to denote the consequence of instruction and practice. I'll continue to use "learning objective". You can use whichever term is most comfortable to you.

In any case, a learning objective can be defined as a statement written in "ABCD " format; that is to say, the audience (A), behaviour (B), condition (c) and

degree (D). though they won't appear in this order in your statements. To maintain consistency between Gagné's conditions of learning (Gagné, Briggs, & Wager, 1992), constructivist learning as well as learner-centred theories (see Richey, 2000), let's attempt to write a broad, fairly high level educational objective (i.e., cognitive strategy) for developing educational materials on the web -

After reading this article on developing your educational website (the condition), the teacher (the audience) will be able to develop an educational website (the behaviour) to support his/her students, by completing a paper mock-up showing learning objectives in ABCD format (the degree).

Similarly, your web-based educational material should contain a few *intellectual skill* objectives and should appear near the top of the first webpage on your educational website. The verbs for intellectual skills objectives are straightforward. First, the student is asked to distinguish between one thing and another, say bears and other creatures. They may be asked to do this by constructing a table with columns and listing the differences within each of the columns. This "distinguishing" activity is called discrimination learning and is a low-level activity. Now that the student has distinguished bears from other creatures, they are asked to identify the characteristics within the class of different bears, brown bears, grizzly bears and so on.

Try this now with one of your own ideas adapted from your local curriculum guide. On the first web page jot down a few objectives, with a verb:

- To distinguish between things natural or imagined: Procedural knowledge, discrimination learning, an intellectual skill.
- To describe the identifying characteristics of a concept: Procedural knowledge, concept-learning, an intellectual skill.
- To demonstrate a procedure step-by-step: Procedural knowledge, rule using, an intellectual skill.
- To generate a new procedure for problem solving: Procedural knowledge, higher-order rule using, an intellectual skill approach to problem solving.
- To summarize in their own words, recite exactly, or recall a fact: Declarative knowledge, verbal information learning.
- To devise a plan, predict an outcome, or figure-out a new way: *Strategic or generic procedural knowledge, a cognitive strategy approach to problem solving.*

Remember that for each learning objective you have written to include the "A-B-C-D" format, that is –

- *Audience* (the learner characteristics),
- *Behaviour* (add your verb "distinguish", "describe", "demonstrate", or "summarize in your own words"),
- *Conditions* (how - using the art paper? the protractor? the atlas? in front of people?),
- *Degree* (when? what criteria?).

Finally add some associated links to websites. Below the links, add a "hint" if you want the student to construct something original on video or in PowerPoint, make a link to a page that tells them how to do that. Below that, add your email address with the note "If you have any questions, please email me at...". At the top of page 2 is your partial answer to the first objective, goal, mission or challenge stated on page 1. For example, if there are five things they must know, or five parts of a procedure to demonstrate, tell them two. And ask them for more.

In summation, this paper has suggested how you can you *can* make your own educational website, do it well, and as a consequence, avoid infringing copyright law, the moral rights of the author, and rules of the university. The recommended procedure has been to use a syntax-independent approach to educational website design, wherein you draw on paper before typing into a text editor, thereby keeping design and the coding decisions separate. The inclusion of paper mock-up as a pre-computer activity may improve teachers' educational websites, as it has done in previous educational research (Brown & Mann, 2001). Regarding the organization of your educational website, aim for a clear focus. Don't skip from one topic to the next. Provide lots of student guidance on one topic between webpages (i.e., multiple choice or constructed answers, full or partial answers, error-contingent or fault-free questions, elaborative interrogation). Learner factors (from DECL) should be students' attitudes toward the subject or topic, demographics (do all have computer access - if not it may have to be printed), their capacity to learn this content, and their competence with the language. Your language should be conversational and easy for students to engage in the tasks. Keep the sentences and paragraphs concise. Check your grammar, punctuation, and spelling. The next step involves the transformation of your paper mock-up into an off-line educational website by developing the HTML documents from your paper frames and displaying them in your Internet browser and then uploading web files to the schools or university server, which is beyond the scope of this paper.

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BROADBAND IN TEACHING AND LEARNING IN NEWFOUNDLAND AND LABRADOR

Rob Power and Elizabeth Murphy

Abstract

In recent years, there have been initiatives to provide schools throughout Newfoundland and Labrador with access to broadband connectivity and related communications technologies. These efforts have occurred in parallel with nationwide initiatives to put in place broadband networks, particularly in rural and remote communities. The significance of these initiatives requires an understanding of the nature and characteristics of broadband and its potential benefits in a context of teaching and learning. An examination of two schools from Newfoundland and Labrador indicates that schools are, to some degree, experiencing these benefits. However, despite these initiatives, access to broadband remains a critical issue for teaching and learning in this province given its unique geographic and demographic characteristics.

Introduction

There has been discussion in recent years regarding putting in place a broadband infrastructure in Canada. Much of this discussion has focused on the benefits of broadband in teaching and learning (see Savage, 2001; SchoolNet, 2001, 2002b, 2002c). This discussion has occurred in parallel with nationwide efforts in K-12 education systems to increase the level of technology integration into the curriculum, and to provide access to equivalent educational opportunities for all learners (see APEF, *n.d.*, 2000; Industry Canada, 2002a, 2002b; SchoolNet, 2001). Providing broadband has been discussed as one means achieving these goals. However, the question arises as to what benefits can be realized from access to broadband-supported teaching and learning. While the literature provides insight into the benefits related to online learning in general (see for example Dibbon, 2002; Laferrière, 1999; Laferrière, et. al. 2001), it has not provided a similar insight into the benefits of broadband in particular.

The purpose of this paper is to describe some of these benefits as they have been experienced by two Newfoundland schools. Some barriers to the realization of benefits will also be discussed in an effort to consider how schools could be further supported in order to achieve more benefits in the future. The paper begins with a definition of what constitutes broadband as well as an overview of broadband connectivity in Newfoundland and Labrador schools.

Defining Broadband

The term broadband typically refers to 24/7, high-speed, bi-directional connectivity. The Industry Canada Broadband Technical Resource Team (2003) defines broadband as "two-way access to a variety of services via a high speed connection to the public data network and/or the Internet," (p. 2) while acknowledging that there is no universally accepted data transfer rate for broadband. The National Broadband Task Force (see Industry Canada Broadband Technical Resource Team,

2003) specifies a data transfer rate of 1.544 Megabits per second as suitable for applications such as full-motion videoconferencing. Although lower transfer rates can allow for videoconferencing, a transfer rate suitable for full-motion videoconferencing would be required to be practical in an educational context.

Provincial Broadband Connectivity Context

In Newfoundland and Labrador, technical and administrative support for students, educators, and educational stakeholders, including connectivity support, is primarily provided by the Centre for Distance Learning and Innovation (CDLI), the Student/Teacher Educational Multimedia Network (STEM~Net) and the Virtual Teacher Centre (VTC). These organizations have mandates ranging from the development and distribution of distance education opportunities, to the provision and support of access to connectivity and computer equipment and the facilitation of innovative educational experiences such as seen in the SchoolNet GrassRoots program (see Dibbon, 2002; SchoolNet, 2003a). They also play critical roles in the development, facilitation, and support of professional development for educators, and distributing high quality educational resources (see CDLI, *n.d.*; Govt. of NL, 2003a; STEM~Net, *n.d.*, 1999; Virtual Teacher Centre, 2002).

Level of Technology Integration in Schools in Newfoundland and Labrador

The Department of Education's *Profile '96: Educational Indicators* (Govt. of NL, 1996) provides information on the number of schools with local area computer networks, the ratio of students to computers, and the ratio of students to computers with multimedia or Internet access capabilities. According to the profile, in 1996, the majority of the province's schools were unable to provide students or educators with adequate access to technical resources or connectivity to realize significant benefits in teaching and learning. More recent documentary evidence indicating that these ratios have decreased can be found in information on school connectivity provided by CDLI. At present, 512K Frame Relay is used by 90 of the province's 317 schools in order to facilitate the delivery of the Centre's distance learning program (CDLI, *n.d.*; Govt. of NL, 2003a). CDLI also provides connectivity by means of two-way wireless satellite in areas where adequate local access is not already in place to ensure that students can avail of distance education opportunities.

Data on provincial and national trends in connectivity and Internet usage provided in Statistics Canada's *General Social Survey 2000* (Dickinson & Ellison 1999; Dryburgh, 2001; Statistics Canada, 2001) demonstrate that access to Internet connectivity, as well as levels of Internet usage are on the rise in Newfoundland and Labrador. However, there are significant differences between provincial rates and national averages. The differences between the provincial and national rates for Internet penetration into schools, the home and the workplace, and the trends in household connectivity, indicate that schools in Newfoundland and Labrador may play a more significant role than those in other provinces in terms of providing students and educators with access to technology, and distance education and e-learning opportunities (Dickinson & Ellison 1999; Dryburgh, 2001; Statistics Canada, 2001).

Federal Industry Minister Allan Rock announced in June of 2003 that Industry Canada would work in partnership with the provincial government to provide broadband throughout the province (Govt. of Canada & Govt. of NL, 2003; Govt. of NL, 2003*b*). The Connecting Learners and Communities project will entail an investment of \$15-million to provide broadband to schools and communities in rural and remote areas. The two levels of government will also seek private sector partnerships to contribute to the cost of the initiative. The initiative is expected to have implications for the delivery of education, e-business and tele-medicine services (Govt. of Canada & Govt. of NL, 2003; Govt. of NL, 2003*b*). The project's intent is to expand and improve the delivery and accessibility of services currently provided by CDLI. Provincial Education Minister Gerry Reid noted that two-thirds of the province's 317 schools are located in rural and remote areas, and that providing access to broadband will have major benefits in terms of their access to CDLI services and resources.

Realizing the Benefits of Broadband Access in Newfoundland and Labrador Schools

It is of value to inquire into the activities of schools where broadband connections have been put in place so as to assess some of the ways that benefits of access are being realized. This paper considers the cases of two Newfoundland schools that have been profiled in the literature and that have access to broadband connections. The cases of Roncalli Central High School (RCHS) in Port Saunders, NL and of Fatima Academy in St. Brides, NL are presented in order to provide insight into ways that schools are making use of their broadband connection to take advantage of opportunities to develop new skills, innovate, collaborate and access mentors and experts.

Roncalli Central High School, Port Saunders, NL

Roncalli is a member of the SchoolNet Network of Innovative Schools and has actively participated in the SchoolNet GrassRoots program (Dibbon, 2002; RCHS, 2003; SchoolNet, 2003*a*; STEM-Net, 1999). Gaining designation as an NIS school has been a major achievement for RCHS, which has been recognized as a leader for technology innovation in such areas as broadcasting, journalism and robotics. In his study of the impact of GrassRoots participation on NIS schools, Dibbon (2003) notes that RCHS participated in over thirty GrassRoots projects in the first few years of the program. Meanwhile, approximately one-third of the school's seventeen teachers were involved with between ten to twelve GrassRoots project applications in the 2001-02 school year alone.

More recently, RCHS was one of thirteen schools to participate in the Telesat Satellite Multimedia Trails (see Roncalli Central High School, 2003; Telesat, *n.d.*, *a*; Walker, 2003*a*, 2003*d*). Over the eighteen-month duration of the project the school gained satellite forward connectivity rates of up to 3 Mbps for Internet access and video distribution, and return link burst cap rates ranging from 64 Kbps to 512Kbps (Telesat, *n.d.*, *b*). It was also linked to a network that included Telesat in Ottawa and the twelve other participating schools in three provinces. Teachers and students at the school were quick to familiarize themselves with the benefits of the new connectivity and the equipment and resources that had been provided to them.

In an interview with Doug Walker of *SchoolNet News* (Walker, 2003a), the school's principal and technology teacher noted increased enthusiasm for the potential of the resources and for innovative approaches to teaching and learning. They described the integration of technology into the curriculum as an ongoing collaborative effort spanning many subject areas simultaneously. Increased enthusiasm and innovation were also attributed to a growing realization that teaching with technology was not the same as teaching technology (Dibbon, 2002, pp.69-70; RCHS, 2003; Telesat, *n.d.*, a; Walker, 2003a, 2003d), and that collaborative efforts could cover multiple objectives simultaneously, while also easing the time-constraints on already over-burdened teachers.

Walker (2003e) lists the use of the videoconferencing capacity of broadband as one of the more popular features used by schools participating in the Telesat Satellite Multimedia Trails. That feature was used by Walker to interview the principal and technology teacher, who described it as potentially one of the most powerful tools associated with broadband. Students at RCHS used videoconferencing to participate in collaborative activities with remote classes, to receive mentoring and assistance from remote experts, and to participate in events that would have otherwise been impossible given the school's location (RCHS, 2003; Telesat, *n.d.*, a; Walker, 2003a, 2003d). Videoconferencing also allowed teachers to collaborate with their peers from other schools and to receive technical advice from remotely located experts. The principal and technology teacher noted that videoconferencing could also be used to facilitate virtual class visits by subject area experts from anywhere in the world.

The relatively isolated school has been able to exhibit leadership in innovation and technology integration on provincial and national scales (see Dibbon, 2002, pp.69-70; RCHS, 2003; Telesat, *n.d.*, a; Walker, 2003a, 2003d). Students have been able to participate, and win awards on a national scale in areas such as broadcasting, journalism, multimedia production, robotics, and the sciences. Student and teacher motivation has increased, and collaborative and innovative teaching practices have been more widely accepted. As Dibbon (2002) notes, RCHS appears comfortably situated in stage two innovation--the adoption of innovative ways of teaching and learning, and the invention of new ways of teaching and learning with technology--and is well on its way towards stage three innovation--the transformation of teaching and learning into more open-concept schooling with both intra and inter-school collaboration.

Fatima Academy, St. Bride's, NL

Fatima Academy is another example of a school where the integration of information and communications technologies and broadband has brought with them many benefits. The school is located in the rural community of St. Bride's, on Newfoundland's Avalon Peninsula. In 1996, the school was in a district where the average ratio of students to computers was 13.2:1, and the average ratio of students to multimedia and Internet-capable computers was 65.3:1 (Govt. of NL, 1996, p.55). Despite this, Fatima Academy has a history of participation in the SchoolNet GrassRoots program that stretches back to 1996 (Fatima Academy, 2003; SchoolNet, 2001; Walker, 2003c). The school is now a member of the SchoolNet Network of Innovative Schools and, more recently, has participated in the Telesat Satellite Multimedia Trails (see Fatima Academy, 2003; Telesat, *n.d.*, a; Walker, 2003c,

2003d). Participation in those initiatives has allowed the school to facilitate increased technical capacity, foster the development of technology and knowledge-economy skills, and experience the advantages of innovation and change in teaching and learning environments.

Access to advanced information and communications technology and broadband have allowed teachers and students at Fatima Academy to explore real-world and alternative learning resources, avail of expert advice, build and strengthen ties with their peers in other schools, and build and showcase their enthusiasm and success in learning (see Fatima Academy, 2003; Walker, 2003c). Among the projects developed as part of the SchoolNet GrassRoots program, teachers and students have developed online resources showcasing their local community and natural ecology. Other projects have highlighted the impact of natural disasters such as oil spills and Hurricane Gert. The school has also collaborated with remotely located experts, such as scientists at the Freshwater Fluvarium in St. John's, NL, to provide older students with opportunities to learn about and participate in the science of salmon hatchery and the conservation of salmon stocks in St. John's rivers. In an examination of the school's web site, Walker (2003c) notes that there is a high degree of incorporation of new technologies such as digital photography and audio and video clips. But Walker points out that these technologies are only used when appropriate to advance the learning of students and to convey expressions of the significance of topics.

Participation in the Telesat Satellite Multimedia Trials brought new resources and benefits to Fatima Academy. For the first time, the school experienced the benefits of access to satellite forward connectivity rates of up to 3 Mbps and return link burst cap rates ranging from 64 Kbps to 512 Kbps, as well as joining a network of schools participating in the Trials (Fatima Academy, 2003; Telesat, *n.d.*, *a*, *n.d.*, *b*; Walker, 2003c, 2003d). The faster and more reliable Internet access and the potential of videoconferencing capabilities were among the resources exploited by students and teachers over the eighteen-month span of the program (Fatima Academy, 2003; Walker, 2003c). Students from Fatima Academy participated in video conference exchanges with their peers from other schools in Newfoundland and Labrador as well as in Quebec. Such video conferences allowed for cultural exchanges and opportunities for students to teach one another about local ecological resources and wonders. Teachers and administrators from Fatima Academy took advantage of high-speed Internet access and videoconferencing to network with their peers from other schools and with experts in remote locations to exchange ideas and best-practices and to overcome technical challenges.

Examining the impact of Fatima Academy's participation in the SchoolNet Network of Innovative Schools and GrassRoots programs and the Telesat Satellite Multimedia Trials shows that the school is, to some extent, realizing the benefits of access to broadband (Fatima Academy, 2003; Walker, 2003c,2003d). Students and teachers alike have had the opportunity to expand their repertoires of technology-related skills and have shown an ability to use those skills to share their enthusiasm and successes effectively as well as to explore and develop a wealth of alternative educational resources. They have also had the opportunity to develop and work in highly collaborative environments. Both of these achievements in recent years have increased the school's ability to meet the demands of an increasingly technology and

knowledge-based economy (Fatima Academy, 2003; Walker, 2003c, 2003d). In addition to this, teachers and students have demonstrated increased ability and willingness to develop networks with other schools and to exchange ideas and best practices. Students and teachers at Fatima Academy have demonstrated success in what Dibbon (2002) describes as stage two innovation. They are collaborating, integrating new ways of using technology in education, and exchanging ideas and expertise. Fatima Academy also appears to be well on its way to demonstrating stage three innovation (Dibbon, 2002). The school has a reputation for being an exciting place to learn, and has begun to integrate innovative ways of opening up the classroom beyond traditional walls and ways of teaching and learning as well as ways of connecting the teaching and learning experiences of students and teachers with those of their peers from other parts of the province, and the country.

Achieving Further Benefits

The two examples provided in this paper suggest that some schools in Newfoundland and Labrador are experiencing some benefits from broadband. The announcement of a partnership to put in place province-wide access to broadband will provide support for further realization of benefits. Teachers and administrators from schools that have gained broadband have identified several benefits that must be encouraged. These include the continued, if not increased, promotion of technology integration and the adoption of collaborative and innovative practices. One possibility that has been identified is offering increased incentives for participation in GrassRoots projects (Dibbon, 2002). Increased financial incentives have been identified as one way to attract new teachers to participate in the technology integration, and to enable participants to integrate more resources within their schools. A concern that has been identified is a lack of time to dedicate to planning and implementing technology-related initiatives (Dibbon, 2002; Walker, 2003a, 2003b, 2003c, 2003d, 2003e). Educators note that being overburdened with course loads and curriculum objectives prevents them from being more innovative and transforming teaching and learning environments in their schools. Addressing this concern, combined with further support and incentives for innovation, could lead to further benefits. As more teachers gain the time to collaborate, plan, and implement innovative initiatives, they will begin to find ways to use such initiatives to reduce their initial burdens and to meet curriculum requirements more effectively (Dibbon, 2002).

Another issue that has been identified is a lack of opportunities for professional development, thereby reducing capacity to integrate and use technology effectively (Dibbon, 2002; Walker, 2003a, 2003b, 2003c, 2003d, 2003e). Opportunities for professional development could be provided in many forms, including providing funding and support for increased collaboration between schools. As schools gain the capacity to collaborate using broadband connections, and as they network with larger groups of remotely located schools, they will gain access to pools of ideas, expertise, and best practices that could help to resolve their professional development needs (Walker, 2003a, 2003b, 2003c, 2003d, 2003e). In addition, as schools gain further capacity through broadband, educators will gain increased access to such resources as CDLI, SchoolNet, STEM~Net, and VTC. This access will provide them with more opportunities for online professional development and will allow them to contribute their own ideas, expertise, and best practices to a growing pool of educational

resources (CDLI, *n.d.*; Dibbon, 2002; STEM~Net, *n.d.*, 1999; Virtual Teacher Centre, 2002).

Conclusion

This paper presented the examples of two schools to illustrate some ways in which benefits of broadband are being realized in Newfoundland and Labrador. These benefits include increased technical literacy, increased access to a broad range of previously unavailable educational resources, increased student participation and achievement in a wider range of educational experiences, and increased motivation amongst both students and teachers. These benefits also include a transformation of the learning environment itself, through a shift towards greater collaboration among students, teachers, and schools, and a shift towards more open-concept schooling. Continued commitment to providing access to state-of-the-art technology and connectivity and to providing opportunities for professional development and collaboration within and between schools will help promote realization of benefits through a greater sharing of ideas, expertise, and best practices. The benefits of such changes include increased technological capacity within schools, increased ability to meet the rapidly changing demands of society, and increased capacity to transform pedagogical practices and the environment in which teaching and learning occurs. Further studies could provide insight into the effects of broadband access on student achievement, faster and more practical and reliable methods of providing broadband, particularly for rural and remote schools, and ways to support and encourage further collaboration and innovation amongst educators and students using broadband.

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DIGITAL VIDEO IN DISTANCE EDUCATION AT MEMORIAL UNIVERSITY: CHOOSING A FORMAT AMONG THE ALTERNATIVES

Kevin J. O'Leary & Elizabeth Murphy

Memorial University has incorporated educational video components in distance education since 1969. The video ranges from the sequencing of a small number of still images to full courses given in 1-hour video lectures. Production and distribution of the majority of such video are completed by the university's video production facilities originally known as the *Educational Television Center, or ETV*. The production facility is now a part of the university's Distance Education and Learning Technologies, or DELT. Initially, video components of courses consisted of recordings on one inch, reel-to-reel tapes distributed to learning centers around the province. Students had to travel to these centers to view the individual tapes at scheduled times. Over the years, a number of other distribution formats have been used, including satellite distribution. Today, video is primarily delivered in VHS videotape format mailed directly to the students and then returned by them at the end of the course. During the 2001-2002 academic year, forty-two of the 135 courses delivered by Memorial through DELT incorporated use of video.

Just as new formats for video were adopted to keep pace with progress in technology, so too might we expect that the emergence of new technologies will result in the adoption of formats superior to VHS. New technologies are typically designed to overcome the constraints of their predecessors and often afford possibilities not present in older forms of the technology. Thus, although the VHS video format may have proven adequate in the past, there are now alternatives that may better serve the end users. The image and sound quality of the VHS videotape is now surpassed by new digital video technologies. Some of these new technologies also overcome the distribution constraints associated with having to use regular postal services to deliver videotapes to students. In addition and, more importantly, new forms of delivery of video can afford much higher levels of learner control than can the VHS format.

The emergence of new technologies such as better video formats may also be accompanied by changes in the contexts in which these very technologies are used. Distance education at Memorial has adopted a variety of delivery modes since its beginnings over 30 years ago. While correspondence modes which relied on traditional mail service and teleconference may have represented the norm in delivery of programs at a distance for many years at Memorial, such forms are being replaced today by web-based delivery. Of the approximate 250 distance courses offered by the university, 170 of these are now delivered using WebCT™. The adoption of this new approach to learning and the technology to support it creates an imperative to investigate the value of adopting new formats for video. These should be compatible with and achieve the level of quality required of the new forms of learning.

While the imperative to adopt new formats for video may be evident, the choice of which one should be adopted requires careful consideration of the alternatives, their affordances and constraints. "Affordances are what objects or things offer people to do with them" (Jordan, Raubal, Gartrell, & Egenhofer, 1998). In this sense, the term affordance refers to what the technology makes possible or what

it can allow the user to do. As well, the context in which the technology is used will need to be considered in relation to the affordances and constraints. The format must be compatible with the context in such a way that it supports maximizing the former and minimizing the latter.

This paper considers the affordances and constraints of three digital video formats and provides an overview of digital video in general. The three forms are CD-ROM, DVD-ROM and streamed video. The paper also provides a discussion of these technologies in relation to the instructional context of Newfoundland and considers as well how they might evolve in the future. The purpose of the paper is to determine which of the three formats might present the most viable alternative to the use of video in VHS format in distance education at Memorial.

Digital Video: An Overview

All video and audio starts out as an analog signal (Silbergleid, 1999). The video and audio analog signals are transformed into a digital format by the recording device or, at a later time, through some form of translation software. The resulting transformation is a collection of binary digits that make up a numerical representation of the recorded information. Digitization has done for video and audio programs what word processors have done for text. Word processors have taken what used to be the physical entities of ink and paper and transformed the characters into a collection of digital data. Digital video is the conversion of light energy or video, and sound energy or audio, into this similar composition of digital data. These once physical objects are now a coded combination of 0s and 1s that, when processed, result in pictures and sound.

The amount of these 0s and 1s needed to be stored to capture a video program depends on the length of the program and the technical quality of the picture and audio. The longer the video, the more data must be stored and processed. To maximize the video quality of the picture, one must maximize the amount of data created from the capture device through a process referred to as data compression. Netlingo (2002) describes compression as "[a] method for storing text, data, or images in fewer bits (...) so less disk or file space is needed to represent the same information" (p. 1). Different types of compression are more effective at minimizing the amount of data needed to deliver a quality video program.

Rajendran (2002) explains how video compression uses the redundancy of video pictures to minimize the amount of data needed to store the required information. A digital video signal is comprised of a group of small dots of video called pixels. When all of these pixels are displayed together on a computer monitor they create an image called a frame. These pixels refresh themselves a certain number of times per second. Video compression tries to minimize the amount of data it must send to the screen when a frame changes to recreate an image. If a picture is comprised of a still image, compression software will simply refresh the data it has already sent to the screen. The same pixel composition is required in the same area of the screen as the previous frame. There is no need to process information that already exists. If the video being processed contains moving or changing images, then each pixel on the screen must be changed rapidly, thus requiring more data and faster processing of the data.

Bandwidth or the amount of data that can move through a delivery system is another important consideration in relation to digital video. Bandwidth is measured in bits per second, or bps (Netlingo, 2002). The faster the number of times the data can refresh themselves, the smoother the motion will appear. Broadcast television signals sent to the home refresh themselves 30 times every second but the speed at which the brain processes visual images allows this refreshing period to appear seamless. A film viewed in a movie theatre changes 24 times per second. If the digital video comes from a source that cannot supply a given level of bits per second, the image quality will be compromised.

Digital video affords a number of technological and pedagogical advantages over analog technologies such as videotape. Li and Liao (1997) argue that digital video is superior to analog video in relation to the attributes of robustness, seamless integration, reusability and interchangeability, and ease of distribution. Unlike analog video signals, digital video information is robust in that it does not degrade in quality with time or usage. Analog video loses quality in both the audio clarity and picture sharpness with each generation of copying. "Digital video generally maintains quality better than analog since the signal can be digitally copied and digitally transformed without adding noise, distortion, and color and luminance shifts" (Focus inc., 2002, ¶ 2). Digital signals retain their initial quality unless they are reformatted to a different digital format. Seamless integration refers to the ability of digital video signals to be integrated with other digital resources without having to use separate display devices. Students can view the digital video components of their course on the same computer they use for word processing or for retrieving information from the Internet.

The reusability and interchangeability of digital video entities has to do with this technology's common usability in different countries. Analog video signals have different technical specifications in different areas of the world. Videotape programs recorded in North America, using the NTSC technical specifications, will not play on a videotape player used in the United Kingdom and other parts of Europe which use the PAL television standard. A student in Russia would require an analog video in the SECAM format. (Kropla, 2001). A digital video signal recorded on CD-ROM or delivered over the Web could be viewed in any of these places. The fourth area mentioned by Li and Liao (1997), regarding the advantages digital video has over analog video, has to do with the ease of distribution potential digital video signals hold over analog video signals. Digital video signals sent over the Internet eliminate many of the distribution barriers experienced by analog video distribution.

Learner control

From a pedagogical perspective, digital video technologies can facilitate high levels of learner control. Learner control through the use of digital video can be described as "self-determined, discovery learning, in which the student can interactively browse through the multimedia contents, consolidate material of interest and skip irrelevant material" (Lemke, Jesse & Brenner, 2002, p. 643). Using analog video technologies, for example in VHS format, the viewer must watch the video in a linear fashion. To find a specific section of the program, viewers must move forward or backward through the material of the program until they find the content of interest. Digital video technologies can allow the viewer to move about the video program in a non-linear fashion. The degree of learner control can increase when the digital video

is incorporated into a multimedia or hypermedia learning structure. In this case, a learner may navigate between a number of media components of a learning module. A multi-media object could be comprised of text, graphics and video files all contained within the one CD-ROM. Learners could navigate around the multiple media components of the CD as they determined the need to do so. Hypermedia entities are multi-media compositions that provide links to other multi-media compositions and allow the user to access these links in a non-sequential manner (Li & Liao, 1997). Multi-media becomes hypermedia when the linked information is not contained in one definable component. A DVD-ROM that contains video objects or graphics as well as hyperlinks to a URL on the Internet would be an example of hypermedia.

Digital Video Distribution Technologies

Disc Technologies

Two formats commonly used for the distribution of digital video are CD-ROM (Compact Disc Read Only Memory) and DVD (Digital Versatile or Video Disk) technologies. The DVD technologies include a video format which can be displayed on a television set whereas the DVD-ROM is normally displayed on a computer. Both CD and the DVD technologies have similarities with respect to the level of user control that they offer students. Where they differ is in the amount of data they can store and the quality of the digital video they can deliver.

CD-ROM technology allows for the storage of video, audio, and graphics. Its popularity has been earned more from its low hardware and duplication costs than from its ability to playback high quality video (The POD, n.d.). When the CD-ROM was developed in the early nineties, it could store over 650MB of data. Developers are now aiming to increase the capacity of the disc. Philips and Sony recently announced a new High-Density CD-ROM called MMCD (MultiMedia CD) which will increase the maximum amount of non-compressed data storage on a CD-ROM to 7.4 GB. However, the disc will require new CD-ROM drives based on new technology (CD Solutions Inc.,2002). The goal of the CD-ROM industry is to put a full length or more than two hours of MPEG-2 compressed motion picture onto a CD-ROM.

The present inability of CDs to store the amount of data needed to deliver even VHS quality video is compensated for in some ways. Reducing the size of the viewing screen that is generated by the CD video and reducing the frame rate can decrease the amount of data needed. A standard broadcast signal would be 640 x 480 pixels (Gerhart, 1999) using a frame rate of 30 fps. When authoring CD-ROMs that include video components, instructional designers can use a picture size that measures 320 x 240 pixels and a frame rate of 15 fps. However, the reduction in frame rate decreases the seamless transition between frames and can make the picture appear jumpy to the viewer.

Video producers can aim to minimize the amount of movement in the picture content of any video that is recorded for use in a CD-ROM. This allows the video decompression software to minimize the amount of new data it must process due to the redundancy in the picture composition from the previous frames. As Leland (1999) states, "As anyone who has worked with compressed video (for example, CD-ROMs) knows, camera motion like pans, zooms, and dollies which are normally used

to enhance the visual interest of a production cause low-bandwidth codecs to 'choke' ..." (p. 146).

From the perspective of distribution, CD-ROMs must be mailed to the students. This distribution method does not offer any advantage over the present distribution of VHS tapes. Delayed or lost materials can still hinder students' access to the course materials. Furthermore, accessibility may be an issue if the student's computer does not have a CD-ROM player. There is at present no information available on the number of distance students in this province who have computers with CD-ROM players.

In spite of these constraints, digital video in CD-ROM format affords certain possibilities not present in VHS format. Compared to the linear VHS tapes, CD-ROM technology offers students a significant level of learner control in relation to viewing. The various text, graphic, and video components of an educational CD-ROM can be indexed on a menu page of the disc. Students have the option of moving through the content in a non-linear fashion and according to their preferences. CD-ROM offers some financial advantages as a digital video distribution medium as well. Blank VHS tapes cost approximately \$1.50 each to buy in bulk compared to blank CD-ROM discs that retail for as little as \$.30 each. The shipping cost to have the lightweight CD-ROM discs delivered to students, compared to the cost of shipping the larger VHS tapes, also offers an advantage for using this format.

DVD / DVD-ROM

Weaver (2002) describes DVD as containing the positive attributes of videotape laserdisc and CD-ROM but with improvements in all of these attributes. DVD and DVD-ROM technologies contain some visual similarities to CD-ROM technology. Both technologies employ the use of optical technologies to record and playback data. The major difference comes from the amount of data each format holds and the speed at which this data can be delivered. CD-ROMs can presently store approximately 650-700 Megabits of data whereas a single sided DVD can hold 4.7Gigabits which amounts to approximately 135 minutes of MPEG-2 video with up to eight channels of audio. CD-ROM can transfer data at a rate near 4.32 Megabits per second while the DVD can transfer data at a rate of 26.1 Megabits per second (Advisory Group on Computer Graphics, 1998).

Horbett (2002) lists a number of advantages DVD offers to users beyond the improvement in video quality and data processing speed. These advantages relate to the amount of control DVD can allow the learner through branching, menus, audio streams, video angles, and subtitles. Each of these advantages adds to the user's ability to interact with and personally control the information stored on the disc. Branching refers to the viewer's ability to move in a non-linear fashion from one segment of a video program to another to skip information the learner already understands or to review material.

Menus imbedded in a DVD allow the user to move between the various components of the disc. A student can use the menu or menus supplied to navigate between the video, graphical and text components of the information being studied. "Menus can be inserted anywhere throughout a program to allow the user to make a

choice that can ultimately change the entire experience" (Ibid., ¶ 10). The ability to include multiple audio streams on a DVD also adds to the level of control that students can experience using DVD technology. These audio channels can include such components as language translations to allow a student the option of choosing the language they wish to use for learning. Explanations of various concepts or ideas can be delivered in different levels of complexity. Students can then select the level best suited to their needs.

The capacity of a DVD to include various shooting angles of a visual object, on demand, can enhance the control a student has over the learning environment. As an example, if Social Work students are observing an interview between a counselor and a client as part of their course material, they might find it as important to view the physical reactions of the listener as well as those of the speaker. A DVD containing this learning information can offer various video angles of the same interview segment. Students could potentially view the entire video focusing on the physical reactions of the counselor and then view the complete interaction again with the client on the screen. Students could also switch back and forth between the two viewing angles as they choose. DVD can also include subtitle tracks. These tracks can be used to add text descriptions to support learner comprehension. The subtitles could also contain specific or special instructions for the student or to increase the accessibility of the resources to hearing-impaired learners.

While DVD technology presents advantages in terms of delivery, it nonetheless presents the same constraints as CD-ROM in terms of distribution. The DVD must be delivered to the student using the mail or a courier service which can result in delays particularly for those living in remote areas. Also, at an approximate cost of \$12 each, DVD-ROMs unfortunately represent by far the most expensive of all the formats considered here. The use of DVD technology in distance education also raises issues related to accessibility. While one in every four U.S. homes is equipped with a DVD player (American City Business Journals Inc. 2002), there are no statistics available on the number of distance students at Memorial who have access to DVD players. However, the decrease in the cost of DVD video players and the increase in the number of DVD video rentals visible in video rental stores would indicate the availability of this technology to students is on the rise (Marioni, 2002).

Streamed video

Streamed video represents another option for the delivery of digital video to distance students. Students can view and hear the decompressed media directly from their computer assuming it is programmed with the compatible software to decompress the video content. Two forms of streaming are available for use: progressive streaming and real-time streaming. Progressive streaming downloads the entire video file to the computer. The file is then stored on the user's computer before it is played. Real-time streaming is stored on a server and plays on users' computers without having to be saved to their hard-drive (Ibid.). Due to the amount of space progressive streaming can take up on a student's hard drive and the amount of time needed for downloading a large files, real-time streaming is the delivery method that has been preferred by Memorial.

Real-time streamed video can offer students control of how they view videos. Learners have the option of jumping to different segments of the program (Ibid.). Young and Asensio (2002) put forth that video delivered by the Internet also gives learners the added benefit of integration with other learning resources. Students viewing videos over the Internet can also use the vast resources of the Web as they link from the streamed video to instructor supplied URLs. Students can also search for other topic-related links.

There is another fiscal and pedagogical advantage to using streaming video. De Smedt and Black (2002) argue that one of the major advantages web-based instruction has over other digital distribution systems, such as CD-ROM, is the ability to make fast and easy revisions to the course content. If there is a need to revise the course content, the course files can be changed for all users at one time. Compared to videotape, CD-ROM, or DVD this facility in making revisions can save time and money related to production costs. Streamed video distribution can increase the flexibility students have for accessing the video components of their courses. Students, theoretically, can access the supplied video components wherever they can log on to the Internet.

In spite of the many affordances presented by streaming video, accessibility remains an impediment to its use in distance education. Learners are restricted in their ability to access high resolution, streamed video by the type of Internet connection (Illinois Online Network, 2000). Users' Internet connections can range from the low-speed dial-up modems, to high-speed cable or ADSL distribution systems. While a dial-up modem can deliver data at a maximum rate of only 58.8 kilobits per second, a high-speed cable modem can offer subscribers the ability to download data at a rate of 1.5 Megabits per second (Gutenko, 2002). Access to the higher bandwidth connections is needed to deliver video quality that would approach the level of the VHS tapes currently distributed to distance students by Memorial.

While the university currently provides every student with free access to the institution's dial-up modem pool, high-speed connections must be purchased from a private Internet provider at a cost of approximately \$40.00 to \$50.00 per month (Rogers' Communications Inc., 2002). The cost of such service may be a deterrent for students. Yet, even for those willing to and able to pay the associated costs, high-speed service may simply not be an option because of the lack of availability of the service in many areas. Of the 649 communities in the province, 635 of these have fewer than 5000 people (Operation Online, 2001). It would be an expensive venture to bring broadband Internet access to all these communities. As Lynch (1998) commented in relation to high-speed use, "accessibility is not as widespread as might be expected" (p. 6). However, a solution to the delivery of streamed video to users on narrowband connections is use of sure streaming which allows the user the opportunity to present a profile of his/her connection so that the video can be streamed according to the connection. This type of streaming dynamically changes the quality of the signal to match the bandwidth.

Accessibility of streamed video is also compromised by lack of interoperability of software formats. Presently, Memorial streams its video in RealMedia™ format because it holds a RealNetworks™ software license. It does not hold a license that would allow it to stream video in other formats such as Windows Media Player™ or

QuickTime™. For the end users or students, this means that some version of RealMedia player must be installed on their machine. The player can be downloaded for free or purchased making cost a non-issue. However, students may encounter technical difficulties downloading the software and configuring it to suit the requirements of their computer.

A further constraint associated with the use of streamed video is quality. Presently video that is delivered in streamed format must take into consideration data compression and deliver video that is smaller in viewing size than regular video. As well, during production, control contrast and color must be carefully controlled as must the amount of movement in the video frame.

Discussion

Each of the three video formats considered in this paper presented both affordances and constraints. The CD-ROM format affords better levels of learner control than does the VHS format. CD-ROMs can contain menus that allow students to navigate content according to their preferences and not necessarily according to a predetermined sequence. The availability of CD-ROM players makes the technology relatively accessible. In relation to cost, this format presents advantages as well. CD-ROM burners can be purchased at a low price compared to VHS dubbing machines and the cost of blank CDs is approximately ten times lower than the cost of a VHS tape. Thus, DELT would incur considerable saving by switching from VHS to CD-ROM formats. In spite of these affordances, the format is presently limited in its ability to deliver high-resolution video. In addition, the storage capacity of CDs is presently limited in comparison to other formats. However, present and future developments in the technology may allow it to overcome some of these constraints.

In comparison with video in CD-ROM format, DVD technology offers the user a greater amount of learner control through its menu capabilities, multiple audio tracks and video-angle selection possibilities. This control can be increased when the disc is designed for use along with the Internet. The constraint associated with DVD technology stems from its low level of accessibility since many students may not have the technology needed to play the disc. A further constraint relates to the production costs. The price of approximately \$12.00 for each disc is high compared to that of the other video formats. At the present time, given the likelihood that many students may not have DVD players in their machines, and given as well the cost of the individual disc, DVD-ROM technology does not represent a viable choice for DELT. If the price of the individual disc becomes more comparable to that of the CD and if the player becomes more widespread, the DVD format could represent a strong alternative to the use of VHS.

From the perspective of learner control, video streamed over the Internet affords many possibilities. Learners can select which parts of the video they want to view and can simultaneously link to online resources. They can view the video whenever they access the course web site. Streamed video components can be easily updated and altered as well because the video content is stored on the supplier's server. However, the technology presents some constraints in relation to its accessibility and, in terms of the quality it affords.

The many and varying constraints and affordances of each of the three formats considered in this paper make obvious the need for careful consideration of the alternatives to the use of video in VHS format in distance education at Memorial. Of the three, we can conclude that the DVD-ROM format does not presently represent a viable alternative because of its high cost combined with its low accessibility. Yet, improvements in the cost of the disc and accessibility of the players could make this technology a viable alternative in the very near future. Therefore, two alternatives remain: streamed video and CD-ROM.

The sure streaming of video can allow DELT to minimize some of the constraints related to narrowband connections. However, as long as many students are accessing their distance education courses through dial-up modems as opposed to always-on, high-speed connections, streamed video represents a weak alternative. In relation to the use of streamed video in Newfoundland, the context itself actually imposes its own constraints in addition to those inherent in the technology itself. However, continued research into caching, or storing content closer to the end user may minimize some of the constraints of narrowband connections. As well, research into improving compression formulas to support delivery of video over narrowband connections can also help minimize constraints. Such research is ongoing presently in Canada and around the world. Newfoundland also represents an ideal testbed for applications resulting from such research because of our reliance on narrowband connections and because of DELT's history of production and delivery of video.

The remaining technology therefore is that of the CD-ROM. Quality of this format can be enhanced through encoding with the MPEG-1 or 2 standard. However, because of the limited storage capacity, it can only represent an alternative to the VHS format if the content length can adequately fit onto the disc. Future developments may result in a format that is affordable, accessible and capable of storing amounts of data equivalent to the VHS format. Under these circumstances, then the CD-ROM format can represent a viable alternative to the use of VHS.

Conclusion

Thirty years ago in Newfoundland, students needing to view course-related video were obliged to travel to centers outside their homes and in some cases, their communities. Since that time, achievements in technology have made possible the viewing of video directly in the users' home and even at their desktops. Not only has access to video improved remarkably, but the quality has seen improvement as well. In addition, video for educational purposes can now offer significantly more learner control. Whereas, 30 years ago, students had few options available to them in terms of viewing video, today, they may potentially choose from video in a variety of formats such as VHS, CD, DVD or streamed.

While the formats have changed and increased in variety and quantity, there remain nonetheless issues related to accessibility, cost and quality. As this paper has shown, these issues require consideration when choosing among the alternative formats for delivery of video in distance education. Such choices may as well require predicting the future. As technologies become more prevalent, their prices often become more competitive. Whereas DVD-ROM represents a prohibitively expensive alternative today, such may not be the case in years to come. It is also possible that

DVD-ROMs may eventually become as accessible as are CD-ROMs today. Encoding standards will continue to improve no doubt resulting in even better quality than what is afforded today by the MPEG-4 format. Better compression formulas and increased access to broadband will likely make streamed video a more viable alternative in the future.

For institutions like Memorial that need to make choices among alternative video formats, there will always be many factors to weigh. The choice will involve consideration of the allowances of the technologies as well as their constraints. The context of use and requirements of the users will also need to be factored into the choice. Finally, serious consideration will need to be given to trends and to an appreciation of how the technology may evolve in the future.

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Re-conceptualizing Distance Education: Implications for the Rural Schools of Newfoundland and Labrador

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Introduction

Online learning will become even more prevalent in the coming years. Our challenge as administrators will be to differentiate those that have the appearance of quality from those that truly deliver unique and enriching learning experiences for students (Berman & Pape, 2001).[i]

In September of 1988, the Newfoundland and Labrador Department of Education implemented a program of distance education for rural high school students. The main purpose of this initiative was “to provide access for students in small schools to high school courses that were considered important for graduation and for post-secondary admission but that were difficult to offer in such schools” (*Supporting Learning*, 2000, p. 72). [ii]

In its first year of operation, the program consisted of just one course - Advanced Mathematics 1201. This course had an enrolment of 36 students in 13 rural schools. The experiment proved successful and the program grew to the point where in 1999-2000, 11 courses were offered with 898 course enrolments. A total of 703 students in 77 different rural schools were taking one and sometimes two courses in Advanced Mathematics, Physics, Chemistry and French.[iii]

This distance education program was decidedly “low tech” by today’s standards. It made use of the postal service and the existing telephone system. Course materials, such as textbooks and the essential student handbooks, are sent to students by mail. Assignments and student questions were sent to teachers and returned to students by fax machine. Interaction and communication between and among teachers and learners occur though the audio graphics technologies (teleconference and telewriters or electronic whiteboards) developed by Memorial University’s Telemedicine Centre. A distinguishing and valued feature of that system is that it enabled participants to engage in real time (synchronous) dialogue and visual demonstrations in relation to teaching and learning matters for 50% of the required instructional time for distance courses.

On occasion, schools made provision for students to telephone their distance teachers directly to seek clarification or assistance with some course related matter. Many distance teachers also made the effort to transcend the physical barriers created by distance education by actually visiting their students in their schools once or twice a year.

Distance education has been quite successful in fulfilling its stated purpose. This was due in large part to the determination and hard work of the rural students enrolled in the program. Distance education has also been fortunate in recruiting a very dedicated and committed group of distance teachers who generally have taken a

very keen interest in seeing their rural students succeed. These teachers were aware of and responsive to the unique context and conditions in which their students lived and studied.

A significant contribution to the success of the current program has also been made by many school-based teachers and principals. In addition to providing technical and supervisory support for the program, many rural teachers have also provided, voluntarily, significant academic tutoring to distance students. Unfortunately, this instructional assistance has never been officially recognized or acknowledged; it has been greatly appreciated, however, by rural students and parents.

On the other hand, the program has not been without its flaws and limitations. The technology used, although relatively simple, has not been without its problems; an indication more perhaps of the inherently problematic telecommunications infrastructure in many rural places than of the limitations of the technology itself.

It has catered for the most part to a select or "elite" group of students. It is a program that could be accused of "educating the best, while ignoring the rest," providing little benefit to the majority of the students in the school not taking part. Indeed it is program that has sometimes had a negative effect in various ways on the school as a whole - an educational example of the tale wagging the dog. Once a school commits to having a distance course as part of its schedule, most other instructional periods have to revolve around the distance time table.

Nevertheless, it has provided several thousands of rural students over the years with the opportunity to earn advanced academic high school credits that they may not have otherwise been able to accumulate. For the privileged few, it has been a boon.[iv]

Re-thinking Distance Education

The province must remain a leader in the development and use of distance education as technology shifts towards a computer and Internet-based approach. (Supporting Learning, 2000, p. 78)

The Ministerial Panel on the Delivery of Education in the Classroom[v] has recommended a number of significant changes to distance education in the province. These changes are outlined in chapter six of their recently released final report, *Supporting Learning* (2000). Four key recommendations provide the direction for the proposed changes:

Recommendation 58

that the province embark on a program to substantially increase the scope of distance education offerings in the schools through the establishment of a "Centre for Distance Learning and Innovation".

Recommendation 59

that the Centre for Distance Learning and Innovation consist of a number of teachers, who may be termed Electronic Teachers or E-teachers, with primary responsibility for course delivery and evaluation and that, at the school level, teachers be assigned from the regular school allocation as mediating teachers to ensure appropriate interaction between students and E-teachers.

Recommendation 60

that an approach be taken to content packaging and delivery that is not totally dependent on high bandwidth technologies.

Recommendation 61

that most communications be through an Internet-based system incorporating e-mail, conference forums, Internet fax and similar devices, with minimal reliance on synchronous communications, fixed schedules or other constraining elements.

These proposed changes will have a potential impact on all students and teachers in the province. The Panel believes that students in all schools should have access to computer mediated, internet based distance education opportunities; it also believes that teacher professional development can and should occur through Internet based technologies.

The Ministerial Panel appears to have a great deal of unquestioning faith in the potential and possibilities that information and communication technologies (ICT) have for education. Indeed, schools are told they "must embrace" technology (p.62). In addition, the report conveys a real sense of urgency and directs the educational community to move quickly and without delay to adopt technology in all aspects of education. These injunctions are quite contrary to the best thinking in the literature, which is unanimous in suggesting a more critical perspective and thoughtful and adequate planning and professional development:

Careful planning also is in evidence in the Durham public school district in Ontario, Canada. The 67,000-student district has moved slowly in developing its online campus, which eventually will provide training for students, teachers and other staff. After two years of research and development, one of the school district's first steps last year was to try out learning modules in a regular classroom context.

This blended approach improved course development and helped students determine whether online learning was for them.

"Most people aren't taking their time," says Todd Hitchcock, e-learning project manager for the Durham Virtual Campus. So far, Durham's offerings include four complete online courses for high school students and four online modules used as part of traditional courses. "People

start out very fast. But then they get the content in one area and have to move to another," which can be very expensive.

He adds: "I have heard too often, 'I don't know what that e-learning thing is but we want it and we want it in 100 days' (Russo, 2000)[vi]

Although the proposals and recommendations contained in *Supporting Learning* (2000), have implications for all schools, I am primarily concerned in this paper, with how the proposed changes to distance education will affect the provision of quality education and schooling in rural places. I am particularly concerned with those schools in remote and isolated places; It is the smallest and most remote schools that could benefit the most from an expanded distance program.

The present approach to distance education, with its simple but fairly reliable technology, serves the students availing of its service, reasonable well. Proposed changes should provide something at least equivalent in accessibility and quality for these students. Consideration also has to be given to the pedagogical needs of the more diverse group of learners expected to participate in online distance education (ODE).

In Chapter five of their report, the Panel highlights the "program disparity" that exists among schools in this province. Smaller schools, mostly rural, are not able to offer the number and variety of courses that larger schools, mostly urban, can. It is the desire to "lessen this disparity" and "increase the equality of educational opportunity" for rural students that underlies, ostensibly, the Panel's proposed recommended changes to distance education.

Distance education[vii] has been widely advocated as a means of equalizing educational opportunity, providing wide access to programs and learning resources and responding to varying learning styles and life styles.

They appear to be convinced that technology provides the final solution to this historic challenge of rural schooling and, thus, will create a level playing field for rural students to compete with their urban counterparts. Perhaps what is proposed may do that. However, the key question that has to be asked is will the new model of distance education proposed by Ministerial Panel improve the quality of education and schooling provided for all students in rural schools and particularly in remote places? Simply providing access to programs and courses via technology may or may not result in quality or equal educational opportunities for rural students. Something more than access is required and that "something more" has much to do with the quality of interaction and communication that occurs in the process of teaching and learning. This is true for face to face classrooms and may be even more critical in virtual environments.

The Panel's recommendations do have the potential for enhancing rural education. The current system has demonstrated the value of distance education for those few rural students who have so far participated. If the new model being proposed in *Supporting Learning* (2000) will provide additional educational opportunities to all rural students, especially those in the smaller and more remote

places, then the new model will be endorsed and welcomed by rural educators, parents and students.

However, in order for those possibilities to be realized considerable human and technical resources have to be in place before implementation begins. Otherwise we will be putting many rural children and youth at risk. The Panel has expressed the belief that certain “instructional economies” (p.81) may be achieved if its proposed changes are adopted and implemented. Perhaps this too is possible; but such economies cannot be obtained at the expense of rural students education.

Before endorsing the recommended changes, parents and educators have to be assured that what is proposed is at least equivalent to what is being replaced and is appropriate for the more diverse group of students who may be participating. To justify the time, energy and resources that will be required to make the changes, one might actually expect a large measure of improvement.

Purpose of Paper

The purpose of this paper is to offer a review and critical commentary on the Ministerial Panel’s proposed changes to the provision and role of distance education in the K-12 school system in Newfoundland and Labrador. In addition, a number of questions for further inquire and discussion will be identified.[viii]

In the first section of the paper, I will examine the issue of “program disparity” which the Ministerial Panel identifies as a most serious challenge facing rural schools. Following this, I will review each of the major changes to distance education being proposed in the *Supporting Learning* (2000) document. Issues, concerns and questions related to these changes will also be identified and commented on briefly.

1. “The special needs of schools in rural areas of the province”

The Newfoundland and Labrador Department of Education, following Statistics Canada, defines “rural” quantitatively and by default. Thus, “urban refers to cities, towns, and metropolitan areas with a population of 5,000 or more. Rural includes all others” (*Education Statistics*, 2000-2001).

In Newfoundland and Labrador a school is classified as a rural school if it is situated in a community of fewer than 5,000 persons. Given this “definition” of “rural,” rural schools can be situated in a very wide range of contexts. Such a definition tells us nothing about the degree of remoteness or isolation or the availability or proximity of services. An isolated rural community of 200 is a very different rural community than one of 4500 with a short road link to a nearby urban center. Rural schools are quite diverse in terms of their location and size.

For the school year, 2000-2001 there were 214 schools classified officially as rural with a combined enrolment of 37,990 students. This represented 64% of the total number of schools and 42% of the total provincial K-12 enrolment (*Education Statistics*, 2001-2002).

Rural schools are small schools with an average enrolment of approximately 178 students. 74 of these rural schools have an enrolment of less than 100. All but a few of the province's 80 or so all grade schools are rural schools.

Although all-grade schools account for as much as 40% of all rural schools and have their own unique dynamics and needs, the Department of Education does not treat them as a separate category. Yet any attempt to alter the nature of program delivery at the high school level will have a potential impact on the all students in an all-grade school.

In all-grade schools, a science specialist in the school is an educational resource for the whole school, not just the senior high students taking science courses. If that science teacher is no longer in the school, the high school students may still "access" the required science courses via distance, but an on-site, school-wide resource has been lost.

In section 5.1.5 of Chapter Five, entitled "Program Disparities," the Ministerial Panel "considered the special needs of schools in rural areas of the province" (*Supporting Learning*, 2000, p. 54). One very important "special need" mentioned and then largely ignored is "[t]he unique socio-economic conditions of many rural communities...". The socio-economic conditions in many rural communities in the province are among the most challenging in the whole of Canada. Statistics Canada consistently reports that, generally, rural Newfoundland and Labrador has the lowest average family income, the highest levels of unemployment and the lowest level of adult literacy in the country.

In addition, the dramatic out-migration in many rural regions, combined with the lowest fertility rate in the nation, has resulted in considerable population decline among both adults and school age children. This challenging situation is compounded by the demographic profile of those who are leaving (better educated/employability skills) and those who are remaining in many rural communities. While it is important to acknowledge that some rural communities do not fit this general socio-economic profile and that there is wide diversity among rural places, there is growing concern among many rural educators about the economic and social conditions in an increasing number of rural places.

Given what we know about the impact of socio-economic conditions on education and schooling, it is surprising (and disappointing) that the Ministerial Panel chose not to pursue this issue. Any attempt to improve the quality of education which ignores the economic and social realities of rural communities and families will not be very successful. This is especially true in a situation which is to be increasingly dependent on computer mediated distance education for program delivery and all that it implies.

The Panel's position is that the school is "fundamentally a learning organization" and is thus primarily concerned with academic matters (p.11). But learning organizations (schools), virtual or otherwise, do not exist in a vacuum; their context has to be given as much consideration as program development and program delivery. Is there some notion that a virtual school, existing in cyberspace, can be oblivious of context?

The Panel also focused attention on the achievement of rural schools:

The issue of low achievement levels in rural areas has been well documented. An examination of the indicators published by the Department of Education shows that rural students, as a group, perform substantially lower than students in urban schools. Compared to other areas where improvement efforts could be directed, the Panel believes *measures to increase student performance in rural schools are most urgently needed* (p.54). [emphasis added]

Although the research evidence clearly indicates a clear relationship between socio-economic conditions and achievement, again, the Panel chose not to discuss this relationship. Many rural educators would take issue with this rather misleading generalisation about rural schools and their achievement. Such statements, made without any qualifications, clearly undermine the hard work of rural educators and ignore the very real achievements of many rural schools.

Be that as it may be, there is still the legitimate question to ask related to the impact the proposed changes to distance education might have on rural achievement. Will the proposed changes to distance education improve the performance and achievement levels of rural students? What impact will they have on completion rates and school retention?

Again, there is no discussion of this issue in *Supporting Learning* (2000). Are we to assume that the proposed changes to distance education are at least among “the measures most urgently needed” to address the purported low levels of rural student achievement? Is there any evidence to support this assumption? None is offered in *Supporting Learning* (2000).

The primary concern of the Ministerial Panel regarding rural schools articulated in *Supporting Learning* (2000) is the “wide program differences” (p. 54) that exist between rural and urban schools *and* among rural small schools. In the view of the Ministerial Panel, these program differences or “disparities” constitute a form of educational inequality. The province must strive to “lessen program disparity” and “minimize” the “inequalities in program access...and delivery” that currently exist among schools (p.54,56). Consequently,

There is a need to strengthen the delivery of education in rural Newfoundland and Labrador. The education system must provide a level of service which removes barriers so that all students, regardless of the location of their community, are able to access an essential program (p. 54). [emphasis added]

The Ministerial Panel makes it clear that its primary concern is the smallest and most remote rural schools, those “most in need of program enhancement.”

I think it is important to note that, currently, all but a very few of the smallest rural schools manage to offer an academic program that qualifies rural students for admission to Memorial University and other post-secondary institutions. Even all-grade schools with as few as 17 students manage to do this by taking advantage of

the current distance education program and utilising a number of school- based strategies including:

- Curriculum rotation: courses are offered once every two or three years.
- Teaching two or more courses and/or subjects simultaneously in the same instructional period.
- Independent study: students complete courses outside regularly scheduled time with voluntary assistance from school based teachers.
- Having courses taught by non-specialist teachers
- Tailoring course offerings each year to individual student needs.

These strategies “work” in the sense that they enable students to earn the needed graduation credits. However, from an educational perspective, they are far from ideal and often prove to be very problematic. They also result in much more demanding working conditions for rural teachers, who generally, have to teach more courses and have fewer preparation periods than do their urban counterparts.

A major educational concern of rural educators, not articulated in *Supporting Learning* (2000), is the lack of educational programming and provision for those students not intending to pursue further academic study. Ironically, the Ministerial Panel recommends the reduction or elimination of locally developed courses which often attempt to meet the needs of this group of students.

An Increased Reliance on Distance Education

The solution for program challenged rural schools, in the view of the Ministerial Panel, is an increased reliance on distance education in order to meet mandated curriculum requirements. Instead of viewing distance education as a supplementary or marginal program for a few select students, as it is currently, distance learning is to be re-conceptualised as an *alternative method of program delivery for all students*.

Distance Education is to be viewed as a viable alternative to traditional face to face instruction for rural high school students. Whatever programs and courses cannot be offered on-site by school-based teachers, could be provided to rural students via distance education:

A review of distance education in other jurisdictions and of the use of computer-based technologies, in particular, has convinced the Panel that models of distance education do exist and can be cost-effective under appropriate circumstances. It is proposed that a new group of distance education courses be developed, with the goal of increasing program breadth and *ensuring an essential program for all students* (*Supporting Learning*, 2000, p. 62). [emphasis added]

Primarily, the size and location of the school will determine the degree of reliance on distance education. Clearly, the smallest and most remote schools would make the most extensive use of distance learning.[ix] However, if enrolments continue to decline as projected and further teacher cuts are made to rural boards, more and more rural schools will become increasingly dependent on distance education to provide essential programming for their students.

Up to this point in time, the government has been forced to keep a certain number of extra teachers in rural schools in order to ensure a certain level of programming. By elevating distance education to a new status, it may be no longer necessary. Once, the proposed expansion of distance education is in place, teacher reductions could directly follow enrolment declines. As actual teachers are cut from rural schools, programming can be maintained via E teachers in virtual schools.

In Chapter Six of *Supporting Learning* (2000) the Ministerial Panel outlines its proposed new model of distance education that is intended to support the increased reliance on distance learning as an alternative method of program delivery. The following sections of this paper examine key aspects of that proposed model beginning with the Panel's recommendation to expand significantly the number of distance education courses.

2. Expansion of Distance Education

The Ministerial Panel recommends,

that the province embark on a program to substantially increase the scope of distance education offerings in the schools through the establishment of a "Centre for Distance Learning and Innovation. Recommendation 58 (*Supporting Learning*, 2000).

In order for distance education to fulfill its new role in the province's education system, it is necessary for the Department of Education to "substantially increase its distance education offerings." The Ministerial Panel recommends the establishment of a Centre for Distance Learning and Innovation (CDLI) to be responsible for this task (p.79).

The Panel suggests that the an "adequate starting point" (p.86) for this proposed expansion would be an "initial suite of 18 courses representing 30 senior high credits. These 18 courses would consist of the 11 currently being offered plus the "development of courses in music, fine arts, technology education, sciences, language arts and social studies designed to broaden the scope of choice in these areas"(*Supporting Learning*, 2000, p.68).

The Department of Education is directed by the Panel to give the "development of the proposed suite of high school courses the highest priority" and to "ensure that the system can be in place by September 2001"(p. 86). This is necessary so that "all high schools, no matter how small, can offer the essential program outlined in this report" (p. 79).

The initial goal is to implement a [distance education] program sufficient to ensure that the minimum high school program can be brought to all schools. The starting point would be schools with Grade 10-12 enrolment below the cut off point for one class per grade (p.85).

A small rural school taking "maximum advantage" of the distance education could offer up to 18 courses (30 credits) via distance education, "leaving a minimum of about 18 credits" to be offered by school based teachers (p.86).

The development of this “initial suite of courses” is clearly identified as a “starting point.” The logical endpoint would appear to be having the entire high school curriculum made available to schools via distance education. This would result in the province having a completely dual mode of program provision. One would be the traditional face to face teaching and learning environment; the other a distance education “virtual environment.”

Distance Education for all Students

As noted above the initial focus is to on those schools currently participating in distance education programming. The important difference is that these schools will be offering “a much larger proportion of the [essential] program” via distance (p. 86), Much more significant, is the fact that this proposed expansion would mean that many more students and *a wider range of students* will have the opportunity to take distance courses. As the reliance on distance education increases, students in smaller schools may, in fact, have little choice but to access essential courses via distance learning.

As noted earlier, the current system had less than 1000 course enrolments in the 1999-2000 school year. This translates into about 700 rural students taking distance courses. In the first year of the proposed expansion, 2001-2002, the Panel foresees an increase of 2,000% in the number of course enrolments suggesting that “an initial target of 20,000 course enrolments” be used for planning purposes (p.86) Since individual students may take more than one distance course, it is difficult to guess how many more students will be participating in the program. It is safe to assume that the 20,000 course enrolments would translate into at least 7,000 students!

The Ministerial Panel, however, does not see an expanded system of distance education serving only rural students attending small schools. The Panel proposes a totally open system of distance education. Students “in all schools will be able to access distance education opportunities”(*Supporting Learning*, 2000, p. 80). As the number of courses made available via distance education increases, schools other than small rural schools will want to “take advantage of the opportunity to participate”(*Supporting Learning*, 2000, p.85).

Furthermore, the Panel sees the reach of distance education extending beyond the regular school system:

Taking an even broader perspective, there is no need to confine access to individuals in the regular school system. Such courses are available to parents who choose to home-school their children, to adults who have not completed high school, to students in institutions or to recent students who are short a few credits or who need to upgrade their marks. In fact, the latter group encompasses those who are now labeled Level IV students. Students in this category might welcome having access to the courses they need without being subject to the constraints of re turning to school for a year. The system could benefit by not having the students counted as part of school enrolments, thus saving

some teaching units who could be more efficiently deployed as E-teachers (86).

The Ministerial Panel sees the expansion of distance translating into an increased reliance on distance education province wide. However, the degree and nature of that reliance will be related to the size and location of the school. For rural schools, the likely use will be providing access to the prescribed essential program; for urban schools, which will continue being able to provide essential programming face to face and on site, distance education will likely be used to offer optional and enrichment programs.

The expansion in the number of course offerings and the provision of open access for all students will create an alternative mode of program delivery for the whole province. All students regardless of the size or location of their school will have access to courses via distance education. For rural students this will mean access to many courses that may have been previously unavailable to them; for urban students it will mean access to an alternative mode of learning not previously available to them.

The Panel acknowledges some people may be concerned that what is being proposed “may seem like a high level of reliance on distance” for providing educational programming to small rural schools. It also acknowledges that many people question the appropriateness of distance for all learners:

Prevailing opinion in the field (rural educators and parents) seems to be that distance education should continue but should be treated as supplementary to mainstream programming. There is a strong view that this approach is most suitable for advanced students who are capable of independent learning... 75).

Expert opinion expressed within the distance education literature including the E-Learning literature tends to support the “prevailing opinion in the field.” Distance education is a mode of learning that may not suitable for all adult learners let alone all adolescent learners. Palloff & Pratt (2001)[x] in *Lessons from the Cyberspace Classrooms: The Realities of Online Teaching* note:

Well-constructed online courses can enhance and expand institutional offerings, thus attracting students who prefer this mode of learning. *Online learning is not appropriate for all students*, however, and is not likely to replace the face-to face classroom (p.12). [emphasis added]

The Panel offers the reassurance that “the support system[xi] being put in place is designed to offset any initial disadvantage of the new approach” (p. 86).

3. An Internet based, asynchronous learning network

The province must remain a leader in the development and use of distance education as technology shifts towards a computer and Internet-based approach. (Supporting Learning, 2000).

The first mode of distance education delivery utilized in this province for rural students was correspondence courses. This program began in the 1930's and the target group was elementary rural students in small and remote small schools. In the 1950's a program for grade ix students was added and this continued until about 1963. The correspondence program was discontinued as more and more central high schools were built and a better road system enable more students to be bussed to larger schools.[xii]

Riggs (1987)[xiii] rediscovered the existence of small rural schools which for one reason or another had disappeared from the Newfoundland and Labrador education consciousness. He noted the programming challenges that (still)existed in many such schools and it was in following his recommendations that the current telephone based audio-graphics approach described in the introduction of this paper was initiated in 1988.

Since1998, Advanced Placement courses have been offered via the Internet to a small number of students. Districts participating 2001-2002 include, Vista, Burin Peninsula, and Avalon West. In keeping with the nature of AP courses, only the most able students are selected for participation. Completion rates for these courses have been problematic at times and the differences in the number of students enrolled and actually writing the final exam and achieving university standing for an AP course are surprising.

Elsewhere in North America, interest in the use of the Internet as a method of program delivery has been increasing since the inception of the first "virtual school" in 1995.[xiv] Although the actual number of high school students taking Online courses remains a tiny fraction of the total school population. In the US for example one estimate puts the number at 50,000 students in 2000, a very small percentage of the 53 million K-12 student population. Many states, as well larger individual districts, have developed virtual schools and are currently offering online distance courses within their own jurisdictions as well as recruiting students from other places within the US and internationally. There are also a number of proprietary virtual schools which are private, for profit organizations which see significant commercial opportunities in online distance education.[xv]

Why the interest in online learning in the US?

According to its most ardent proponents, online learning is the elixir that can help address all sorts of problems facing school systems today: teacher shortages, limited course offerings, too many dropouts, the flight to home-schooling, lack of Advanced Placement classes in some places, the need for individualized learning, charter school competition, poor teacher quality and lack of physical space (Russo, 2001).

A note of caution is offered from US researchers, however, because....

Despite its growing popularity and the companies' unbridled promotional claims, questions remain about the appropriateness of online learning for the majority of students in elementary and secondary schools, the lack of research data on its effectiveness and the high costs and complicated logistics of developing online programs (Russo, 2001).

The Ministerial Panel believes that the time is right for this province to join the E-Learning revolution on a grand scale. It proposes that the current synchronous, telephone-based, audio-graphics system of distance education be transformed into an Internet based, computer mediated, asynchronous learning network. All distance education activity should change to a web based format.

Existing distance courses and all new courses intended for distance delivery should be developed (or re-developed) as web-based courses. Students would access these courses via the Internet and all communications and interactions between and among participants (students and teachers) would be via Internet based information and communication technologies.

The Panel offers a number of reasons for recommending this change. One reason has to do with the fact that "Internet-based distance learning offers the opportunity to move away from the scheduling constraints of synchronous programming" inherent in the current system (p. 78).

As has been noted above, the proposed increased reliance on distance education as an alternative mode of program delivery requires an expansion in the number of distance courses made available to schools. However, the synchronous nature of the current system is "its most serious limitation" as it effectively inhibits that necessary expansion.

The current system is now approaching a scheduling saturation point. Because of the requirement for synchronous delivery, the Panel notes the extreme difficulty in scaling up the system to handle the distribution of many simultaneous programs (p.76).

Therefore increased reliance on distance education and expanded web based course offerings will require, in the Panel's view, the adoption of an asynchronous learning network. An ALN has the potential of unlimited capacity; any number of programs and courses can be offered though this mode of distance education provision.

Another problem with the current system inherent in its synchronous nature, according to the Panel, is that it imposes "severe limitations on school schedules" (*Supporting Learning*, 2000, p. 76), whereas, an asynchronous Internet based approach can effectively create a "virtual learning environment" in which, theoretically, "teachers and learners ... are free from the constraints of space and time." Again, theoretically at least, "There are no major restrictions on the location of teachers and students, course scheduling or the start and end dates of programs" (p.80).

In addition to permitting unlimited expansion in terms of programs and courses and total flexibility in terms of scheduling, the Ministerial Panel points out other reasons for and advantages of switching to an web based asynchronous mode of distance education:

- The province must remain a leader in the development and use of distance education as technology shifts towards a computer and Internet-based approach Internet-based distance learning
- It will help students become accustomed to new ways of learning and to the technologies that are becoming all-pervasive in daily life.
- The approach promotes independence and enhances technological transfer and capacity.

The Panel also notes another possible advantage of changing to Web-based courses:

Web-based courses are now commonplace in many jurisdictions and are becoming increasingly widely available to the larger world. Thus, the use of this format might obviate the need to develop new courses. Instead, it should be possible to adopt or adapt material that has already been produce (p.83).

Why go to the expense and bother of developing one's own courses in Math, Science or English when it is possible to purchase ready made courses and pre-packaged learning resources? As noted earlier, there is a growing number of "virtual schools" in North American, many of which are proprietary, for profit educational businesses more than willing to sell their products to school districts any where. This may be another example of the possible "instructional economies" the Panel anticipates realizing if its proposals and recommendations are accepted and adopted.

As the Ministerial Panel notes, in order to access web-based courses, students need access to a reliable Internet connection. Unfortunately, many rural areas of the province have very slow and often unreliable Internet connections. To counter any possible "time lost due to telecommunications and other technical problems" the Panel suggests that consideration be given to "placing the main body of course material on CD-ROM as well as on the Web" (83). These CD-ROM's could be delivered to rural students in small and remote schools by postal service as were the correspondence course materials fifty years ago.

The smallest and most remote rural schools, those "most in need of program enhancement" would be forced to make the most use of these CD ROM's, while the larger and more metropolitan schools, schools least in need of enhancement, would have full access to the online courses. A CD ROM can provide students with access to course materials and a great deal of information; however, they cannot provide students with any interaction or communication with their teachers or fellow students. And that is a very important pedagogical distinction.

4. Asynchronous Communication and Interaction

The adoption of an asynchronous learning network will require a fundamental change in how distance teachers and distance learners communicate and interact when participating in the proposed new model of distance education.

One of the distinctive pedagogical features of the current system is the opportunity teachers and learners have to engage in real time, synchronous, conversation and interaction about teaching and learning matters. Fully 50% of the instructional time prescribed for distance courses (five of ten instructional periods) is designated for this purpose. Teachers and students have the *opportunity to actually talk with one another*, in real time, during these online sessions.

These sessions serve important social as well as pedagogical purposes. Education and schooling is very much a social activity. Students are human beings, and younger learners especially relate to their teacher in the first instance as persons, secondarily as instructors. In the current system, distance teachers take some of this time just to chat with the students in an effort to establish that important social rapport that is a vital part of learning and learner satisfaction. This real time interaction also serves a vital function in terms of encouraging and motivating distance students in their work efforts and accepting their responsibility for keeping up their assigned tasks. Hearing the sound of their teacher's voice in real time, sensing his/her synchronous presence appears to have a positive effect on the students in distance courses.

Perhaps the most significant pedagogical aspect of these online sessions is that they provide the students with the opportunity to ask their distance teachers questions about some aspect of the course with which they are having difficulty. In turn the teacher can ask the students questions about the nature of the difficulty they are having. Because the conversations are occurring in real time, questions and answers can be posed and answered with the same immediacy as they would be in a face to face classroom situation. Although the participants cannot see each other and the teacher does not have the aid of those visual clues that alert a teacher to comprehension or confusion in a learner, she/he can interpret much from verbal clues. Even silence in response to a question posed in a synchronous session can tell the distance teacher much in terms of where students are and what their needs may be.

Another important technological aspect of the current system is the use of a tele-writer or "white board." Both students and teachers have access to this learning tool. As the teacher writes or creates a diagram on the white board, the students in their remote location can immediately see what the teacher is doing. As the teacher writes or draws, the students can comment on or question the teacher as she/he goes. They can ask the teacher to stop, to go back, to explain further each step of a procedure or operation. They can do this because the interaction is occurring in real time.

Distance teachers use this technology to help explain through illustration and example particular problems that students are having with certain aspects of the

course. They can provide direct instruction for very specific purposes to one or more students in real time.

Just as in face to face classrooms, students may be asked to “come to the board” to demonstrate their knowledge and understanding; in the current approach to distance they can do something very similar. Students can be asked to demonstrate their knowledge and understanding by completing a task on the white board. Again, the feedback from the teacher has the same immediacy as in a face to face classroom.

This pedagogical feature of the current system is highly regarded by those currently involved in distance education in the province. Educators, parents, and students are unanimous in believing the opportunity of synchronous interaction enables the current system to succeed to the degree than it does. They are skeptical about eliminating or diminishing of this aspect of the current model.

The Ministerial Panel acknowledges that the opportunity for “real time communication” is “the main advantage” of the current system (p.76). However, in the view of the Panel, this synchronous component is, as we have noted above, “problematic” since it is “dependent on centralized scheduling” and “is built around high cost audio telephone communications” (*Supporting Learning*, 2000, p. 62). The Panel’s recommendation, as noted, is that “there be minimal reliance on synchronous communication.” The preference of the Panel is the removal of what it sees as “the restrictions of the current system by eliminating or substantially reducing the synchronous component (p. 82):

The significant departure from the current teleconference system is that most communication would occur through the Internet, with the main communications tool being a conference forum (*Supporting Learning*, 2000, p.66)

The Panel explains that “A conference forum is essentially a sophisticated Web-based e-mail system that permits *an organized flow of information* between instructor and students and among students” (p. 80) [emphasis added]. Students can access the forum anytime, but “there is no expectation of real-time conversations” (p. 66). In point of fact there would not be any “conversation” as such and as now occurs at all. The intent seems to be to limit, if not eliminate, the opportunities students and teachers now have to *talk* about matters pertaining to the course or any difficulties students may be having. “Any time access” is dependent on students having access to a computer and a reliable Internet connection. But as we have noted, it is the smallest and most remote schools that have the least reliable and slowest Internet connection. Does this not make achieving the intended goal of equalizing educational opportunity for these rural students somewhat problematic

Interaction and communication will not only be asynchronous, it will also be text-based. Students and teachers will “interface with one another” via their machines and exchange digitized text (typed messages); or as the Panel describes it, “an organized flow of information” (p.80).[xvii] The current teleconference system with its capacity for oral communication would be replaced with text driven Internet based

communication tools. The sounds of people talking will be replaced with the sounds of keys clicking, sounds heard only by those doing the clicking.

If a student is experiencing some difficulty with some aspect of a course and wishes to ask a question, instead of simply asking the teacher the question at one of the frequent synchronous sessions, integral to the current system, she/he will have to write out his/her question. Then she/he must type it as e mail message or forum entry and send it electronically to the teacher. Then, she/he must wait for the teacher to read the question and type a reply. If the student wishes to contribute to a class discussion, the same process will have to be followed. This places several very different and challenging demands on distance students compared to students in face to face classrooms as well as in the current approach to distance.

They must be able to put into writing whatever they wish to communicate with their peers or their teachers. And they must be able to be proficient at typing or keyboarding. A student not proficient in keyboarding skills may be hampered in his/her ability to communicate with the teacher in an asynchronous learning network. This may be quite frustrating for the students and potentially detrimental to their educational achievement. Not only is this as the Panel notes, "a significant departure from the current teleconference system (p.66)," it also places a whole new set of demands on students, especially rural students, in their efforts to obtain an education via distance learning.

What may be the greatest pedagogical strength of the current system is also its greatest limitation, in the view of the Panel, because it impedes progress. It must be sacrificed or severely curtailed in order to permit the proposed expansion of the system. It is a fair question to ask what the point is of expanding the system, if that expansion erodes the quality of education (online as well as face to face) currently provided to rural students?

What seems to be missing in the proposed new model of distance education is any informed understanding of the communications infrastructure limitations of many rural places in Newfoundland and Labrador, especially the more isolated places. Equally, significant is an apparent lack of awareness of the social and pedagogical needs of the *average* adolescent learner.[xvii]

5. Supporting Students in E Learning

That the Centre for Distance Learning and Innovation consist of a number of teachers, who may be termed Electronic Teachers or E-teachers, with primary responsibility for course delivery and evaluation and that, at the school level, teachers be assigned from the regular school allocation as mediating teachers to ensure appropriate interaction between students and E-teachers. (Supporting Learning, 2000, Recommendation 59).

"Teachers," observes the Ministerial Panel, "...exert a more significant influence on educational quality than does any other aspect of schooling" (p.50). It is teachers who will have the responsibility of making the proposed new model of distance education work. As the reliance on distance education increases, especially

for small rural schools, the kinds of human and technical support provided by teachers will be crucial if students are to succeed.

The literature on distance education regardless of mode – from correspondence to web-based, or level – K12 to post secondary - is replete with the caveat that distance education may not be appropriate for all learners. E learning, as with any other form of distance education, places a much higher level of responsibility on the student for independent study and self-regulation than does traditional face to face instruction. Not all adult learners have the maturity, discipline, or motivation to accept this responsibility. The existence of such dispositions in adolescents, experience has shown, is even rarer.

As noted earlier, the Panel contends that “any initial disadvantage” created by the admittedly “high level of reliance on distance” will be “offset by the support system that would be put in place” (p.86). The support system being referred to by the Panel consists of a distance education teacher (an E teacher) and a school-based classroom teacher whose job it will be to “ensure appropriate interaction” between the students and their “E teacher”(Supporting Learning, 2000, p. 79).

E teachers

In our experience, the training program for prospective online teachers is a key factor in teachers being able to engage students online. For example, the Virtual High School requires prospective teachers participate in a semester-long, 60-hour training program before they can teach a course online that has already been designed and posted on the Web. If the teacher is designing his or her own course rather than teaching a section of a course already designed, the preparation time is twice as long. A good training program will offer extensive instruction in online pedagogy and delivery (Berman and Pape, 2001).

E teachers are described by the Panel as “long distance teachers and course managers” and they would have “prime responsibility for course delivery and evaluation.” (p. 80). Many of their duties and responsibilities are similar to those of the current distance educators. There are some significant differences in how they will carry out those duties, however.

E teachers would be responsible for marking assignments and exams. (It isn't clear from *Supporting Learning* if they would actually have any opportunity to create assignments or exams.) According to the Panel's model the E teacher will not be responsible for creating the course; this will be done by some one else or the course may be possibly purchased from one of the growing number of commercial providers of web based courses. This may mean that the E teacher will simply evaluate and grade students' performance on prescribed tests and assignments. (This was how the correspondence courses, described earlier, worked)

E teachers are expected to take a “pro-active role in establishing and maintaining communications with students and school-based teachers” (p.81). (There is no reference to E teachers maintaining any communications with parents.)

As noted above the primary way communications will occur is through a conference forum:

The E teacher's role would be to monitor the forum, responding to queries as needed, and to use the forum to create a dynamic element to the course, which permits elaboration or modification of content, posting instructions, giving feedback on assigned work and other activities typical of teacher-student interaction.

As noted, these communications will be text based (typed as opposed to spoken) and asynchronous (delayed not immediate) and will be dependent on students having a reliable Internet connection. Students forced to work primarily from a CD ROM will have limited, if any, access to this forum.

E teachers would also be responsible for "professional development activities for other teachers" (p.81). (It isn't clear which teachers are being referred to here.)

The Panel also outlines what they see as the preferred working conditions of E teachers:

- E-teachers would be assigned to courses on a full-time basis and in sufficient numbers to allow for adequate course monitoring and rapid response to queries
- These teachers would be free from the supervisory functions of classroom teachers [and] from most of the day to day constraints of preparation, supervision and class schedules
- For the most part, they would confine their work to one or two courses in which most of the content and learning resources would have been planned in advance.
- Because of the schedule-free nature of the distance courses, E teachers would have a much more flexible work schedule than regular teachers.
- It would be reasonable to expect E teachers to maintain communications outside of regular class hours. "Responding to e-mail, conference forums or even telephone communications could occur at any time."
- The Panel cautions, however, that e teaching should not, in general, be combined with regular classroom teaching, because this would reduce flexibility.
- While it is not possible at this point to estimate the demand on the E teachers, the Panel notes that such teachers would function best if not subjected to the constraints of normal school hours (*Supporting Learning*, 2000, p.81).

The Panel appears to have a vision of the E teacher as being somewhat of a detached figure, disconnected from any actual contact with any school or individual teachers, students, or parents. Thus the Panel issues a "caution" against constraining the E teacher in any way with other school based courses and responsibilities or even hours of operation. In order to ensure the desired flexibility, E teachers should have no other responsibilities other than their web-based courses. They should use this flexibility to make themselves available to communicate with their students, apparently, any time of the day or night.

The Panel does not offer a definite view as to how many students, or “course registrations,” for which E teachers would be responsible, although, as noted above they should be able to provide “rapid response to [student] inquires.” The Panel does offer the view that, given the working conditions of E teachers, they should be able to handle more students than classroom teachers:

Since the E teacher is free from most of the day to day constraints of preparation, supervision and class schedules, it is reasonable that such a teacher could be responsible for more than the number of students in an on-site class (p.81).

The Ministerial Panel believes that the through the use of E teachers “instructional economies” can be achieved:

It is clear, however, that instructional economies can be achieved. For small schools this approach creates a manageable system in terms of teacher requirements while allowing all schools to offer the essential high school program (p.81).

Does this imply that as enrolments continue to decline, the distance education program will expand, and that E teachers will be increasingly be used take the place of school based teachers in small rural schools?

Classroom Teachers: A Mediating Role

It is proposed that teachers within the schools be given direct responsibility for facilitating distance education courses (*Supporting Learning*, 2000, p. 82).

One of the key and distinguishing features of the proposed model of web based distance education is the identification of, “an important mediating role for school-based teachers... .” (p. 78). The current system of distance education, states the Panel, “envisages no direct role for regular school-based teachers:”

Distance education courses are separated from others and students are expected to operate relatively independently of the teachers in the school. It is mainly for this reason that numbers have to be limited and students are selected who are most likely to be able to function independently. While the school principal has a role in scheduling and other teachers do assist with supervision, technical problems and content, this is not an inherent feature of the [current] system (*Supporting Learning*, 2000, p. 78).

In the new model, the Ministerial Panel proposes that school based teachers be given “direct responsibility for facilitating distance education courses...”(p. 82). This facilitating role includes,

liaison with the E teacher and attending to matters of attendance, discipline, homework, assignments and other normal aspects of classroom life (p. 82).

The Ministerial Panel emphasises that the mediating responsibilities of the school-based teachers do not include any planning, preparing or instructional duties for the courses they are facilitating. The point is made twice:

This role would involve facilitating student learning but not direct responsibility for course preparation or instruction (78)

These teachers would not be expected to prepare for each course under their supervision (p. 82).

The Panel notes that there “would be nothing to preclude these teachers from assisting students with matters of content” but the point is that it would not be part of their designated role responsibilities. In other words, if teachers want to volunteer their time and effort, they are free to do so, but it is not expected. Nor should they expect, it is presumed, to have such assistance acknowledged.

The Ministerial Panel appears to be unaware that the current system of distance education has clearly demonstrated that many students taking distance courses required and received a significant amount of pedagogical assistance with “matters of content” from school based personnel.[xviii] It must be remembered that these current students are a select group chosen for their academic ability and their predisposition for independent study. Given that a wider range of students will be taking distance courses and that they will be working primarily in an asynchronous mode, and possibly from a CD ROM, it is hard to imagine that the need for on-site academic and pedagogical assistance would not be greatly increased. It is difficult to understand why the Ministerial Panel is ignoring what will be a very obvious need of rural students taking distance courses.

The Panel recommends that “mediating teachers would be assigned to distance education classes as part of their normal teaching assignments”(82) and offers this view of their working conditions:

Freed from much of the preparation burden[xix] it would be reasonable to expect classroom teachers to facilitate groups larger than the regular high school class, with these groups having several courses in progress simultaneously. ... The underlying principle is that multiple courses would be in progress in a single class (p. 82).

It is somewhat difficult to understand just what the Ministerial Panel has in mind as to *how* and *when* classroom teachers are to carry out their “mediating” responsibilities. What does, “multiple courses would be in progress in a single class” mean? What is actually being envisioned here? Does it mean that a school-based teacher would be responsible for mediating two or more web based courses in a classroom or computer lab? Or, does it mean that a school-based classroom teacher would be responsible for mediating two or more web based courses while, at same time and in the same space, be attempting to teach a face-to-face course?[xx] Are the additional demands being placed on classroom teachers in a mediating role to be recognized as part of their workload and appropriate provision for this incorporated in their overall assignment? Or is this work to be done on their “free time” on a voluntary basis?

Given the *wider range of students* that will be presumably taking distance courses, the increased reliance on distance education to provide *basic educational services*, and the asynchronous mode of delivery and poor connectivity in many places, the role of school based mediating teachers is going to be rather crucial to the success of the new model. The failure of the Ministerial Panel to recognise this and make the mediating responsibility a separate and recognized part of a rural teacher's designated workload, with an appropriate and distinct provision of time during the instructional day, undermines this most important aspect of the new model. If this issue is not adequately addressed, many rural students will have their education compromised and put at risk. Is this equalizing educational opportunity?

6. Conclusion

The proposed new model of distance education can provide rural students with access to more and a wider range of courses than might otherwise be available to them. But then, if it is just a matter of *access*, the same goal could be achieved with a greater use of mail order correspondence courses. A commitment to education equality and a quality education for all has to go well beyond the provision of access.

It remains an open question, therefore, whether the intended computer mediated, Internet dependent model of distance education will in fact *equalize educational opportunities for rural students*, particularly those attending the smallest and most remote schools. An equally significant unanswered question at this point is whether or not the increased reliance on distance education as an alternative mode of program delivery will improve *the quality of education* provided to rural children and raise levels of rural academic achievement.

Among the key issues in need of critical inquiry and public discourse are:

- Equality of Access
- The appropriateness of online distance education for all learners
- The educational equivalency of online and face to face instruction
- The effect of an increased reliance on distance education at the high school level on all-grade schools

Equality of Access

First of all, there is the question of *equality of access* to these new educational opportunities. Access to the Internet remains problematic in many rural areas of this province. It is most problematic for those small and remote schools most in need of program enhancement. While access to course materials and resources may be provided via a CD ROM, access to teachers and other students cannot be thus provided. This may mean limited interaction and communication opportunities for many rural students taking online courses. This compromises the quality of the educational opportunity thus available; it calls into question to what extent educational opportunities have in fact been equalized.

Equality of access is not just a matter of communications infrastructure; it is also a matter of economics. Funding formulas for educational resources favour larger schools over smaller ones. Most rural schools are small, and all remote schools are

very small. Rural schools (and rural districts), therefore, do not have the financial resources to spend on technology that larger urban schools do. Many rural schools are situated in those parts of the province experiencing the most challenging economic and social circumstances; they are also in those regions experiencing the greatest out-migration of people. They do not have the opportunities for fund raising and creating partnerships with businesses that schools in larger centres do.

If the responsibility for funding the technology, the machines, and the technicians required to support online distance education is downloaded to rural boards and small schools, then a dramatic digital divide will be created in this province. Again, this will greatly compromise the equality of access students will have in rural schools compared to their urban counterparts.

A third dimension of access equality is the issue of home access for students taking online distance education. Those students, who have access to computers and the Internet in their homes, will have a distinct advantage over those who cannot afford home access. This is the second and more serious dimension of the digital divide.

These privileged students will indeed enjoy the much touted “anytime, anywhere” advantage of online education. In those communities where connectivity is problematic, especially during peak times during the day, having home access might be considered a necessity. However, as we have noted a number of times in this paper, many families in rural Newfoundland and Labrador have to deal with very challenging financial circumstances. They may not be able to afford to provide home access for their children.

As long as online distance education is an option for select students wishing to take advanced academic courses, perhaps this issue can be ignored. However, if as proposed by the Ministerial Panel distance education is to function as an alternative mode of program delivery for all schools and the only form of program delivery for certain essential courses for small rural schools, then, access issues become of paramount importance.

If we do not provide equality of access for rural students, rather than equalizing educational opportunities we may in fact be doing the very opposite, especially for those students who live remote places and/or in challenging economic circumstances. We will be making their educational and life chances worse, not better. At the same time we will be increasing educational opportunities for children who already enjoy many privileges.

The appropriateness of distance education for all learners

A second issue is the appropriateness of online distance education for all learners. The Panel proposes that distance education be re-conceptualized from a supplementary program to being an alternative mode of program delivery for all students. A constant caution in the literature suggests that distance education is not appropriate for all learners. This is because all forms of distance education, including online learning, requires certain attributes and dispositions not possessed by all

learners. This is evidenced in part by the 50% completion rate in distance education for *adult learners* (Berman and Pape, 2001).

Up to this point in time, distance learners in this province have been a select group of students chosen in large part for their maturity and their demonstrated capacity for independent and self-regulated study. The only students who have so far participated in online distance courses have been those taking Advanced Placement courses. Although this latter group of students were selected especially for these courses, completion rates and the number of students writing and passing the AP exams were not that impressive given the calibre of students involved.

To expect the average (not to mention the below average) student to function successfully in a virtual learning environment where contact with the teacher will be primarily or even exclusively via typed messages communicated asynchronously, when and if an Internet connection can be maintained, is a very questionable proposition. The Ministerial Panel believes that the supports that will be in place via the E teacher and m teacher will provide whatever support any student may require. Yet they fail to make adequate provision for where that support is to be most likely needed: in the school.

Furthermore, they fail to realize or acknowledge that experience has clearly demonstrated that young learners, even those with the necessary characteristics, need *academic tutoring* when taking distance education courses. The failure to make this a distinct component of the new model could put future generations of rural students at risk.

The Ministerial Panel has pointed out that “rural students, as a group, perform academically substantially lower than students in urban schools” (p.54). While urban students will continue to have the choice of online or face to face instruction, increasingly, it would appear, rural students will have no choice but to take essential courses via distance education. Is this an equitable proposition? Is imposing a more demanding mode of learning on rural students creating a level playing field? Is such a development likely to ameliorate the purported rural under achievement?

A question of equivalency

Are educational experiences in virtual learning environments equivalent to those in face to face classrooms? To what extent will the proposed new model of distance education and the increased reliance on distance learning provide rural students with an educational experience of equal value and worth to face to face educational experiences? How would we make such value judgements? Who would make them?

Simonson et al. (1999)[xxi] have developed a theory of distance education that focuses on the concept of equivalency: “The responsibility for creating equivalent learning environments for online learners lies with the instructional designer and is *in no way the responsibility of the student*”: [emphasis added]

Equivalency implies that even though the learning environments of on-site and distance learners differ, it is essential that the learning experiences be of equal value. ... [N]o matter how the learning

experiences differ in type or degree, it is critical that the sum of those experiences be of equal value for on-site and distance learners (Hoffman, S.Q. et al. 2000, 331).[xxii]

A whole school solution?

The primary, intended beneficiary of the new model of distance education, according to the Ministerial Panel, are the smaller and more remote rural schools that have the most difficulty offering the mandated curriculum and recruiting and retaining specialist teachers. As has been noted earlier in this paper, most if not all of these schools are all-grade schools. The teachers in these schools do not just teach courses at the high school level; generally they teach at several levels and, equally important, provide an important resource for the whole school. What kind of educational deficit may be created in an all-grade school if a math/science specialist is no longer needed onsite because those courses are provided to students online? Is an educational change that benefits only a few students but may possibly disadvantage many students, a fair or just one?

A final word

A modified and somewhat scaled down version of the Ministerial Panel's new model of distance education was piloted/field tested during the 2001/2002 school year. [xxiii] Ten online courses were offered in 20 schools to approximately 200 students. Most significantly, efforts were made to make some degree of synchronous interaction a feature of all courses.

This field test was monitored as a project under the direction of the Chair of TeleLearning in the Faculty of Education, MUN. A report on the year's activities has been completed and was submitted to CDLI in June of this year (2002). It may be assumed that the issues, concerns and questions raised in this paper have been addressed in that report. Unfortunately, this report has not been made available to the public.

Anecdotal and informal reports from the field over the past school year have indicated that many problems related to the technology and connectivity have been encountered in most rural places where the new model is being tested. This has had an impact, naturally, on the pedagogy and the effectiveness of the courses since communication and interaction are affected. Issues have also arisen, as one might expect, related to the working conditions of the m teachers and the lack of clarity of their role; there are also concerns about the timely availability of technical support.[xxiv] Student achievement levels in some courses have also been a cause of concern.

An unfortunate aspect of the field test is the fact that insufficient effort, apparently, was made to recruit a wide range of students for participation. If the field test does not demonstrate that the proposed model can be effective for the very diverse student population in rural schools, its utility as an alternative mode of program delivery for all students has not been demonstrated.

Although I have raised a number of questions about the Ministerial Panel's proposed new model of online distance education, I remain convinced that such an

approach has potential for enhancing the provision of education in small and remote rural schools. However, as always the devil is in the details, the so important “minute particulars” that make all the difference in teaching and learning. Details and particulars not known or forgotten by those not engaged in classroom work. What’s needed to make the vision an educational reality is more sensitivity and responsiveness on the part of the planners and designers to the actual pedagogical needs of those rural students who will be participating.

The system has to be designed for the students in question; they cannot be expected to “sink or swim” in a system that does not consider who they are and where they live. Furthermore, careful consideration has to be given to how any proposed change will affect the whole school and all students. Our commitment has to be to every student, not a select few.

Finally, one point is stressed repeatedly in the literature: haste makes waste. Online learning represents a substantial change in how education is provided. In addition to all the technical issues both teachers *and* students have to learn new ways of teaching and learning. Not surprisingly, successful implementation takes careful and thoughtful planning. This means taking one’s time, moving slowly; most importantly it means making sure that extensive professional development is provided to all teachers participating before implementation occurs. Equally important, students must be given the opportunity to learn the new skills they will need in order to participate in distance education.

Comments or suggestions welcomed dmulcahy@mun.ca

Notes

- [i] Berman, S.H. & Pape, E. (2001). A Consumers Guide to Online Courses. The School Administrator Web Edition (Oct) http://www.aasa.org/publications/sa/2001_10/berman.htm
- [ii] *Supporting Learning* (2000). Government of Newfoundland and Labrador. St. John’s, NF. This was the final report of the “Ministerial Panel on Educational Delivery in the Classroom.” All page reference in this paper refer to the web based version of this document which is available at: <http://www.edu.gov.nf.ca/panel/panel.pdf>
- [iii] Brown, J.; Sheppard, B.; & Stevens, K. (2000). Effective Schooling in a Tele-Learning Environment. Centre for TeleLearning and Rural Education, Faculty of Education, MUN. St. John’s NF.
- [iv] To the best of my knowledge, there have been no studies investigating how well distance students compared with non-distance students subsequently do academically with university level courses.
- [v] The appointment of the Ministerial Panel was announced at a government press conference on August 19, 1999. Central to its mandate was an investigation into alternative modes of program delivery for the province’s

schools. The Ministerial Panel's mandate as well as the full text of news release can be viewed at:
<http://www.gov.nf.ca/releases/1999/edu/0819n07.htm>

- [vi] Russo, A (2000). E Learning Everywhere. The School Administrator Web Edition. http://www.aasa.org/publications/sa/2001_10/russo.htm
- [vii] The Panel offers this definition of distance education: "Distance education and various other near-synonymous terms, such as open learning, tele-learning, distributed learning and virtual schooling, may be defined as any form of teaching and learning in which instructor and students are separated in time or location." Strictly speaking being separated in time may or may not be a feature of distance education. Real time interaction is a feature of many forms of distance learning.
- [viii] *Supporting Learning* (2000) remains the only public document that outlines the government's official policy on the expansion and re-conceptualization of distance education. My comments in this paper focus exclusively on this document.
- [ix] The Ministerial Panel asserts that all schools in the province should be able to offer at least "25 courses having a total of 42 credits annually." The Panel asserts that a review of "Department of Education databases" indicate that this number of courses can be offered in schools having as few as 20 students in the high school grades using a combination of school and distance education courses along with some multi-course teaching" (p.62). The smaller the school, the greater will be the reliance on distance education to meet program requirements.
- [x] Palloff, R.M. & Pratt, K. (2001). *Lessons from the Cyberspace Classroom: The Realities of Online Teaching*. San Francisco: Jossey-Bass.
- [xi] This "support system" is reviewed later in this paper.
- [xii] According to the annual report of the Department of Education for 1959 there were 256 grade nine students from 94 of the province's 484 one-room schools taking correspondence courses. (I would like to thank graduate student, Ed Buckingham, for bringing this fact to my attention.)
- [xiii] Riggs, F. (1987) *The Small Schools Study Project: Final Report*. St. John's, NF: Faculty of Education, MUN.
- [xiv] One of the first and best of these schools, "The Virtual School" <http://www.govhs.org/website.nsf> created by the Concord Consortium is non-profit and organized on cooperative principles. Berman & Tinker (2001) describes how this works:

The VHS is built on a simple concept. Each school in the collaborative selects one or two innovative and technologically adept faculty members to teach over the Internet. These teachers receive training in how to teach *netcourses* in

ways that are student-active, maximize the use of Internet-based resources, and utilize the best in multi-media technology. In exchange for each teacher released by the school to teach one *netcourse*, the school is able to register 20 students to take *netcourses* offered by any of the participating schools. Because the teachers for these twenty students may be in twenty different schools, each school provides some release time for a site coordinator who acts as a guidance counselor and technical advisor for students in that school who are taking *netcourses*.

- [xv] A sampling of US based commercial virtual schools can be reviewed at: http://www.aasa.org/publications/sa/2001_10/hirsch_vendors.htm
- [xvi] "Information sharing is not the same as learning," says Christopher Dede, the Wirth Professor of Learning Technologies at Harvard's Graduate School of Education. "Sometimes people forget that in distance education."
- [xvii] In many conversations I have had with experienced high school teachers, both rural and urban, this point is stressed time and time again. While in every class, there may be a few students who might succeed with this approach to learning, there is the concern that many students would have difficulty.
- [xviii] Many of my graduate students familiar with distance education have provided many examples of this during our online discussions as part of Education 6675, Current Issues in Rural Education.
- [xix] It is surely a unique kind of learning experience being provided here given that neither of the teachers involved have to do any preparation or planning.
- [xx] According to rural teachers who have taught two courses in the same instructional time slot in a face to face environment, what is being proposed here is fundamentally different and in their view possibly problematic.
- [xxi] Simonson, M., Schollosser, C, & Hanson, D. (1999). Theory and distance education: A New discussion. *The American Journal of Distance Education*, 13(1), 6-23.
- [xxii] Hoffman, S.Q, Martin, M.S, & Jackson, J.E. (2000). Using the Theory of Equivalency to Bring Onsite and Online learning Together. *Quarterly Review of Distance Education*, 1(4), 327-335.
- [xxiii] The Ministerial Panel did not see the need for a pilot program, despite the complex changes it had proposed.
- [xxiv] "An online infrastructure necessary to provide quality programming has two components. The first is technical. The program needs to have sufficient technical support to run smoothly and address problems that emerge. An online program that doesn't have the bandwidth or memory sufficient to support its courses will create continual interruptions of instruction. A program that lacks a well-staffed help desk also will end up frustrating students and teachers. An effective program must also provide a smooth registration

process, guarantee the privacy of student records and maintain electronic security measures.

The second component to infrastructure is policy. An online program that has effective policies and procedures in place is more likely to avoid serious problems and protect schools from complaints and law-suits. Online programs should have well delineated roles and responsibilities for its teachers, site coordinators and administrative personnel. It should have well-articulated administrative policies for add, drop and withdrawal from courses, student attendance and the timely posting of failure warnings, failure notices and grades"(Berman & Pape, 2001)

GLOBAL VILLAGE OR GLOBAL CITY? THE (URBAN) COMMUNICATIONS REVOLUTION AND EDUCATION

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This paper argues that the global communications revolution of the last twenty years has been mainly confined to the wealthy, urbanised and educated countries of the world, to the detriment of the development of education, culture and progress in the largely rural Third World.

Advances in communications technology have, almost by definition, been confined to urban areas with developed infrastructures and a skilled and educated workforce. The global economy to which improved communications in all fields has given rise is largely concentrated in the densely-populated, highly-urbanised OECD countries, from which corporate wealth and power exercises hegemony, particularly in the educational and cultural spheres. Neo-liberalism, the ideology of globalisation, has fashioned a concept of education to suit the needs of Western industrial nations. Education is seen at the engine of the economy, propelling the curriculum in the direction of the utilitarian and the vocational, with an emphasis on science, mathematics, computer and business studies, and the promotion of the entrepreneurial spirit. Economic competition has led to a move away from input or process standards towards performance and outcome standards, with frequent testing and the listing of scores in tables, as measures of international comparison.

Concomitantly, an urban-based "Western" consumer culture, embracing pop music, Hollywood films, fast-food chains, branded soft-drinks, "airport" novels, "infotainment", etc., is spreading to all parts of the world, threatening indigenous educational-cultural values in the largely rural Third World and developing countries. Globalisation, and the neo-liberal educational program and urban cultural values it espouses, would appear to offer little in the way of remedying the educational problems of these regions, which need, in the first place, a massive improvement in material resources - schools, equipment and faculties and textbooks, as well as other social service infrastructures. Globalisation has given rise to economic and social inequalities, particularly between North and South and seems unlikely, even in the medium term, to be able to correct them. While poverty, disease and unemployment remain, schooling will be hampered, and the penetration of "Coca Cola culture" will be eased. To the extent that globalisation has its roots in the cities of urbanised countries, and has enriched the First World at the expense of the Third, can the city, from a world perspective, unequivocally be said to be a light and a beacon?

On 4 February 1997 President Clinton made his State of the Union speech, outlining a 10-point program; this included "a national crusade for education standards... representing what all of our students must know to succeed in the knowledge economy of the 21st century"; the creation of charter schools; a literacy crusade; skill training and the connection of every classroom and library to the internet.⁽¹⁾ In July 1997 the newly-elected Labour government in Britain presented its educational manifesto *Excellence in Schools*; this promised investment in human capital in order to compete in the global economy; a "crusade for higher standards",

to be measured by school performance tables; and improved information and communications technology.⁽²⁾

Before the Canadian general election of November 1997, the Liberal Party issued its famous Red Book, *Securing Our Future Together*. Bearing in mind that education is not a federal jurisdiction, this document contained a surprising number of educational proposals. "The future belongs to societies... who invest in the knowledge, education and innovation of their people", the program declared. This investment would "equip Canadians to compete in a changing world", a policy priority if Canada was not to fall behind other countries. "Partnerships" with industry and business would lead to improvement in secondary education and research and literacy programs would receive extra funding. Investment in infrastructure, including a nationwide internet grid, was forecast for the year 2000.⁽³⁾

What is remarkable about these programs is the similarity of their content: the need to invest in the skill and knowledge of young people in order to participate in the knowledge economy of the 21st century and compete in the global marketplace; an emphasis on training in skills and literacy; and high standards in the classroom, to be tested and measured by performance tables. I shall argue later that these propositions constitute the essence of what has come to be known as the neo-liberal education agenda.

The roots of neo-liberalism go back to the 1930s, when a group of economists, inspired by the Austrian aristocrat Friedrich von Hayek, came together in Paris in 1938 to re-invent liberalism.⁽⁴⁾ Hayek's manifesto, *The Road to Serfdom*, published in 1944, asserted that socialism and collectivism were inimical to freedom, which could only be achieved through the market.⁽⁵⁾ Though economically libertarian, the neo-liberals (as they were correctly called) were politically conservative and their views harmonised with those of the proponents of globalization as it developed from the 1970s. Today the neo-liberal agenda dictates that market forces are the best guarantee of freedom and prosperity, that the frontiers of the state should be rolled back, and that government support for a wide range of social services should be reduced. This program entwines with and sustains the aims of the proponents of global free enterprise -- the maximisation of trade, financial speculation and profit, and the accompanying strategies of deregulation, privatisation, streamlining and relocation of production, the recomposition of the labour force, and so on, policies which have led to the growth of the service sector, with its poorly-paid casual labour and lack of job security.

"For some, globalization is what we are bound to do if we wish to be happy," writes Zygmunt Bauman somewhat poetically, "for others globalization is the cause of our unhappiness." But, he adds more realistically, "globalization is the intractable fate of the world, an irreversible process."⁽⁶⁾ Although some historians have traced the roots of globalization to the growth of world empires and the dominance of English as a world language,⁽⁷⁾ globalization as we know it, as the historian Eric Hobsbawm has maintained, originates in the elimination of technical obstacles to expansion, which has allowed the economy to reach its present world-wide spread. The turning point, Hobsbawm argues, was the advent of modern air transport which abolished agricultural seasonality; the subsequent vast expansion of communications associated with satellites, fibre optics and the computer, galvanised the growth of

transnational production, trade and finance. ⁽⁸⁾ Today transnational corporations control 25% of global output and the annual sales of the top 100 companies total \$4 trillion. ⁽⁹⁾ The United Nations *Human Development Report 2000* has this to say about transnational companies:

Global corporations...have the potential to do great damage -- by destroying livelihoods through environmental practices that lay forests bare, deplete fishing stocks, dump hazardous materials and pollute rivers and lakes that were once a source of water and fish. They can also disempower poor people and rob them of their dignity through hazardous and inhumane working conditions. And their influences can inevitably go further -- in supporting repressive regimes... ⁽¹⁰⁾

Bauman points out that globalization, rather than unifying the world, tends to polarise it, ⁽¹¹⁾ and undoubtedly the most salient feature of today's world is the growth of economic inequality. Wealth accumulates in the richer nations (and to the rich within those countries) and drains away from the poorer Third world. 20% of the world's population (read the 29 OECD countries) consume 86% of the world's goods. ⁽¹²⁾ The significant point is that inequality has increased most rapidly in the last twenty-five years, the heyday of globalization. In 1973 the difference between the richest and poorest countries was 44-1; by 1992 it had risen to 72-1. ⁽¹³⁾ The United Nations Human Development Report 2000, UNESCO's World Education Report 2000, and the World Bank Atlas 2000 give a heartrending picture of poverty, disease, illiteracy and labour besetting children in the Third World, where income, GNP and exports have all declined in the last three decades. This is not to mention the depredations wrought by the "structural adjustment programs" and debt collection policies of the IMF and the World Bank. ⁽¹⁴⁾

If the policies of neo-liberal governments and organisations have resulted in the destruction of the life chances and educational opportunities for millions of children in the Third World, the effects of neo-liberal educational policies in the First World countries have had a more subtle but nonetheless deleterious effect on the quality and aims of education. Neo-liberalism has long had an educational component. In 1961 Theodore Schultz advanced his theory of human capital, which posited a direct link between investment in the education of young people and increased productivity of the economy. ⁽¹⁵⁾ A year later Milton Friedman argued against the reforms of "big government", for a greater play of market forces in education, and for the extension of parental choice and the quasi-private voucher system in schooling. ⁽¹⁶⁾ A case study of developments in the United States in subsequent years will elucidate the socio-economic background of the neo-liberal education agenda.

In the mid '70s, coincident with the reassertion of the power of capital under United States hegemony and the ending of the post-war Keynesian consensus, the politico-economic tide increasingly flowed in neo-liberal channels. In 1974 and 1976 respectively the prototype neo-liberals Hayek and Friedman received the Nobel Prize for economics. In 1979 their disciple Margaret Thatcher became Prime Minister of Great Britain, followed a year later by the election of Ronald Reagan as President of the United States. The centre of economic gravity in the United States was moving from the politically liberal rust-belt to the politically conservative Sunbelt, with its space-age and cold war plants serving the military, aerospace and the computer

industries. Futurologists such as John Naisbitt, Alvin Toffler and Newt Gingrich were announcing the advent of the knowledge economy and the Information Age, with implications for culture and education.⁽¹⁷⁾

The educational strand in neo-liberalism came to full prominence in the United States in 1983, with the publication of *A Nation At Risk*, issued by the National Commission on Excellence in Education, and endorsed by President Reagan. The essential message of the report was simple: the education system was being undermined by "a rising tide of mediocrity", which was putting the nation in jeopardy. Radical reforms were necessary if the United States were to maintain, and improve on, its "competitive edge" in world markets.⁽¹⁸⁾

It is hardly surprising that the corporate executives, government bureaucrats and assorted academics who compiled *A Nation At Risk* (and other similar reports) bowed to the prevailing zeitgeist and produced a document which, acknowledging the imperatives of the information age, declared that "knowledge, learning, information and skilled intelligence are the new raw material of international commerce", and on this basis laid the groundwork of new policies and practices for education, somewhat different from the liberal-humanist curriculum and the loose connection of schools with the world of work of traditional education.

The Report's recommendations can be summarised as follows: that education should be aligned to the imperatives of the market economy; that deficiencies in schools rather than structural defects in the national economy were the root cause of the nation's weakness; that business and corporations had a right to help determine educational policy; that the curriculum should emphasise scientific, technical and vocational subjects, including a large input of computer studies, and that more rigorous standards be enforced, and tested regularly.⁽¹⁹⁾

As Oscar Wilde observed: "On matters of importance, style, not sincerity, is the important thing", and there is no doubt that the use of apocalyptic language and the dramatic organisation of the argument -- not to mention the harmony of its recommendations with information age ideals -- contributed to the report's impact and acceptance, not only in the United States but also elsewhere, particularly in Canada. Since 1983, American politicians and educationists have continued to maintain that school standards have deteriorated. Richard Rothstein, in an amusing book entitled *The Way We Were*, was able to show, however, that allegations about low standards in schools have been made in every decade of the twentieth century.⁽²⁰⁾ The (largely erroneous) belief that standards were declining was, in fact, the motivation behind the fairly recent introduction of "high stakes" testing.

When Mrs. Thatcher became Prime Minister of Great Britain in 1979 she used a similar argument: the educational legacy of the 1960s -- general permissiveness, the lowering of standards, child-centred teaching -- was ruining the nation's education. A thorough reorganisation of the whole system was necessary. Throughout the 1980s and '90s a series of policy initiatives were put into operation: the financial and organisational powers of local educational authorities were to be weakened and schools removed from their control; more authority was to be given to parents; a rival state sector inaugurated -- ostensibly to increase choice and competition; the curriculum (formerly largely the prerogative of individual schools) to

be prescribed by government, and strict assessment of individual school performance made mandatory.

A wide-ranging Education Act in 1988 introduced Local Management of Schools and Open Enrolment, which effectively handed over most of the control of schools from local authorities to parents. Under John Major, Grant Maintained Schools -- self-governing state schools -- (a.k.a. charter schools) were established, "league tables" of school performance set up, and a powerful Office of Standards and Testing in Education founded.⁽²¹⁾

These reforms affected the state sector. Nothing was done to modify England's unique two-tier system of education, embodied in the existence of over 200 major schools belonging to the independent private sector outside state control, which supplies a disproportionate number of students to the elite universities of Oxford and Cambridge. Nor did the Conservative governments, or their Labour successor, improve social conditions which adversely affect educational performance and opportunity. 34% percent of children in Britain live in poverty, up from 10% in 1979, a condition which is affecting their performance at school.⁽²²⁾ A lower proportion of pupils of blue-collar parents entered higher education in 1999 than in 1996.⁽²³⁾

Tony Blair's Labour Party has retained virtually all the educational reforms of the Thatcher-Major era, and in the first three years of power spent less on education than the latter.⁽²⁴⁾ Its own reforms, some of them good in principle, have been applied unimaginatively and in top-down fashion -- for example, enforcement of a national curriculum, literacy and numeracy hours, compulsory citizenship classes, and extended standardised testing; on the results of the tests league tables of school performance are compiled (with closure for "failing" schools). The government, in true neo-liberal fashion, continues to use the slogan "standards, not structures" (i.e., socio-economic conditions) as the focus for educational reform.

Two sympathetic but critical observers of the Labour Party's performance have summed up their concerns about its educational policy:

'The biggest worry with Labour's current approach to education has little to do with the work ability of its drive on standards or with money; it is the single-minded instrumentalism that underlies its thinking. The idea that education... is a way of helping people to discover and enjoy the infinite riches of human culture, develop their intellectual capacities and their creativity and find personal fulfilment -- has been all but forgotten in Labour's enthusiasm for investing in human capital in the age of knowledge.'⁽²⁵⁾

In Canada, unlike the USA and Britain, there is no federal education office or ministry; each province jealously guards its educational prerogatives, and any survey of Canadian education must deal with such overall policies as can be discerned.

A national debate on the future of education, inspired by the American reform movement, began in the late 1980s and early '90s. During the premiership of Brian Mulroney, a flurry of reports appeared on the future of education, issued by corporate organisations and government-sponsored scientific associations. A selection of titles

will indicate their orientation: *Focus 2000; Reaching for Tomorrow, Inventing Our Future; A Knowledge-Based Economy: The New National Dream*. Their contents echoed the now-familiar neo-liberal arguments and recommendations of the American crisis and reform literature, often in similar language but in a less oracular manner. The increasing linkage of education with the world of work was evident in the emphasis on the creation of a workforce of mobile labour, equipped with what the Conference Board of Canada calls "employability skills" -- generic skills, portable qualifications and technological literacy, and flexibility adapted to life-long learning. The organisation of more centrally developed curriculum frameworks, especially in science, followed. The deficit crisis of the early '90s gave occasion to the federal and provincial governments to initiate a series of cutbacks in educational funding whose effects are with us yet.

Two educationists in the *World Year Book of Education 2000* sum up recent trends in Canadian education:

Echoing, in part, broader international trends, school reform in the 1990s in Canada has seen an increasingly managerialist focus on curriculum standardization, testing, accountability and control, a centralizing reduction in the number and authority of local school boards, along with some attention to giving parents a greater say in which schools their children will attend and in select aspects of local school governance. Associated with these developments has been a stalling or reorientation of many of the egalitarian initiatives in education that had begun to take root in the 1970s and 1980s.⁽²⁶⁾

A closer look at education reform in two provinces where the political right has gained power will bear this out. Klein's "renovation" of Alberta education has been part of his restructuring of economic and public life, which involved lower corporate taxes ("the Alberta advantage"), deregulation, balancing the budget by cuts in public services (including education) privatisation, etc. He claimed that Albertans were not getting value for money in education and that outcomes could be improved only by opening up the service to the market and allowing greater parental choice and self-responsibility.

The cutting edge of educational reform was the Charter School. A publicly-funded, independent, free, open-to-all institution, it is formed by a charter or contract between the Ministry of Education and a group of parents, citizens and educators outside the control of local authorities; in other words a charter school is a state-financed private school. The school would have some discretionary power over innovation, but would not have to hire unionised teachers. It would have to justify its existence by results, largely based on scores in standardised tests of information-based learning. These performance-based skills were to produce the "intellectual capital" which would form "an economic engine designed to increase Alberta's competitiveness, wealth and quality of life".⁽²⁷⁾

As in Alberta, so in Ontario, with Premier Harris's "commons sense revolution". Bill 160, The Education Quality Improvement Act of 1997, was preceded by a \$1 billion cut in public funding, the elimination of rent control, the reduction of local democracy, the reduction or elimination of school board powers, curricula reforms

and the promotion of standardised testing. The Bill and the Act essentially gave the government unprecedented power over almost all aspects of public education including average class size, reduction in teachers' preparation time, length of school day, etc. A per-pupil funding formula (similar to Britain's Open Enrolment policy) and the promise of greater parental choice in schooling, essentially turns families into consumers of education and seekers of the "best school". The reform basically aims to centralise power and decentralise accountability.⁽²⁸⁾

* * * *

To move from the particular to the general, there are at least half-a-dozen areas of education, all interlinked to, and affected by, globalisation and neo-liberalism, in which the best of the liberal-humanist pedagogical tradition is under threat. The modification of the curriculum, the undermining of local control and the move towards privatisation, and the increasing accommodation of schooling to the world of work and economic productivity have, I think, received sufficient attention. Three others -- standardised testing, the infiltration of business, advertising and the consumer ethic into schools, and the increasing use of computer technology in education deserve a closer look.

Standardised testing is increasingly being used in all three countries, particularly the U.S.A. It is a by-product of the drive for international economic competition, where national achievement can be measured in numbers. In essence, standardised testing intensifies the worst features of traditional education -- the fragmentation of knowledge into subjects, learning by memorisation, dependence on textbooks, the search for the right answer, and the measurement of achievement by examination. In the step-by-step mastery of discrete fragments of knowledge, testing betrays its origins in the outmoded behaviourist theories of Watson, Pavlov, Skinner et al. It rests on several dubious assumptions: that the basis of education is the learning of facts; that only the observable is real, and only the real can be tested, measured and quantified. In extreme cases classroom activity is reduced to "teaching to the test", with pupils as passive recipients of units of knowledge.

"High-stakes testing", in which, according to the logic of the market, poor performers are penalised or dismissed, seems to me to strike at the heart of valid education -- the cultivation of the imagination, critical thinking, reading and writing as a means of human communication, the exploration of liberal arts and science, and the general enrichment of the personality. Questions remain -- does every pupil need a standard skill? Should any child be labelled "substandard"? In the United States it is students from the minorities who are most likely to receive this label.⁽²⁹⁾

During the 1990s business in its many forms has taken an unprecedented interest in education. From the World Bank's 1995 document *Priorities and Strategies for Education* to *Business Week's* slogan of the following year "Education is Business's Business,"⁽³⁰⁾ to the Asia-Pacific Economic Council's call for "maximum business intervention" in schools,⁽³¹⁾ corporate interests have targeted institutions of learning.

This takes two forms: school-business "partnerships," in which cash strapped schools receive free or cheap computer hardware and software, participate in school-

to-work programs, "match" themselves with business firms, allow business input into curriculum, and similar ventures.⁽³²⁾ In 1996, the European Commission directed that all 300,000 schools, 4 million teachers and 67 million pupils in the European Community be placed in partnerships with TNCs within the decade.⁽³³⁾ In Canada there are as many as 20,000 such links, with some 90% of schools involved.⁽³⁴⁾ The Council of Ministers of Education supports such initiatives.⁽³⁵⁾ In Britain 90% of secondary schools have associations with business.⁽³⁶⁾ Some businesses expect students trained in their hardware in school to enter their organisation after graduation.

The other aspect of business influence in schools is direct advertising of products, and this extends right down to kindergarten level. In the United States this is a large industry -- Lifetime Learning Systems has 2 million teachers using corporate-sponsored education programs; Modern Talking Pictures has links with several mega-corporations; Youth News Network issues news broadcasts to thousands of schools with a mandatory two minutes of commercial advertising. In Canada, Toronto has hosted a conference entitled "Kid Power: Creative Kid-Targeted Marketing Strategies," aimed at children 2-12 years. *Kids World Magazine*, with corporate advertising, circulates in 1,600 large English-language elementary schools, 40% of the target school population. *Junior Jays Magazine* has a similar readership.⁽³⁷⁾ I could elaborate, but the subject is almost infinite. And I haven't yet mentioned such obscenities as Burger King Academies and McDonald's input into the curriculum of American schools.

The object of all this is purely commercial. Kids have deep pockets -- an estimated \$20 billion spending power in Canada alone⁽³⁸⁾ -- and the strategy is not only to tap this market, but to instil "brand loyalty" for life, and secure allegiance to a free-market world.

And finally the computer, which is really the heartbeat of the Information Age. But what is information? Its original meaning was a factual statement to an inquiry, whether in a tourist office or a library. Since 1950, however, when Claude Shannon published "A Mathematical Theory of Communication," the meaning of the word has been revolutionised and it now connotes anything that can be coded for transmission (from great thoughts to gibberish) through a channel that connects a source with a receiver.⁽³⁹⁾

Once this is accepted, there seem to be two aspects of the use of the computer in education which deserve scrutiny. First, as some analysts have pointed out, the very speed and apparent mechanical certainty of computers; the ability to translate whatever enters the computer into binary numbers, to homogenise all that enters the coding system, obscures a distinction between ideas and information, i.e., between the idea or design of a program and the data, although both are commonly subsumed under the rubric of information.

Theodore Roszak, in *The Cult of Information*, argues that every piece of software contains ideas, assumptions and attitudes which govern the data, and require evaluation as to their philosophical content. Thus when a student sits in front of a computer, moving the cursor to access data, he or she is not only looking at a screen, but also entering into a relationship with the mind of the person who

constructed the program. The software thus contains the conceptual matrix within which students think, and which, to a greatest or lesser degree, organises his or her thought processes.⁽⁴⁰⁾

Second, prolonged exposure to computer programs which, by the very nature of the computer itself, proceed by step by step progression and formal logical sequences, may lead students and teachers to believe that the mind's operations also follow their pattern, i.e., that thinking is a matter of data processing, and the more rapid the operations the greater the learning.⁽⁴¹⁾ But as Whitehead and others have pointed out, thinking and learning do not always proceed in a series of logical steps, but by leaps, intuition, combination and re-combination of ideas, the sudden formation of a gestalt. The mind thinks with ideas, not information. The most important task of educators is to contrive learning situations in which young minds can come together to create, evaluate, adapt and use ideas. The computer may have its place in education, but it cannot replicate the workings of the human mind, and its continual use may do harm to the very thought processes it is the duty of educators to cultivate.

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WEBCT: SERVING EDUCATORS IN NEWFOUNDLAND & LABRADOR

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An increasing number of colleges and schools in Newfoundland and Labrador, including some faculty and staff at Memorial University, have joined the list of educators around the world who use WebCT (Web Course Tools) to manage their courses on the Web. WebCT is a computer program written for the Web that facilitates the creation of sophisticated Web-based presentations and environments for collaboration. The content of a WebCT course is provided in HTML pages designed by the instructor or support person.

Internet Communication and the Web

Internet communication first became accessible to educators in the form of a text-based computer program called *participate* in 1981 (see CoNet, 1998), and later CoSy in 1985 (see Softwords, 1995). "World Wide Web" technology was considered to be a major improvement, with its capability of sending graphs and pictures over the Internet. It was over this graphical computer environment that the first Web-supported courses began to appear in 1995. In 1996, the number of online courses available was about 100. In 1998, the number increased close to 1,000, increasing again to 8,000 in 1999, and again to 30,000 courses in 2000. It is estimated that, by 2002, one hundred thousand courses will be available online (McGreal, 2000).

Around the time of the early uses of the Web (in 1995), Computer Science Lecturer Murray Goldberg received funding from the University of British Columbia to develop a system of management tools to facilitate Web course preparation and management. Together with Sasan Salari, Murray developed a product that was so well received by his peers that they launched a WebCT version commercially in 1997. In May 1999, WebCT joined forces with *Universal Learning Technology*. The combined company expanded rapidly, launching *WebCT.com* in January 2000. As of July 2000, WebCT had registered 6.7 million student accounts in 147,000 courses at 1480 colleges and universities in 57 countries.

Continuing Education and the STEM~Net

As of this writing, the School of Continuing Education at Memorial University is promoting several Web-supported courses, including: 13 in Business, 13 in Education, 5 in Nursing, 5 in Sociology, 4 Web-supported in Economics, 3 in Psychology, 2 in English, 2 in Social Work, and 1 Web-supported course each in Computer Science, Statistics, Technology, Engineering, Math, Library Studies, and Medicine. The School of Continuing Education has an extensive program of credit courses at Memorial University, as well as many credit-free personal and professional development courses, certificate programs, customized workforce training services, and other services. The Web courses they support are maintained on a computer that is owned by Memorial University.

Several Web courses reside on the STEM~Net computer. In the recent history of *WebCT*, there have been 29 Web-supported courses in Education, 2 in

Psychology, 1 in Group Counselling, and 1 Graduate Research Integrity Program course. STEM~Net (Science, Technology Education and Mathematics Network) is a computer network for K-12 and college educators in Newfoundland and Labrador. STEM~Net, like other computer networks, provides teachers and students with a variety of services including access to electronic mail, libraries, news groups, conferences and the Internet (Mann & Weir, 1993). STEM~Net is currently giving educators in the province two kinds of Web course support, namely: *SiteScape* or *WebCT*.

Web-Based Education

Along with presentation and collaboration capabilities, WebCT also purports to facilitate the creation of Web-based educational environments, presumably by non-technical users. WebCT is supposed to enable the development of entire online courses, or simply to publish materials that will supplement existing courses. Results of two studies (Mann, 1998a; 1998b), however, showed that educators with knowledge of instructional design but limited technical knowledge of WebCT needed more technical and design assistance than currently offered in their Web tools and contextualized help. In fact, there are appears to be a consensus in the recent literature (Gros, Elen, Kerres, Merrienboer & Spector, 1997) and in educational organizations around the world that I've visited that Web course instructors and support personnel are really at a loss to know how to match proper methods of course design with contemporary authoring, multimedia and hypermedia systems like WebCT and, when they do, learning principles are omitted or misapplied. Part of the reason for the confusion is that conventional course development methods are based on psychological and educational theory that is too broad in scope and too rigid to prescribe instruction for hypermedia systems like the Web (Tergan, 1998). Conventional methods for developing printed lecture notes or videotaped lectures are frequently too static (Boshier, Mohapi, Moulton, Qayyum, Sadownik, & Wilson, 1997), inert (Yang, Moore & Burton, 1995), unusable (Wild & Quinn, 1998) and -- I would add -- too slow to react, for prescribing satisfactory conditions for Web-supported interactive learning. In short, "instructional design procedures often don't work" (Winn, 1997, p. 36).

Instead of guessing at appropriate design configurations in WebCT, instructors and support personnel seem to adopt personal, stochastic, and somewhat idiosyncratic methods tied directly to their own knowledge and confidence in using WebCT.

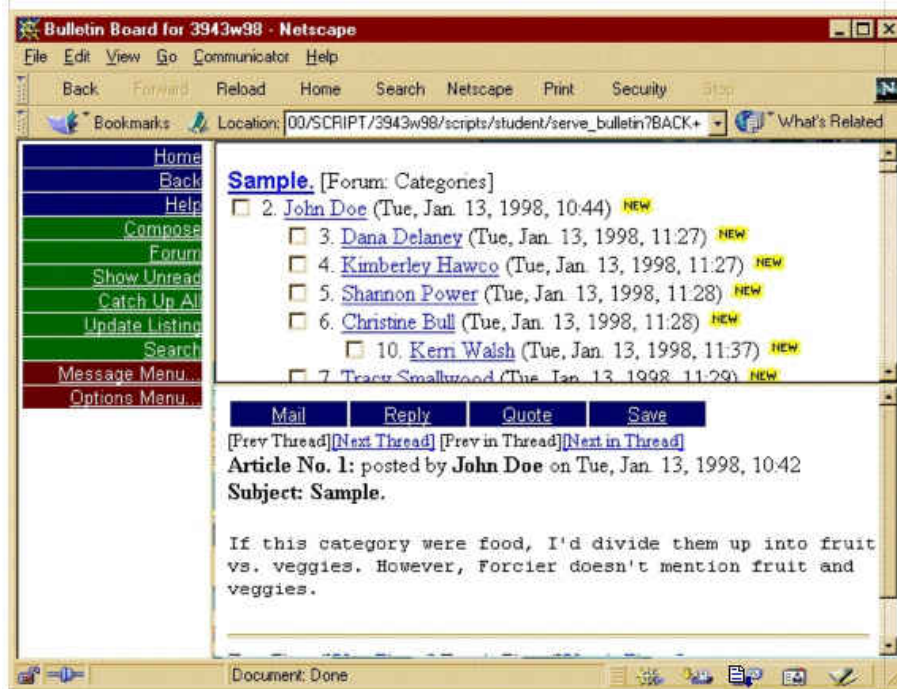
Rather than adopt and stay with a particular method, however, these educators seem quite willing to discover, experiment and adapt to new combinations of methods within a certain overall purpose. I call this purpose a "phase", and the discovery method that appears to shift in and out of methods at will, phasing-in- and -out. I believe there are three shifting phases of Web course management, namely: Lesson enhancement, resource-based teaching and learning, and online learning environments. This paper only discusses the first phase of Web course management using WebCT, namely, Lesson enhancement. For a detailed explanation of the phases of Web course management, see Mann (1999a, 1999b or 2000).

Briefly, in the lesson enhancement phase, an instructor approaches the Web with cautious optimism. Usually with help from the resident technologist, the instructor will decide to introduce the Web somehow as an extracurricular activity to enhance the lesson either by setting-up a group discussion, or by requiring student presentations and assessment.

Setting-Up a Discussion

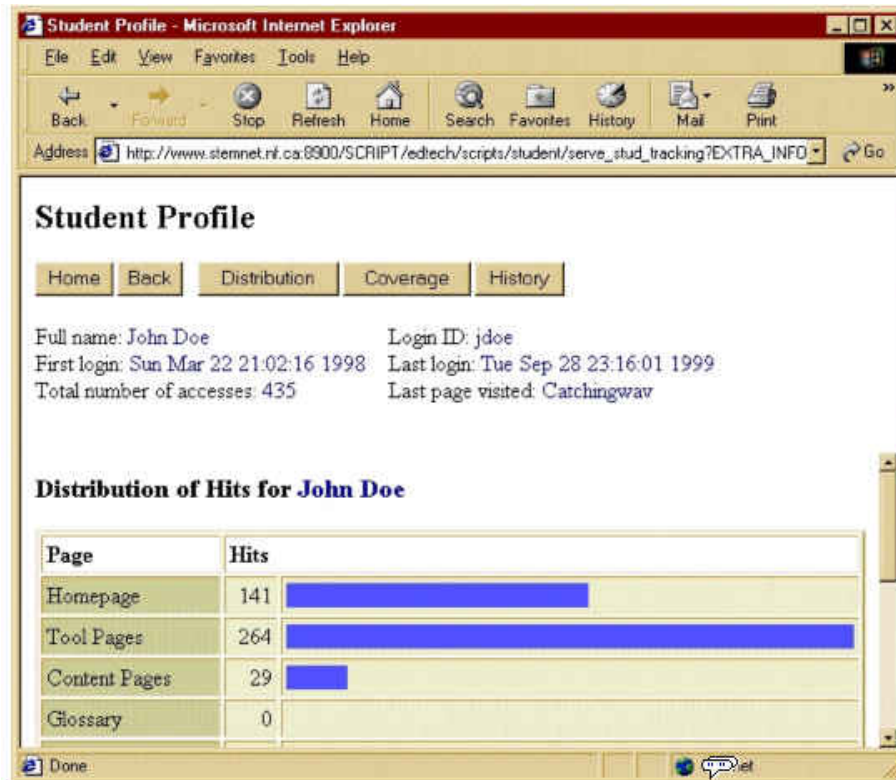
One way in which the instructor initiates WebCT with students to enhance a lesson is to maintain discussion topics in a Computer Conference or Chat Room, monitoring student participation throughout the conference. Figure 1 shows a typical WebCT Bulletin Board collaboration.

Figure 1. Online collaboration using a bulletin board system.



The WebCT conferencing system has a threaded, multi-fora asynchronous electronic conference. Fora can be created and deleted by the instructor. The electronic mail facility can be added to a course allowing one-to-one message transfer among course participants. The interface is very much like that of the bulletin board. The e-mail in WebCT is integrated with the student management and student progress tracking administrative tools. Figure 2 shows a typical online display of student hits.

Figure 2. Online display of student hits using a profiling tool



WebCT can maintain detailed information regarding accesses made by each student in a course. In some cases the designer may wish to allow each student to access the information maintained for him or her. In this way the student would be aware of exactly what information is being recorded about him or her. To facilitate this, WebCT allows the designer to place an icon on a homepage or tool page to permit the student to access this information. Several types of information are provided by here that allow the instructor to monitor student participation and progress.

Online Student Presentations

Another way in which the instructor initiates WebCT with students to enhance a lesson is to get them working online in groups. WebCT supports student groups and allows the designer to designate group membership. As an alternative, WebCT can automatically divide the class into groups given the desired group size. Each group is given a presentation area for the publication of group projects. Group presentation areas are access controlled in that an area can be edited only by group

members but can be viewed by any member of the class, as shown below in Figure 3.

Figure 3. Uploaded group assignments with Group 03 highlighted.

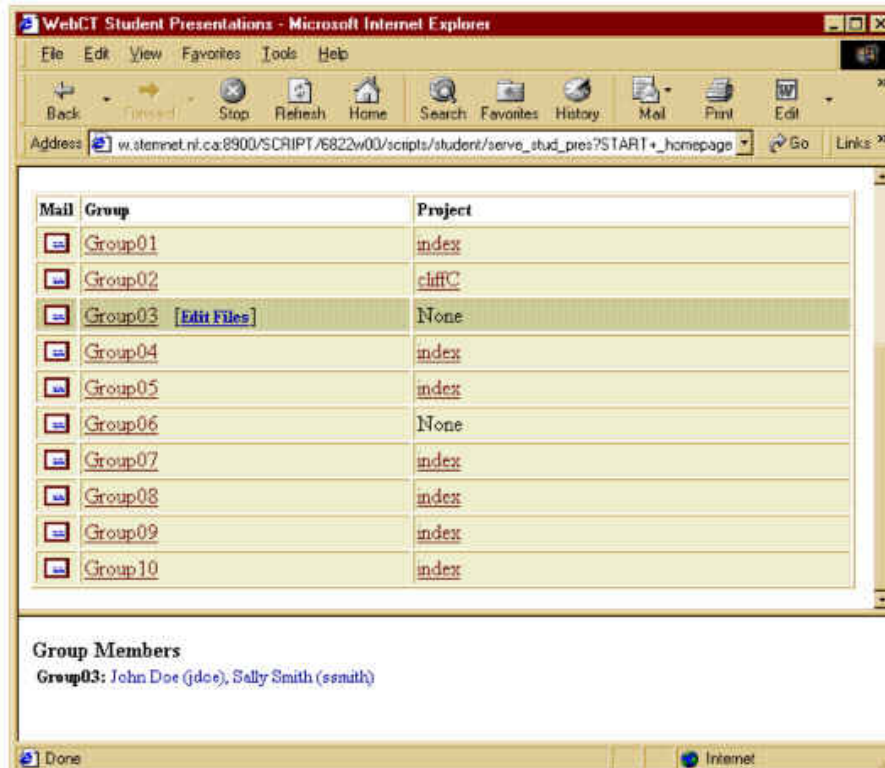


Figure 3 shows the list of group assignments of 17 students in a recent graduate course as they were displayed in the WebCT "Presentation" area. Students had collaborated to write a research paper, then "html'd it" and electronically uploaded the html file into their WebCT "Presentations" area. Only group members could edit the content of their group presentation.

Once all the papers are uploaded into WebCT "Presentations", students vote individually on each other's presentation using "Profile" in WebCT. To clarify- "voting" in this sense, means "assigns a mark". The process of assigning a mark occurs as follows: first, individual students view each group's uploaded presentation in WebCT by clicking "Index" in the Project column. Once individual students view each group's uploaded assignment, they assign a mark and justifying comment to each group using the "Survey" tool in WebCT. Similarly, the Instructor assigns a mark and justifying comment to each group using the "Survey" tool. Next, the Instructor

concatenates the Instructor and individual student's marks and justifying comments, as shown in Figure 4.

Figure 4. Separate marks and justifying comments displayed for Group 01.

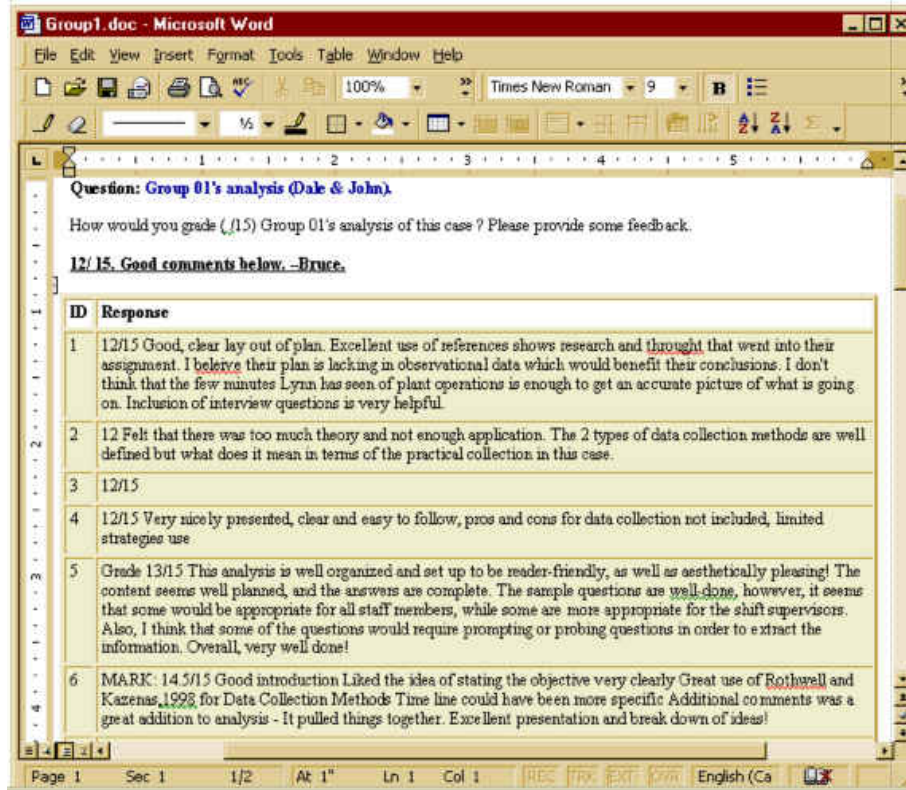


Figure 4 shows the concatenated marks and justifying comments for Group 01, posted separately by the Instructor and the 17 students enrolled in a course in Winter 2000. The Instructor examines the concatenated marks and justifying comments and determines "the final mark and justifying comment" for each Group. The "final mark" is determined from the mid-point between the Instructor's assigned mark and Median mark (average vote) of all 17 students' assigned marks for Group 01. (Based on the data collected from the student in Winter 2000, "the Instructor's" vote will conform in most cases to the Median vote -- average vote of all votes cast by students). Finally, the Instructor pastes the entire results page for Group 01 (including "the final mark and justifying comment") into a word processor, and attaches it to student's email in Group 01. In a few cases, where students cannot read the rtf file, the text is pasted into the email buffer.

Summary

WebCT has been described as a suite of computer-based conferencing tools that facilitate the creation of sophisticated Web-based presentations and collaborations. However, many educators believe that the mere provision of Web management software in no way guarantees critical thinking, that the current status of online collaborative social learning in no way matches the variety of interactions in seminars and tutorials, and that self-paced learning has had a long history of student attrition due to the huge motivational investment required on the part of the student. And although WebCT provides interactivity, structure and the potential for learning to occur, students will always want clear guidelines about how to interact (Janes, 2000).

Since interactivity is a vital component of Web courses, the format for the interaction is of great importance. Although WebCT provides the instructor with greater flexibility for the creation and delivery of the course content, the SiteScape forums are simpler for students (Glassman, 2000, p. 32).

In lieu of better advice than that offered in instructional design principles, instructors and support personnel are employing stochastic methods they deem necessary and sufficient to manage Web courses. Stochastic methods employ a hit-and-miss approach to Web course management that describes student interactions in terms of system tools as a function of system performance. Perhaps over time, we will learn to temper our enthusiasm for system performance with design principles for Web-based learning. Until then, I expect we will continue to phase-in and -out various incantations of curricular Web-based multimedia.

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Network-Intensive Research At Memorial University

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Abstract

Memorial University of Newfoundland recently competed against other Canadian universities for an infrastructure grant to finance an upgrade to the research component of its campus computer network. The odds were terrible- only a 30% chance of beating the competition. Despite the odds, Memorial's application was successful, garnering over \$822,000. to support network-intensive research at the university (Mann, Whitmore, Bussey & Keough, 2000). This paper will describe the kind of research the infrastructure grant will support.

The Problem

At Memorial University of Newfoundland, research and critical resources are distributed across campus in a variety of disciplines and interdisciplinary fields. Memorial has a node on the national network of high performance computers, and is a leading participant in C3.ca. Internal network upgrades are essential to our role in this organization, and to the efficient use of the 20% of the CFI-funded resources that they were required to provide to outside users.

When it was installed three years ago, Memorial's ATM campus network "MUNet", was at the leading edge of university networks. Now it is swamped by network traffic. Congestion had become a major impediment to research carried out all across campus, preventing new research projects from being initiated. A detailed analysis of network traffic confirmed this, and projections indicated further degradation in the coming months unless action was taken immediately (Bussey, 1999). The details are available at www.mun.ca/cc/

A second factor affecting successful network-intensive research at Memorial has been Internet access speed. Memorial has been connected to the Internet at four megabits per second (Mbps). By 1999 standards, four Mbps service was the lowest of the top ten universities in the Maclean's comprehensive university ranking, although several Ontario universities have been using five Mbps services. Notably, universities in British Columbia and Quebec have very large regional network connections; a minimum of one hundred and fifty-five Mbps, which subsequently links to the Internet. Bussey (1999) determined that Memorial's standard Internet access was operating at speeds two orders of magnitude lower than any other university of its kind, and pays prohibitively more for that dubious privilege.

With an upgraded campus computer network, Memorial can replace all network hubs and associated devices with switched 10/100 ethernet. The ATM backbone may be upgraded, but it is much more likely that we will replace it with gigabit Ethernet technology, primarily for cost reasons. That decision will be made as a result of responses to our request for proposals. With the added total estimated

cost of \$2.5M (for administration and teaching), the campus network upgrade will support the advanced research network needs of the institution, and allow researchers in other institutions to access the improved research resources available at Memorial.

Network-Intensive Research

Networked computers are essential and integral components of research at Memorial University. The research is distributed across campus and in a variety of disciplinary-based and interdisciplinary fields. Like the researchers, the resources are distributed all across campus and shared by participants to optimize their use.

For example, numerical modeling is carried out in engineering, computer science, physics, applied mathematics, chemistry, physical oceanography and earth sciences. The computational resources are distributed all across campus. Research capabilities have been limited by difficulties in sharing large data files, and in visualization. Information has been lost because of the inability to transfer, visualize and hence analyze large data files. Although a new computer server with real time visualization capabilities has been installed, its efficient use demands much greater bandwidth. The new upgrade promises more effectiveness and efficiency of computing resources.

Memorial University offers Canada's first interdisciplinary graduate programme in computational science. The programme emphasizes research applications of numerical modeling and visualization. Much of the faculty and graduate student research in computational science requires remote use of resources. Until now however, insufficient bandwidth has limited the options for research in this field.

Some researchers in philosophy, psychology, education, mathematics and medicine at Memorial share research interests in applied cognitive science. One of the biggest, and most critical areas of shared interest in this group has been human attention. Attention is critical to perception, human factors, and multimedia learning research. Quick response time from the computer network is vital to the proper assessment of interactions developed on the computer interface.

Similarly, speech synthesis research is carried out in Linguistics, Education and Management Information Science (within the Business Faculty). Speech synthesis has various applications including event-notification, prompting from voice response systems, and as an interface to an order-verification system. Enhanced network capability is required in this research for extended applications. Efficient and effective sharing of computing resources requires connectivity and adequate bandwidth. It is also important to save the results in databases accessible to other researchers and students.

Research Benefits

By international standards, Memorial University of Newfoundland consistently publishes highly innovative disciplinary and cross-disciplinary research which was having a major positive impact on society. Memorial has taken advantage of its prime location to develop major centres of excellence in ocean research. Research at the

Centre for Cold Ocean Resources Engineering (C-CORE) includes remote sensing target detection, shore-based ground wave radar technology used for long-range detection of ice hazards, and Coastal Ocean Dynamics Applications Radar (CODAR). C-CORE was also the site of Canada's largest centrifuge facility which expands C-CORE's strengths in cold ocean science, space and environmental fields. C-CORE also undertakes image processing projects in many areas including mining automation, industrial inspection and robotics. These projects require large databases of images that typically reside on a single computer but which must be accessed by many members of a project team. A high-speed network will decrease the time necessary for testing image processing algorithms on these large databases of images, thus increasing overall efficiency.

The theoretical condensed matter physics group consists of three faculty members (Lagowski, Whitehead and Whitmore) and their research groups. Their work includes numerical investigations of various systems at the atomic and mesoscopic scales, including thin film magnetic systems, phospholipid bilayers, and specialty polymers. In the studies of magnetic systems, the subtle interplay between the long-range dipolar interaction and the short-range exchange interaction plays a key role. The underlying physics is fundamental in determining the structure and morphology of a wide range of important systems in the physical and biological sciences, including spin glasses, superconductors, liquid crystals, polymers and biological membranes. In polymer and lipid systems, they are addressing fundamental questions about the validity of mean field theory and the range of applicability of various theoretical techniques, many of which apply in certain limiting cases. The work aims to understand the data from experiments on novel systems, which were not described well by other existing theories. It helps to quantify the limitations of the other theories, and to provide insight into real systems. They were also carrying out an extensive computational investigation of the best theoretical method for understanding the electronic structure of organic molecular solids, which cannot be understood using single-electron theories. This work could have a profound effect on understanding and predicting ability for the properties of polymer materials.

The objective of the computational chemistry group (Poirier and collaborators) was to develop a unified theory of chemical reactivity and stability. There were disparate views in the literature on the factors that control regio- and stereo-selectivity in the Diels-Alder reaction. The first step in developing a unified theory requires an understanding of the factors that control selectivity. Such theory should make it possible not only to rationalize the selectivity, but also to make predictions. This understanding was crucial in synthetic chemistry. This research involves structure optimization, the development of new algorithms and better and new ways of analysing and presenting the results. Hence, the research has an important "computational science" component to it. A long-term goal is to develop a modern, "intelligent" program and improve every aspect of the *ab initio* calculations. A modern scientific program must be efficient, flexible, user- and programmer-friendly, take advantage of vector and parallel processing, use modern "Object-Oriented" methods and the most current programming developments, be interfaced with databases and visualization tools. Our *ab initio* program "Mungauss" is being developed to incorporate these features.

Pike and Shalaby's (Mathematics) work in graph theory and combinatorial design theory, focuses on graph decompositions and construction of various combinatorial objects, with applications in coding theory and cryptography. The computational aspects of the research use parallel processing, involves several machines distributed across the campus. Results thus far have included new discoveries concerning perfect 1-factorisations of complete graphs as well as Skolem sequences. Task distributing across a network of workstations can be an attractive alternative to 'monolithic' high-performance computing. A high-speed network was, however, a critical requirement. In many cases, it was the communication latency of the network that determines the performance of the whole application. In such cases, a reduction of the communication delays by an order of magnitude can result in a comparable performance improvement, all without any increase of the performance of the processors. The research conducted by Zuberek's group (Computer Science) clearly indicates that, in many cases, the speedup of distributed applications was limited by the performance of the communication network. The value of his future research relies on a significant improvement on the campus network used to carry it out.

Also in Computer Science, Yuan's group works in the interdisciplinary field of Virtual Assembly (VM). VM uses Virtual Reality technology and integrates diverse manufacturing-related technologies to accommodate the visualization of interacting production processes, process planning, scheduling, assembly planning, logistics from the line to the enterprise, and related processes such as accounting, purchasing, and management. The group started a pilot project on VM a number of years ago and has been investigating issues of virtual factories, such as object-oriented workflow management. Its application will make "e-Factories" a standard practice in the near future, in analogy with the creation of "e-Business" by the internet.

The applied seismology group currently includes 3 faculty members, (Hall, Hurich and Wright). An important fourth was to be appointed to the Petro Canada Research Chair in Applied Seismology, previously occupied by L. Lines. The group has marine and land multi-channel seismic acquisition equipment; and has used a mixture of computing resources for seismic data. The group works on seismic applications to regional tectonics (e.g., LITHOPROBE), to sedimentary basin history (e.g., eastern Mediterranean), Appalachian basins, Atlantic margin basins, and to shallow mineral-oriented targets (mining camps, Buchans, NF, for example). The group has interests in both numerical and analog modelling, and relating the results to physical properties and to seismic wave scattering. The group has an international reputation in regional scale tectonic applications of seismology, and has recently become internationally established in the narrower field of petroleum seismology, especially through the Memorial University Seismic Imaging Consortium (MUSIC), which was sponsored by industry, with NSERC matching grants. MUSIC remains active while they complete the search for Lines' replacement, and they anticipate that the next chair holder will continue to build the group's international recognition.

Hans Rollmann, a Professor of Religious Studies, has pioneered the use of the Internet in a successful electronic Scholars' Seminar in American Church History in 1997/8, which involves participants from Alaska to Texas and from California to Newfoundland. The seminar relies on computing and network resources offered by

Memorial University. The resulting papers and a critical edition of an important North American historical ecumenical text will appear this year in print in the monograph series of the American Theological Library Association. Dr. Rollmann intends to repeat such a seminar in 2000/2001 in collaboration with Dr. Thomas Olbricht of Maine and is in need of improved collaborative connections to expand and improve the delivery and scope the Scholars' Seminars.

Don Nichol uses the Internet and WWW every day to connect with book-trade historians and 18th-century scholars around the world either directly or through the 18th-century Bulletin Board. The Internet critical for gathering information important to his research on the history of copyright, and for maintaining contact with contributors, publishers, conference organizers and the like. I also rely on it heavily on the availability of e-texts for tracking-down quotations from Shakespeare, and a tailor-made concordances to Milton's **Paradise Lost**.

Venkatesan (Engineering) is an expert in Broadband Communications Networks. Architecture, analysis and VLSI design of switch fabrics for broadband communication networks (ATM, IP, ...etc); design of switch fabrics, buffers and schedulers for provisioning of Quality of Service issues in broadband communication networks; architecture and applications of parallel processing systems. Most of the research in this area has been theoretical analysis, software and hardware design. Access to a high speed network will be useful in checking some of the proposed algorithms and devices designed and fabricated at Memorial; and traffic pattern analysis studies that can be facilitated.

Howard Heys (Engineering) is a specialist in Communications Security. The principal focus of the research is computer and network security with foci on cryptography and the application of encryption to broadband communication networks. In recent years, the work has involved several graduate students theses and about 3 or 4 senior undergraduate projects per year. Much of the research to date has focused on the theoretical analysis and design of encryption algorithms. Access to a high-speed network will benefit the research program by facilitating the ability to test proposed methods and implementations of encryption applications on real networks.

Sandra LeFort (Nursing) is funded under the Medical Research Council of Canada to carry out a multi-site evaluation of the chronic pain self-management program. This requires the transfer of data collected at each site into the Nursing Research Unit at Memorial University. Sites were in Newfoundland & Labrador and in Ontario.

Sandra MacDonald (Nursing) has been funded by provincial community health boards to undertake health needs assessments of the population in several areas of Newfoundland and Labrador. Several projects focus on community health needs and resource assessment in the western region, the St. John's region, the central region, and for Labrador Health Services. The outcome will be a large database located in the Nursing Research Unit that will be accessed by other researchers doing studies in this area.

Shirley Solberg (Nursing) is funded by the Maritime Centre for Excellence in Women's Health to study rural women and breast cancer self-help group via audio teleconferencing. Dr. Solberg has developed this new area of research to provide support to women using telecommunications technology. Data in the form of video taping of interviews and large transcripts of interviews need to be accessed by the Nursing Research Unit for analysis. Dr. Solberg has also received another grant to establish a satellite for behaviour studies of Cancer Patients. She will require linkages with the primary site in Ontario as well as all the other satellite centres in Canada.

Alice Gaudine (Nursing) is funded by SSHRC to undertake study on decreasing employee absenteeism through feedback and goal setting, and feedback and relapse prevention. Dr. Gaudine utilizes a number of institutional settings for her studies and large amounts of data sent to the Nursing Research Unit at Memorial for analysis.

Roger Green (Medicine) works in the Medical Genetics Research Group. Medical genetic research at Memorial is moving into an area that requires access to large databases. High-speed access is also required from sites on campus, within Newfoundland, and from other regions of Canada. The databases will be linked to other datasets at remote sites. Some of the data will be in the form of images (X-rays, ECG data etc.), which will require wide bandwidth. The availability of high-speed communication will be essential to the implementation of our plans over the next several years.

Jorge Segovia (Medicine) of the Health and Medical Care (HMC) Research Group, Division of Community Health (Memorial University), conducts research in medical care utilization, health status, and lifestyle. The HMC follows a longitudinal design and uses a large sample size to develop and test models of medical care utilization, using the quantity and pattern of medical service utilization. These are collected by linking health surveys with medical care utilization databases.

Tom Scott (Medicine) evaluates the educational impact of web-based teaching materials for first and second year medical students and multi disciplinary study groups. Learning exercises are completed online and submitted answers were automatically emailed to the course organizer. The exercises are used for second year courses in gastroenterology, endocrinology, women's health and musculoskeletal. Network access is important to the planning, delivery and evaluation of a multidisciplinary projects in which medical, social work, nursing and pharmacy students work in groups to carry out case studies, with one group of nursing students at the Sir Wilfrid Grenfell College in Corner Brook participating entirely online.

Bruce Mann's research is focused on the relative effectiveness of learning from multimedia presented on the World Wide Web. At the current rate of technological development, it is clear that continued testing of his taxonomy will require the new, faster, less congested computer network to better control confounding factors in Web-based learning.

Murray, Pullman, Simpson, and Turner in Social & Health Psychology, have received \$383,000 in SSHRC funding to investigate socio-cultural variations in health

beliefs and values. Again, the improved campus network at Memorial University is expected to improve cross-campus collaboration between the researchers.

Conclusion

Memorial University of Newfoundland is the largest university east of Montreal, and one of the most important research facilities in the Atlantic region. Memorial has six faculties (arts, science, education, medicine, engineering and applied science, and business administration) and seven schools (graduate studies, nursing, physical education, recreation and athletics, social work, continuing education, music and pharmacy). Memorial University is engaged in inter-disciplinary academic research in a broad range of academic disciplines. Highlighted were some of the research initiatives ongoing on campus. This paper has shown that networked computers have become an essential and integral component to all of these initiatives.

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FUTURE DIRECTIONS FOR RURAL SCHOOLS IN NEWFOUNDLAND AND LABRADOR: IS THE "VIRTUAL SCHOOL" THE WAY TO GO?

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Introduction

On August 19, 1999, Premier Brian Tobin and Education Minister Judy Foote held a joint press conference to announce the creation of a ministerial panel on the delivery of education in the classroom. Despite having already spent millions of dollars on a Royal Commission of Inquiry into the Delivery of Programs and Services in Primary, Elementary and Secondary Education (1991/92), a Royal Commission Secretariat (1994/95), and an extensive province-wide Consultation Process in 1996/97, there is still a need, apparently, for further study and consultation before educational reform can go forward.

At the press conference the Premier stated that the creation of the panel is in response to the "debate" this past spring over teacher allocations. "Outrage" might be the more appropriate term to describe the reactions of parents and educators to the impact of the persistent and harmful cutting of teachers from rural schools. Over a two-year period (1996/97 to 1998/99), 648 teachers have been cut from the education system. Rural communities and rural schools have absorbed the majority of these cuts.

The government has justified the reduction in the teaching force on the basis of enrolment declines. In that same two-year period, the province's K-12 enrolment declined by 8,804 students. Although the decline in enrolment has been a province-wide phenomenon, it is the rural areas of the province that are most severely affected when teacher allocations are automatically reduced as enrolment declines. For example, from 1995/96 to 1998/99 District # 10, a predominately urban district, saw its enrolment decline by 7%. During that same period District # 7, a rural district experienced an enrolment decline of 17.6%.

Rural schools are, generally, considerably smaller than urban schools. The average urban school in Newfoundland and Labrador in 1998/99 had an enrolment of 413 students. The average rural school's enrolment in that year was considerably less at just 180 students. In a larger urban school the loss of one or two teachers may or may not be a serious matter; in the smaller rural school the loss of just one teacher may seriously undermine the ability of the school to continue offering even a minimal, bare bones curriculum. After several years of cutbacks and an admirable effort to maintain quality education, rural educators feel they have nothing left to give or to cut.

There is a fundamental problem with the unfair ways resources and funding are allocated to the province's schools. A single formula for allocating teachers works equitably and fairly well if all the schools being resourced are of comparable size and have a student population that is more or less homogeneous. However, if some schools within a system are considerably smaller than others and/or have a student population that differs from the norm in some significant way, then rigidly applying a

formula will discriminate unfairly against the children attending these smaller, more diverse schools. That is why, in almost all jurisdictions, special provision is made for allocating resources to smaller schools and schools with special populations.

The "debate," as the premier referred to it, occurred because the current teacher allocation formula was being applied blindly across the system without any consideration being given to the uniqueness of the rural context and the preponderance of smaller schools in that context. Districts and schools were assigned teachers strictly on the basis of enrolment figures. The expressed "outrage" was generated when rural parents and educators realized that these latest teacher cuts would decimate the limited educational programs still available to their children.

Some (not all) of those small schools that had been granted "necessarily existent" status fared a little better (but not by much) than those small schools that did not gain this designation. However, as I pointed out in the last issue of the *Small Schools Newsletter*, the criteria used in this province for designating a school as "small" for the purposes of additional resource allocation needs revising.

We are a province of small schools. Sixty-four per cent of our schools have fewer than 300 students; 43% have fewer than 200. In all other educational jurisdictions that I am aware of these schools would be considered "small" and would qualify for additional resource allocation. Not only did the application of a single formula discriminate against most of our rural schools, but so too did the restrictive criteria for designating a school as "small."

Typical of the anger and concern expressed by rural parents and educators was a "Telegram Forum" article written by Agnes Loveridge, a teacher/guidance counsellor/parent at Buchans Public School. In "Teacher cuts hurts small schools," Ms. Loveridge writes:

I was both astounded and dismayed to hear Education Minister Judy Foot's comment that she was not aware of any program cuts in schools as a result of the reduction in teaching units for this coming year. Although Buchans Public School is a necessarily existent small school, we have lost teaching units every year -seven since 1991 -and will lose 1.5 this coming year. We have had to double grades and courses, and cut programs with each loss of units.

Does the minister of education believe these schools can cope with more cuts? I am not sure Ms. Foote understands the reality of programming in a small school. The small number of students we have are spread over the 13 grades, however, we still have to offer a full K-12 program.

After detailing some of the realities of teaching and learning in small rural schools and the mounting frustrations of rural educators in the struggle for quality education for rural children, Ms. Loveridge concludes with this accusation:

Ms. Foote, our education system is in crisis and it is a crisis of your making. We have accepted reform, we have restructured, we have

believed your government's promise to put savings back into the education system. I am disgusted and angered by the government's callous indifference and hollow promises. There are two serious impediments to the development of education in rural communities. One of these emerged in the sixties and the other is of more recent origin but is based on an educational perspective developed in the twenties.

The Urban Mindset and the Rural School "Problem"

In 1967 and 1968 Dr. Philip Warren released the two-volume *Report of the Royal Commission on Education and Youth*. Of the twenty-four "major recommendations" of that report only one spoke specifically of rural schooling. Recommendation 3 in volume one stated:

We recommend that extensive consolidation of schools be undertaken at the elementary as well as at the secondary level.

The Commission Report paints a rather dismal picture of rural education and identifies the major source of the problems with rural schools as their size. The solution to the problem was to make them more like urban schools, i.e. bigger. This could be achieved through a process of closure and consolidation.

Although it may not have been the intention of this Commission Report, its publication marks a change in thinking regarding education and schooling in Newfoundland. As happened in other areas of the culture and life there was an official turning away in education from the rural nature of our province. The intention was to develop a modern, progressive, professional and standardized education system and this required, it was thought, larger schools. A major closure and consolidation effort was initiated and many small community schools were closed.

Although the majority of the schools in the province continued to be rural and small, there was a tendency on the part of many educational leaders, politicians and bureaucrats in this province to ignore the unique rural characteristics of our school system. There developed what I refer to as the urban mindset in education. This mindset tended to think only in terms of larger and standardized urban schools. The continued existence of small schools and the necessity of combining grade levels were perceived as unfortunate and problematic. For some the fact that we still had small schools was even a source of some embarrassment and shame.

This urban mindset led to the creation of educational policies, curricula, teacher education programs, professional development initiatives *and* teacher allocation formulas that did not adequately reflect these rural realities. There was a tendency to act as if small rural schools had ceased to exist.

Small rural schools were officially rediscovered by Frank Riggs in 1987. In his *Small Schools Study Project: Final Report*, Riggs alerted the province to the fact that we still had small schools and that educators in those schools felt terribly isolated and disenfranchised from the educational mainstream. In that report Riggs also reminded the educational community of the unique characteristics of rural schools. They tend to be smaller, more diverse in terms of configuration, and more distant from each other

than schools in urban areas. In addition rural schools are very meaningful and important to their communities. These characteristics present unique educational opportunities as well as challenges.

Despite recommendations to be more responsive in reports such as *The Small Schools Study Project: Final Report*, *Our Children Our Future*; and *Learning and Teaching in Multi-grade classrooms*, little has changed in the urban oriented mindset that continues to dominate educational planning in this province. (How else might we account for the "debate" about teacher allocations?) This mindset tends to see rural schools as distant or remote "problems" that must be solved. In point of fact the real problem lies in the limited perspective of some urban based bureaucrats, many of whom, ironically, happen to be former ruralites.

The Cult of Efficiency

A second problem that is hampering the progress of genuine educational reform in all areas of the province is the manner in which our educational leaders and planners have been taken over by the "cult of efficiency" (Callahan, 1962). Frederick Taylor would be proud of our current generation of scientific managers and corporate "wannabes." Armed with calculators, tape measures, stop watches and odometers, educational bureaucrats have spend the last several years going around the province timing, measuring, calculating, and quantifying every aspect of the school system.

The primary goal has been to make maximum use of space, equipment, transportation and personnel. With little regard for the practical realities of schooling, or the quality of the living and working conditions of students or educators, efficiencies have been pursued and achieved in a most single-minded fashion. The Minister of Education takes great pride in what has been achieved:

"When government initiated education reform in the mid-1990s our focus was on governance and bringing efficiencies to the administration of our school system," said Minister Foote. "This has been achieved with the establishment of 11 elected school boards from 27 denominational boards." Efficiencies have been achieved at the District level by having one person now doing the work previously done by two or three. Efficiencies have been achieved by building new schools that are cramped and with little regard for any aesthetic considerations. Efficiencies have been achieved by creating overcrowded conditions in schools, classrooms, cafeterias, and on busses. Efficiencies have been achieved by making bus runs longer and creating schedules that are a nightmare for parents and school administrators. Other than the Minister, few people seem impressed with our leaner and meaner educational system. The expectation and the hope were for improved quality, not greater efficiency at the cost of that quality.

Ministerial Panel on the Delivery of Education in Classroom

According to the government press release of August 19, 1999, the ministerial panel has been created in response to the expressed concerns of parents and educators. The purpose of this panel is to investigate and make recommendations on

the allocation of teachers throughout the province and the breadth and depth of the province's curriculum. Throughout its deliberations the panel will focus on three specific issues: "programming, delivery, and resource supporting."

Programming

The most important and surely the most challenging and potentially contentious issue that the Panel has to deal with is the fundamental curriculum question: What should rural schools teach? The Panel was created because it has become abundantly clear that our smaller rural schools cannot offer the current prescribed program of studies that can quite easily be accommodated in our larger urban schools.

As I indicated above, rural educators have done an admirable job over the years of finding creative and innovative ways of providing their students with as rich a program as possible. They have done this without clear direction or guidelines from the Department of Education. Their school-based efforts have been supplemented in some areas with distance education courses. However, we are at the point now where a genuine curriculum crisis exists in our rural schools.

In the government press release, Premier Tobin has stated that,

The establishment of this ministerial panel is a clear indication that the government of this province is listening to those concerned with education in our province and is committed to doing everything possible to ensure that that *all children in this province, regardless of where they live, have access to a balanced and high quality education.*(Emphasis added)

To live up to this commitment the government must develop a clear policy regarding the educational provision for rural schools. **This policy has to define clearly the educational experiences that will be provided for all children of the province regardless of the size or location of the school they attend.** Programming cannot be guaranteed just to those students who happen to attend schools officially designated "small" and "necessarily existent." (The current criteria for designating a school as small serves more an economic and political function than an educational one.)

The challenge for the Ministerial Panel will be determining the nature of those educational experiences that will be guaranteed to all students. What does a "balanced" and "high quality" educational program look like? What kinds of experiences must be included? More importantly, who will decide the nature of that program? "Balanced" and "high quality" are inherently value laden terms, thus highly contentious. Developing school programs is not simply a technical or scientific exercise. The process is fundamentally a political one always reflecting the values and assumptions of those empowered to make the decisions.

To come to terms with what is admittedly a very difficult challenge, I think the Panel should liberate itself from traditional approaches to curriculum planning. In the past we have always tended to think in terms of individual subjects and courses.

Curriculum development usually means trying to decide what subjects and courses to add to or drop from the program of studies. Invariably, the curriculum expands and, as many teachers have pointed out, becomes overcrowded. Many critics describe this current curriculum as "a mile wide and an inch deep." Quantity has replaced quality; depth has been replaced with shallowness.

Programs and courses are also added as a way to respond to the diversity of students in our classrooms. Thus, we may have as many as three levels of math or English being offered in a school. Changing our pedagogy may in fact be a better and more responsive approach to diversity than adding yet another level of courses.

It is interesting to note that there is a growing rejection of these traditional curriculum notions in many places. Educators and parents are starting to realize that *less may, in fact, be more* when it comes to education and curriculum. To do a few things really well may be much better and more effective than to do many things poorly. Ted Sizer's *Coalition of Essential Schools* is but one example of new ways of thinking about curriculum and education that may provide alternative ways of ensuring high quality education in our small rural schools.

Small schools are unique places and require unique educational ideas. We need to liberate ourselves from our traditional ways of thinking about curriculum as we attempt to respond to the current educational dilemma.

I have deliberately used the phrase "educational experiences" in my comments above because I believe we have to stop thinking of programs only in terms of separate subjects and individual courses. We have to use our imagination and ingenuity. There are innovative ways of achieving the educational goals and aspirations we have for our children and youth; and there are alternative ways of responding to student diversity. But we will make no progress if we do not change our educational paradigm.

Part of the paradigm shift that is needed is a move away from the notion that the curriculum has to be standardized for the whole province or standardized for all rural schools. When faced with diversity (and diversity is one of the defining characteristics of rural schooling) the only truly useful response is flexibility and adaptation. The "one size fits all approach" is quite counterproductive and even harmful.

One other comment might be made on this point. It is the parents and educators of rural Newfoundland and Labrador who must take the lead in defining what should be taught in their communities and schools. They must make their ideas and views known to the Panel; and the Panel must heed what these folks have to say.

The Delivery of Education in the Classroom

The second focus of the Ministerial Panel's investigations is "the delivery of education in the classroom." It is interesting to note, however, that in all four of the Panel's "Terms of Reference" there is some reference to "the delivery of education." Is this an indication that the primary focus of their work is on "delivery?" I hope not. I

think the primary focus should be on curriculum. What kinds of educational experiences do rural parents consider essential to their children's growth and development as human beings? Discussion of how to deliver that program should follow from that.

If curriculum isn't the primary focus, the panel risks falling into the trap of simply investigating those aspects of the urban curriculum that *can* be "delivered" or transmitted to the rural school. The opportunity to develop a rural education program which is unique and responsive to rural needs and aspirations and which fits the unique characteristics of small schools may be lost.

Earlier in this essay I quoted from the August 19, 1999 press conference, the Premier's commitment that all children, "regardless of where they live, have access (my emphasis) to a balanced and high quality education." What are we to understand by "access?"

The majority of students in this province gain access to educational programs by having to ride the school bus. Many rural students currently spend up to two hours a day riding to and from school. Is this part of what is meant by the government's commitment to "access to quality education?" Although many people seem to think we have consolidated schools as far as we can or dare, this isn't the case. There are still visions of rural "super schools" being entertained by some educational planners as a way of providing *efficient access* to "quality educational programs."

Another type of access being availed of by some rural students in this province is the old bursary program. Although not used nearly as much as it once was, there are still a number of students who leave their home communities and spend the week boarding and going to school in another community. Is there any thought being given to revitalizing this program as a way of providing access to programming for rural students? Should this be an enhanced option for those students who might like to try it?

Distance Education and Multiage Pedagogy

The overwhelming majority of students in this province have education "delivered" to them, once they are in school, in a very traditional manner. They are grouped by grade level and have an actual teacher present in the classroom. Rural students, on the other hand, have always had access to alternative approaches to learning and teaching. The Ministerial Panel has identified Distance/TeleLearning and Multi-grade/Multiage as possible alternative methods of delivery for small rural schools.

It is a long-standing tradition in rural schools to have students of more than one grade level in a single classroom. In the old one-room schools, students of all ages and grade levels learned together. As schools became larger the number of grade levels combined in a single room decreased; however, in this province, as in most other rural places, this alternative organizational survived and continues to this day. Declining enrolments over the last several years have created the necessity of going back to this traditional rural practice. For some schools it means increasing the

number of multi-grade classrooms and the number of grade levels in such classrooms.

Although we have always had classrooms with multiple grade levels, we have never accepted them as viable and hence never, officially at least, built up an expertise in this necessary aspect of small school pedagogy. In this province (as well as elsewhere) parents and teachers have been educated to think of this organizational structure as an inferior, backward, old-fashioned and ineffective approach to education. Regrettably, to this day some of our educational leaders continue to use the existence of this grouping practice as a way of convincing rural parents to close their small, community schools.

Ironically, grouping students of two and preferably three grade levels together in a single classroom is advocated by many parents, educators and researchers around the world as an ideal form of classroom organization. The extended time frame that parents, teachers and students have together and the presence of children of different ages and development levels facilitate the practice of a more responsive, child-centered pedagogy. An increasing body of research supports the viability and value of multiage classrooms *if teachers are provided with the appropriate professional development and curricular support.*

The traditional approach that was taken to multi-grade classrooms may be considered an alternative "method of delivery." Multiage education, however, is much more than that. It incorporates a very particular view of education, teaching and learning. (See "Digging Square Holes For Square Pegs" elsewhere in the *Newsletter* for an excellent overview of multiage).

If we are going to endorse multiage pedagogy in this province, that endorsement has to be informed by genuine understanding of the concept. There has to be, as well, a commitment from the Faculty of Education that teachers will be prepared during their pre-service education to implement multiage approaches and commitment from Department of Education that curricula will reflect the existence of multiage classrooms.

Taking Responsibility for One's Learning

Another long-standing tradition in rural schools is students having to take a fair degree of responsibility for their own learning. As part of my research on rural schooling I have had the chance to speak to many former students about their experiences of learning on their own and with the assistance of a distant educator. In the rural schools of the past, the one or two teachers in the school may have lacked the knowledge or the time to teach particular courses. In this situation, an individual student or sometimes a small group of students simply worked their way through the course materials and at the end of the year wrote the exam for the course. In these situations the teachers provided whatever help they could. To a much lesser extent this practice of independent study is still an occasional feature of some rural schools.

Bud Davidge, who attended a one-room school in Bay du Nord, shared with me some of his experiences with correspondence courses ("a course in a box" was Bud's term for the experience). Correspondence courses were the first efforts made

by government to try and supplement the educational program that was offered in the province's rural schools. Building on the independent learning capability that was engendered in students by the very nature of the one- and two-room schools, teachers situated in St. John's developed courses for students in rural schools. Communication between students and teachers was through the mail via the coastal boats. As students completed assignments they were sent to St. John's for correction and evaluation and then sent back to the student.

The "School Car," the "School Broadcasts," and the "Travelling Library" were three other ways of trying to respond to the rural realities of schooling. The school car was a classroom on wheels converted from an old railway car. A teacher traveled the rails from one rural community to another spending a week or two in each one. While the car was in the community the children came to this "classroom on wheels." When it moved on the teacher left the children work to complete on their own until his return. An interesting aspect of this school car was that the teacher would often in the night-time provide basic education for the adults of the community.

The school broadcasts were intended to be a curriculum resource for the teacher in the classroom. They included dramatizations and readings from works of literature and also background materials for social studies. The programs were produced in St. John's and could be received by any school that had a radio and was within broadcast distance. Unfortunately, the further one got from St. John's the less reliable was the technology. (Plus ca change!)

The travelling library consisted of boxes of books, mostly fiction, that were sent by coastal boat to the various isolated communities around the province. In most small rural schools there was little reading material other than the text books. In most homes there would not be many books either. Consequently, the travelling library was a very important of educational enrichment for outport students.

Distance Education

In 1987 the Department of Education instituted a formal Distance Education Program in the province. In that first year 13 schools offered Math 1201. The program was offered via the facilities at Telemedicine. Today the distance program provides three advanced math courses and a calculus readiness course, two levels of physics and chemistry, and three French courses. Courses are transmitted to approximately 80 schools and 300 to 400 students. One recent change has seen the Districts take over responsibility for distance education.

I think it is clear that the Ministerial Panel is giving (as it should) careful and critical consideration to the evolving tele-communications technologies as methods for providing educational experiences and opportunities for students in small rural schools. The use of computers, the internet, on-line courses, interactive two-way video, and satellite communications systems have increased the possibilities and potential for making the size and location of a school irrelevant as far as its capacity to provide access to educational programming and resources.

However, there are a number of issues and questions that should be critically investigated. One of these is a cost benefit analysis of purchasing, implementing *and*

maintaining the new technologies. Technology has become an enormous black hole into which an increasing amount of our educational budgets are disappearing. In recent years most schools have had to devote a considerable portion of their budgets either to purchase or upgrade their hardware or software. A change in one thing seems, invariably, to necessitate a change in something else.

Does it make economic sense to increase distance education or change its method of delivery? Are the costs justifiable in terms of the increased educational opportunities for all students? At present, a small percentage of rural students benefit from distance education, and these tend to be the academically more able students.

Another issue is the communications infrastructure that is required to support the more sophisticated forms of distance education or telelearning. Dennis Parsons, former Director of District # 2, claims that, "Technology in small rural schools is a myth." Despite the fact, says Mr. Parsons, that we have "more hardware than ever, computer networks in schools, good software, satellite dishes, [the] truth is, in small rural schools we don't have the phone lines, backbone system, bandwidth, money for equipment, training for staff or technical support." It is the smaller schools in the more remote regions of the province that could benefit the most from distance education; however, it is these regions that have the most challenges when it comes to telecommunications.

The primary focus of my research interest in distance education and telelearning is pedagogy. Within that general focus I am particularly interested in the kinds of *human* support that young learners require when they are working in an educational environment that is mediated through technology. Providing access to programs and courses via technology is not just a technical exercise. Just as in a classroom situation it isn't enough for a teacher to simply show up and lecture to the students or present a series of overheads, it isn't enough in a telelearning educational environment simply to have courses available through a machine and online. There is much more to education, teaching and learning than that.

It is crucial I believe that we make a necessary distinction between adults learning via distance education and children and youth learning via the same media. It is true that some young students are highly motivated, very independent, and quite capable of learning on their own. They are the same type of student that excelled in the one-room schools of the past.

But many young learners are not like that. Although academically capable, these learners need a human hand and voice to encourage, cajole and support their educational efforts. These young learners, and arguably they would be the majority of high-school students, need a great deal of the kind of engagement and interaction that is intrinsic to good teaching in the classroom. When young students are engaged in educational experiences mediated through technology they require human support in the school and at a distance.

One of the short-comings of the current approach to distance education in this province is that there is no formal pedagogical support for the student in the school. The model has depended on a sort of volunteerism on the part of the principal or a member of the school staff. Educators, who already have full and often overwhelming

workloads, are expected to provide support for these students in addition to their assigned duties.

Although in most situations students have received some degree of support in this way, I don't think this kind of "hit or miss" approach is a very sound pedagogical practice. There are indications that the already demanding workload of rural teachers is going to increase. Understandably, they will be less able and less inclined to take on additional responsibility.

Therefore, if the provision of education in small rural schools in this province is going to depend on increased reliance on distance education via communications technologies, then we have to give considerable thought to the kinds of human support young learners will need in the school. This support has to be formalized as part of the official workload of one or more teachers in the school. It must also be factored in as one of the costs of implementing distance education.

Another issue that has to be considered thoroughly is the kind of human support students need from their teacher at a distance. Since 1987 a number of distance educators in this province have developed a great deal of understanding about the kinds of pedagogical help and encouragement young learners need if they are going to succeed in this leaning environment. They have developed an expertise that enables them to reach out via the technology to provide the necessary encouragement and support young learners need. These experienced distance educators understand that this is a unique learning environment; they also believe that distance teachers have to find ways to reach out to learners as good teachers do in face to face classrooms. If we are going to expand distance education, we have to select our distance educators with some care and be prepared to educate them not only in the effective use of the technology, but also the unique dynamics of interacting with students at a distance. Unfortunately, just as we seldom have provided professional development for teachers new to multiage, we are also seeing the same problems with the assigning of distance educators.

The co-chairs of the Ministerial Panel, Len Williams and Ron Sparkes were guests recently on CBC Radio Noon's *Cross Talk* program. They were taking calls from people interested in making comments and suggestions regarding the Panel's Activities. At one point in the program, Dr. Williams commented that a number of students they have spoken with are "less than enthusiastic" about their experiences with distance education. They would much prefer to have a live teacher in the classroom, he reported. He went on to say that, nevertheless, in his view, the "virtual school is the way to go." He then acknowledged that " a great deal of maturity is needed by students taking distance courses."

I don't know if Dr. Williams' comment that "the virtual school is the way to go" is an indication that the Panel has already made up its mind on this issue. However, his comments on the student's "lack of enthusiasm" and the need for a "great deal of maturity" are worth noting.

Most of the adults I have spoken with about their experiences in distance education, regardless of their age or level of education, would prefer learning in a face to face encounter with a teacher and the other learners. Most of those who

endorse distance education value its accessibility and convenience. Not having to travel all the way to a university or college site is high on their list of positives. Many people also value the asynchronous nature of distance learning which allows them the freedom to learn when they choose. This is why distance learning is very popular with people who actually live near the university but whose work or life style makes it difficult to attend classes in person. These adult advantages are perhaps not as meaningful for younger learners.

During the radio program Dr. Williams did not elaborate as to why the students whom the Panel spoke with were less than enthusiastic about their experiences with distance education. From my conversations with rural parents, educators and students, it is clear that one of the primary reasons for the frustration is the degree of independence demanded of rural students enrolled in distance courses. They have to take a great deal of responsibility for their own learning.

We do not make similar demands on students taking courses in traditional style classrooms, *in urban or rural settings*. Why do we assume that rural students can or should be able to manage on their own in this kind of technological learning environment? Why do we assume or demand a level of maturity of our rural distance education students that we do not of other students?

The fact is that many rural students cannot manage in this situation and many others find it very difficult, as would their urban counterparts. Investing a significant amount of money in a method of delivery that is accessible to only the more able and most mature students doesn't make much educational or economic sense, unless of course our educational philosophy is to "educate the best, ignore the rest."

I don't know if the virtual school is "the way to go." I do know that the existing and emerging communications technologies have great potential for enhancing the educational experiences of students in rural schools. But I firmly believe that we have to develop models of distance education and telelearning that serve the needs of *all the students in the school*, not just the few. A creative and imaginative use of information technologies will enable us to develop such models. But first we have to stop thinking in terms of discrete courses and start thinking in terms of mediated educational experiences reflecting a continuum or curricular outcomes.

We can create a more viable and useful model by listening to what rural students, educators and parents have to say about the current model and responding to the obvious need for more human support for learners in the school. Only if we combine the technical *and* the human dimensions of distance education will we realize the full potential and possibilities of telelearning in rural schools.

There is one other issue that needs some critical attention. Inherent in many forms of distance education, regardless of the nature of the technology, is a particularly conservative educational ideological, the main tenet of which is the notion that education is something of a commodity that can be pre-packaged and transmitted or "delivered" to a learner. Whether that package arrives "in a box," via the coastal boat as in an earlier time, or emanates from a box that sits on a school

desk and is linked to the internet, it is still what Friere (1976) describes as the "banking approach to education." All we have changed or updated is the technology.

If we really want to use the possibilities of the internet for education in rural places we have to incorporate a constructivist, critical and emancipatory view of education into our vision of distance education and telelearning. Then rural students, teachers and parents can make the process of education truly responsive to their needs and aspirations. As Friere (1976) writes,

Authentic education is not carried on by "A" for "B" or by "A" about "B," but rather by "A" with "B," mediated by the world - a world which impresses and challenges both parties, giving rise to views or opinions about it. These views, impregnated with anxieties, doubts, hopes, or hopelessness, imply significant themes on the basis of which the program content of education can be built. ... We cannot ...in the banking style, ...give [learners] "knowledge" or impose upon them the model of the "good man" contained in a program whose content we have ourselves organized (p.86).

Conclusion

Although it is not explicitly stated, there is no doubt that the primary focus of the Ministerial Panel is rural education and schooling. Rural parents, educators, students and other members of the community must take the opportunity offered by Dr. Williams and Dr. Sparkes to make their views known regarding the issues being investigated. The true rural education experts in this province do not live in or work out of St. John's. Those with the most knowledge and understanding of the issues are the people who live the reality of rural life and education on a daily basis. It is they who must take the responsibility for shaping the future of education in rural places. Get informed on the issues and voice your views.

After the Ministerial Panel finishes its work and presents its finding and recommendations, rural educators and parents must critically examine these and decide if indeed what is being suggested will improve the quality of education for their children.

Endnotes

- i. See "Structuring the Educational System: A Report of the Ministerial Consultation Process." <http://www.gov.nf.ca/publicat/educate2/educate2.htm>
For an analysis of the consultation process see also "Critical Perspectives on Educational Reform" (Mulcahy, 1999) in the Morning Watch (Vol. 27, Nos. 3-4) <http://www.mun.ca/educ/faculty/mwatch/win99/mulcahy.htm>
- ii. "Teachers, programs will be panel's focus," Evening Telegram (August 20, 1999).
- iii. Almost 1000 teachers have been cut since 1994/95 (Dept of Education Statistics, 1998/99).
- iv. Declining enrolment is not a new problem. The student population in the province has been in a serious decline since 1971/72. At that time there were 162,118 students. Since then we have lost approximately 2,500 students a year. Since 1991/92 the average decline has been 4,000 students. The lowest fertility rate in Canada has been a major influence in this decline, arguably, with the greatest impact in the rural areas. Since 1991/92, the social and economic conditions in rural Newfoundland have also had a major impact as many families have left.
- v. For example, in the US, schools with a significant student population with an "at risk" socio-economic profile would receive extra teaching and material resources. Many of our rural communities and schools would qualify for such assistance if they were situated in the US.
- vi. Small Schools Newsletter , (Vol. 12, No. 2).
- vii. Evening Telegram (May, 1999)
- viii. Warren. P.J. (1967/68) The Report of the Royal Commission on Education and Youth . St. John's: Government of Newfoundland and Labrador.
- ix. I wish I had a dollar for every time someone has said to me on learning of my interest in small schools, "Oh, do we still have small schools and multi-grade classrooms? I thought they all had been closed."
- x. Riggs, F. (1987) The Small Schools Study Project: Final Report . St. John's: Faculty of Education, MUN.
- xi. Williams, L. (1992) \ Our Children Our Future: Report of the Royal Commission of Inquiry into the Delivery of Programs and Services in Primary, Elementary, Secondary Education. \ St. John's: Government of Newfoundland and Labrador.
- xii. Mulcahy, D.M. (1992) \ Learning and Teaching in Multi-grade Classrooms. St. John's: Faculty of Education, MUN.

- xiii. Callahan, R. (1962) *The Cult of Efficiency* . Chicago: University of Chicago Press.
- xiv. Department of Education press release (August 19, 1999)
- xv. Ministerial Panel web site: <http://www.edu.gov.nf.ca/panel/default.htm>
- xvi. The Panel consists of Dr. Len Williams and Dr. Ron Sparkes. Research support is being provided by Dr. Robert Crocker. Dr. Williams headed up the Education Royal Commission of 1991/92; Dr Crocker was in charge of the Royal Commission Secretariat.
- xvii. Department of Education press release (August 19, 1999).
- xviii. This URL , <http://www.essentialschools.org/> takes you to the CES national web site.
- xix. Terms of Reference.
 1. Examine current educational delivery model and consider alternate approaches;
 2. Conduct consultations to ascertain views on appropriate methods for allocating teacher resources and supporting the delivery of education in the classroom;
 3. Examine current research, allocation procedures used in other jurisdictions, and methods of delivery;
 4. Recommend changes to program offerings and current method of allocating teachers, program delivery methods and issues associated with teacher training and professional development.
- xx. "Each day of the school year, about 80,000 students travel to and from school by school bus. Student busing is provided through a combination of district-owned buses and contracted services. During the 1995/96 school year, the cost to provide these services was \$30,794,000 or an average of about \$400.00 per student. This amount is almost triple the level of funding provided for instructional materials and equipment and triple the level of funding provided for maintenance of school buildings." Source: \1 Structuring the Education System: A Consultation Paper for Educational Change in Newfoundland and Labrador <http://www.gov.nf.ca/publicat/educate/busing.htm>
- xxi. It may be worth noting, if only for historical purposes, that Recommendation 48 of the Warren Royal Commission Report stated: "We recommend that consideration be given to provision of school hostels and dormitories for pupils from very isolated areas."
- xxii. It should be noted that some individual school districts did some very good work in this area on a local level.
- xxiii. The most common example of this was with French.

- xxiv. Personal interview English Harbor West (1998). Bud also told me that at the senior high level he and several other students had to complete the math course on their own. Their teacher, the legendary "Teacher Tom Farrell," who had spent fifty years teaching in the one-room school, really wasn't capable at that point of providing the necessary instruction.
- xxv. For an excellent description of this aspect of rural education see, Noseworthy, R.E. (1997) *The School Car: Bringing the Three R's to Newfoundland's Remote Railway Settlements*. Whitborne, NF: R.P.N. Publishing.
- xxvi. These are excerpts from an excellent presentation given by Mr. Parsons at the Small Schools Conference in St. Anthony, NF, this past summer.
- xxvii. Wednesday, October 20, 1999. When you stop and think about it, what kind of person, given an open choice, would actually prefer to learn or to teach in any other way?
- xxviii. At least one rural principal suggested that I should look into the drop-out rate in distance education. It is the more able students, generally, who take distance courses. The fact that a number of these students are dropping out, is an indication that the model is somewhat flawed in its assumptions about the learners. His point was if the brighter students are finding it difficult how can we possibly extend it to less able students.
- xxix. Friere, P. (1976) *The Pedagogy of the Oppressed* . New York: Continuum.

EVALUATING ONLINE DISCUSSION FORUMS: USENET NEWSGROUPS AND THE CLASSROOM

Michael K. Barbour

Introduction

In an article which appeared in **Atlantic Monthly** approximately two years ago, it was stated that

In 1922, Thomas Edison predicted that "the motion picture is destined to revolutionize our educational system and... in a few years it will supplant largely, if not entirely, the use of textbooks." Twenty-three years later, in 1945, William Levenson, the director of the Cleveland public schools' radio station, claimed that "the time may come when a portable radio receiver will be as common in the classroom as is the blackboard." Forty years after that the noted psychologist B.F. Skinner, referring to the first days of his "teaching machines," in the late 1950s and early 1960s, wrote, "I was soon saying that, with the help of teaching machines and programmed instruction, students could learn twice as much in the same time and with the same effort as in a standard classroom." (Oppenheimer, 1997: 45)

While the motion picture, radio or teaching machine has not revolutionised the classroom as was originally anticipated, computers may very well accomplish this task. However, this will not be achieved through computers alone, and computers will not replace teachers altogether. Nonetheless, teachers have begun to employ computers as tools to assist in their teaching and this might well revolutionise the classroom.

In recent years, teachers have begun to use the Internet as a teaching tool. Language and culture teachers, for example, have been using e-mail pen-friends to help their students in their studies in these areas. Other teachers have been exploiting the World-Wide Web to enhance and enrich the curriculum in all subject areas. There are, of course, three components to the Internet: e-mail, Usenet newsgroups, and the World-Wide Web. While e-mail and the World-Wide Web have found a number of educational applications and there is much literature reporting on these, there has been less use of and less written about Usenet newsgroups. One educational institution that has capitalised fairly extensively on Usenet newsgroups is the Canadian university.

Definition and Comparison

Before proceeding to consider how and to what extent Canadian universities have used Usenet newsgroups, it would be helpful to consider exactly what Usenet newsgroups are. American political consultant and political Internet guru Phil Noble describes Usenet newsgroups as "[discussion groups] with topics ranging from sex... to contemporary European literature." (Noble, 1996: 9) These discussion groups are based in a DOS (lynx) or non-icon based environment. Best estimates state that there are approximately 13,000 different Usenet newsgroups. They can be created by

system administrators at any Internet Service Provider. While Usenet newsgroups used by universities are generally within the domain of that particular university, other Usenet newsgroups generally fall into one of the nine following domains:

alt - an unregulated hierarchy of controversial or unusual topics (not carried by all sites)
comp - computers and related subjects
humanities - literature and the humanities
misc - discussions that do not fit anywhere else
news - news about Usenet itself
rec - hobbies, games, and recreation
sci - science
soc - social groups (often ethnically related)
talk - politics and related topics. (Bull, Bull and Sigmon, 1997: 12)

In addition to these general domains, most countries, states, provinces, and even cities also have domains to cover issues within their areas of interest.

One of the advantages of Usenet newsgroups over other forms of Internet discussion groups is the ease with which they can be created. Unlike web-based methods, all a system administrator needs to do is enter a simple command into the Internet Service Provider's server and the newsgroup is created. In recognising this advantage, however, one is reminded of the fact that there are other methods of Internet discussion available.

The two other common methods of Internet discussion are e-mail listservers and world-wide web-based discussion groups. E-mail listservers are a device which forwards a copy of every e-mail sent to the listserver to all the individuals who have subscribed to that list. There are some short-comings of e-mail listservers when compared to Usenet newsgroups:

Newsgroups differ from mailing lists in several important respects, ... A subscription to an Internet mailing list brings postings that are placed directly in a subscriber's electronic mailbox. Active mailing lists can generate dozens or even hundreds of messages per day. Although filters and other methods of organising this volume of mail are available, the recipient still must organise the incoming messages. It's no wonder that subscribers to mailing lists are frequently overwhelmed by the volume of their mail.

In contrast, newsgroups reside on a central news server, and their messages are viewed with a separate "newsreader." The messages are organised by topic, which allows the viewer to designate an entire conversational strand (known as a "thread") as already read if it is not relevant. (Bull, Bull and Sigmon, 1997: 13)

In these respects, Usenet newsgroups address many of the problems that can be associated with e-mail listservers.

World-wide web-based discussion groups constitute the other most common method of Internet discussion. Web-based discussion groups work in almost the

same manner as Usenet newsgroups, except that the messages are kept on a single world-wide web site and the messages appear in an icon-driven environment. Again, there are also a number of differences between Usenet newsgroups and web-based discussion groups. "Web-based browsers lack many [Usenet newsgroup] features. For example, most Web-based discussion groups do not provide an easy way to mark, hide, or delete previously read postings or to mark an entire topic thread as "read" with a single keystroke" (Bull, Bull and Sigmon, 1997: 15). The other major advantage that Usenet newsgroups have over web-based discussion groups is that there are still computers and Internet connections that operate in a non-icon driven environment. On these computers Usenet newsgroups can be read quite easily, but the web-based discussion groups are not as user friendly towards this sort of environment.

Canadian Universities

In May of this year, an e-mail was sent to the webmasters of thirty-five Canadian universities. This e-mail identified the author as a researcher inquiring about the use of Usenet newsgroups as a companion to traditional teaching and learning at the post-secondary level. It also asked a series of simple questions regarding their university's use of Usenet newsgroups as a companion to courses offered at their university. The response to the initial inquiry was not great, so three weeks later the same e-mail was sent a second time with an explanation as to why it was being sent again and a list of universities which had responded to the original inquiry. The questions were as follows:

1. Has your University established Usenet newsgroups for any of the courses offered in your University calendar?
 - a) Yes
 - b) No
2. If yes, to what extent does your University provide these newsgroups?
 - a) a select few courses
 - b) some courses, but not all
 - c) all courses in some departments and none in others
 - d) all courses in some departments and some in others
 - e) all courses offered in your University's calendar
3. If no to question 1 or anything other than e) to question 2, what are your University's plans in this area in the future (if any)?

Of the thirty-five universities contacted, twenty-two responded. There were five universities which stated that they did not use Usenet newsgroups at all; nine that stated that there were some Usenet newsgroups for a selected few courses; seven that saw themselves as offering Usenet newsgroups for some, but not all courses, and one university that had established a Usenet newsgroup for each and every course listed in its university calendar.¹

The responses to the third question varied greatly. For the most part, universities felt that if professors requested that a Usenet newsgroup be created for their particular course the university would have one created for them. One of the

problems that many of these webmasters voiced with this method was that once the newsgroup was created it was never removed and after a year or two could end up totally unused. However, the most common theme that emerged in these answers was the belief that Usenet newsgroups were "a good tool for the 80s!" but that for the next millennium universities need to move towards world-wide web discussion forums (such as Web-CT, AltaVista Web Forum or Caucus web-conferencing software). Another "new" strategy that was mentioned was the use of shared folders on a departmental or faculty server.

There was one university, however, which used a full integration of its curriculum and Usenet newsgroups. Approximately five years ago, Carleton University used the above mentioned system of instructor request for the creation of course-related Usenet newsgroups (such as *carleton.courses.47100d*). Approximately three years ago, it allowed for a system which created two newsgroups for each course, one for course materials and one for course discussion (such as *carleton.courses.47230b-d* and *carleton.courses.47230b-m*). In the summer of 1997, Carleton decided it would be a lot less work to simply create course newsgroups for every single course regardless of whether or not the course instructor wanted a newsgroup. In other words it was a time saving measure rather than a thoughtful strategy.² The main reason that they created a course newsgroups for every course was that it became difficult and time consuming to create course newsgroups on request. In actual terms, this means that there are 2972 *carleton.course.#####X* Usenet newsgroups.

According to the Carleton University webmaster, Rick Mallett, the use of Usenet newsgroups was more a convenient choice than a decision based upon educational pedagogy:

We felt that an electronic forum for course discussion was useful and straightforward to implement. We didn't care exactly how the newsgroups would be used but assumed that faculty would use the newsgroup to distribute assignments and course notes and that students would use the newsgroup to ask each other (and TA's) questions. In many cases the faculty were oblivious to the existence of the newsgroup (despite our efforts to inform them) and the newsgroup was used exclusively by the students for course related discussion. In other cases the course instructor actively participated in the discussion and attempted to answer as many questions as possible. We've been meaning to look at web forums but haven't had time. Usenet newsgroups are well supported and easy to maintain and there are numerous available newsreaders etc. etc. etc.³

The Carleton University example is the most comprehensive use of this technology of any Canadian university.

Usenet Newsgroups and Learning

In general, though, the mere creation of Usenet newsgroups does not necessarily mean they are being used for sound educational purposes or that they are being used at all. One of the comments made by a number of the webmasters

was that for a Usenet newsgroup to be effective it has to be monitored by the instructor. However, my experience in this area would indicate that it has to be a much greater commitment to the technology than is implicit in this simple task. For online discussion groups to be of use to students, instructors must know beforehand exactly how they intend to use this technology to either supplement or enrich students' learning.

There are a number of ways in which effective use of the technology can be accomplished. One of the easiest is to have the professor post questions to generate student discussion around particular themes, remembering that the Usenet newsgroups are organised in threads which consist of an initial post and then all the responses to that original post. In this scenario, the professor would grade students' responses to the questions and the students' interaction around one another's responses. Another simple way to use the Usenet newsgroups is as a means to post administrative messages regarding the course. Another administrative use is for students to post questions regarding components of the course to the instructor, such as clarification of lecture points or questions about course assignments.

According to Gina Bull, one of the authors of the "Internet Discussion Groups" article, there are two basic ways to use Usenet newsgroups in education:

One is to view the articles as primary sources in a discussion of a topic, much like interviews or letters. In this model, the students would read the newsgroup much like a daily paper, perhaps without interacting at all. The other way is as a support mechanism for the class itself -- a local newsgroup is created for the class (assuming the school has a local Usenet server) -- and is available at all hours for extra class discussions, clarification of assignments, "office hours", etc..⁴

These methods of using the Usenet newsgroups are not particularly creative, nor do they challenge students much beyond basic knowledge and lower-order reasoning. However, there are other methods which can be used, methods which serve to provide more challenge for students. For example, as a student I witnessed one professor in a course in Canadian constitutional politics conduct an online First Ministers meeting. For this activity, the professor created groups during class for each of the ten provinces, two territories, federal government and aboriginal groups. These groups formulated their positions offline, then posted them to the course's Usenet newsgroup. Once all the positions were available on the newsgroups, individual students and groups were encouraged to generate discussion and debate around their areas of common ground and their areas of vast difference. As the participation increased, there was posturing by groups, deal-making, individuals standing firm, everything that would have occurred had this activity been conducted during class-time. However, by moving the activity to a Usenet newsgroup the professor was able to extend the amount of time devoted to the activity and increase the number of students participating in the activity. Conducted offline, this activity would have taken three to six classes. By conducting it online, the professor was able to use one class to explain the activity and get the ball rolling, and then allow the students weeks to participate in this activity.

This approach is similar to one of the four components of the Acadia Advantage. In the example used by the Acadia Advantage, a piece of software called MS-Netmeeting is used by the Institute for Teaching and Technology to assist groups of students in constructing a model of learning. This project would see students orient themselves during class-time towards how they will approach the project and then use their laptops and the MS-Netmeeting software to complete their construction of a model of learning (Hemming and MacKinnon, 1998: 7). Another component of the Acadia Advantage is the use of coded discussion groups to promote substantive discussion. This component worked much the same way as the above mentioned scenario where the professor posed questions for the students to respond to. The coding of the responses was based on a system created by Acadia and every two weeks the responses were compiled by topic and e-mailed to each of the students.

While these may not be uses of Usenet newsgroup, they do illustrate projects that could also be brought into a Usenet newsgroup environment. In addition to the advantages of Internet discussion groups and Usenet newsgroup for enhancing learning, there are some inherent values that come from using these types of technologies. The first value, which was evident in the description of the online First Ministers meeting, is the fact that Usenet newsgroups can allow for a dynamic, on-going discussion. In a classroom situation, an instructor can allow a discussion to be conducted in a particular lesson. However, if that instructor wanted that discussion to continue into the next lesson the instructor would have to bring it up again, or the discussion would die. However, as has been illustrated earlier, there is no time limit for an online discussion. Also, an online discussion which continues over a longer period of time allows students think time before participating in the discussion (something that is not always practical during an in-class discussion).

Another value of Usenet newsgroups is that they can create a sense of community. In many cases, especially at a post-secondary level, students do not have time to associate with one another outside of class-time and have even less opportunity during class-time. Even with the opportunity for interaction during class-time, students tend to gravitate towards others who shared common characteristics as themselves. Online discussion forums can give students who would not otherwise interact with one another a greater chance to get to know their colleagues, creating in effect a cyberfamily.

Another value that Usenet newsgroups help to foster is the teacher's role as a facilitator. In most of the activities outlined above, once the instructor has begun the activity he/she can move aside and allow the students to interact with one another. It is through this interaction that students learn. In this model, the instructor is no longer a teacher but acts only as a facilitator to make sure that students are heading in the right direction and remain on-task or on-topic. In the activities that have been outlined, the pedagogy matches the technology that is being used. Not only is the instructor able to act as a facilitator, but he/she is able to provide a more substantial individual feedback, both in quality and quantity. During an in-class situation, it is not feasible for an instructor to wait for each and every student to make interjections into the discussion and to provide each student with individual feedback.

To end this consideration of Usenet newsgroups at this point would be premature. Up to this point we have examined how Usenet newsgroups can be used,

how they are being used, and to what extent they are being used. However, there are some problems with using Usenet newsgroups that can also be detrimental to students' learning. To complete any consideration of the educational value of Usenet newsgroups, this point must be taken into account.

Pitfalls of Usenet Newsgroups

The reasons for using online discussions and specifically Usenet newsgroups are compelling. Yet there are a number of problems associated with using Usenet newsgroups for educational purposes. The first that can arise and perhaps the easiest to remedy is the issue of off-topic posts. By this I mean online entries from students that are irrelevant to the discussion, the topic or the course in general. While there can be a time and place for these sorts of relaxed discussions, there is always the chance that an instructor's well-thought out, online discussion could turn into a petty flamewar⁵ between students. This can easily occur and it is not easy to remove or delete messages that have been posted to the Usenet newsgroup.⁶ This problem can be monitored, with serious problem being minimised if the instructor regulates the online discussion and is able to catch such deviations before they turn into something that the instructor is unable to stop.

Another problem that can arise with Usenet newsgroups is the students' individual access to this technology. While it is assumed that, since these newsgroups are available online, twenty-four hours a day, seven days a week, all students have equal access, this is not the case. To be able to access Usenet newsgroups, a student would need a computer with some means of connecting to the Internet (either via modem or through an Ethernet connection). This basic requirement means that students who have access to their own computers at home have a greater opportunity to have access to these newsgroups. Students who do not own a home computer have to gain access to these newsgroups using computers provided by the school. However, computer labs are not always open, students are not always on campus to use the labs, and sometimes there are just not enough computers in the lab for every student who wants to use one. The issue of access, or rather equal access, is one that will exist in most situations where technology is involved and one that is not easily addressed.

There is also the problem of inequality in terms of students' ability to use the technology. This is one of the few problems that can be overcome relatively easily and in an effective teaching environment should not be a hurdle. When instructors assign a task, it is necessary first to ensure that the students have the skills to complete the task, a principle which is as relevant to the use of technology as it is to other aspects of learning.

Another problem typically associated with online discussion groups is the loss of direct discussion with other live persons. This problem was exacerbated with the invention of television. With the advent of computers and especially the Internet we, as a society, are spending even less time with each other. We are quickly becoming a faceless society. This phenomenon has a number of problems associated with it. For example, some students are oral learners and remember things that they hear more than anything else. Other students may enjoy interacting with others, while they feel that interacting through a computer screen is cold and unemotional. Finally, the

phenomenon of the faceless society is troubling in that children do not have as much opportunity to develop social skills needed to interact with others.

Conclusion

Where does this leave the use of Usenet newsgroups as an educational tool? As has been shown, online discussions (and specifically Usenet newsgroups) can play a beneficial role in students' learning. We have also seen that there are a number of activities that can be enhanced through the use of online discussions. However, we have also noted that there can be problems associated with the use of online discussion, including problems for which there are no easy or adequate solutions. Yet, to dismiss the use of this technology on this basis would be premature.

Several conclusion might be drawn from this paper. The first is that before deciding to use an online discussion as a part of a curriculum, the instructor must make sure that this technology meets the goals and objectives of that curriculum. In other words, there must be sound pedagogical reasons for its use. The second conclusion is that instructors need to choose the appropriate venue for this online discussion. While this paper has dealt primarily with Usenet newsgroups, there has also be consideration given web-based discussion forums, to e-mail listservers, and to shared folders on a central server. All of these alternatives have particular advantages and disadvantages that instructors should consider when choosing what it is they want to achieve with the online discussion.

Thirdly the instructor should have a well thought-out, well planned activity before beginning an online discussion. As with most teaching activities, both online and offline, a lack of planning will usually result in a lack of learning. Finally, for an online discussion to work well and for students to learn effectively from the exercise, an instructor needs to closely monitor the online activity. Specifically, the instructor needs to make sure that the discussion in moving in a constructive way, that students are not engaging in off-topic posts, and that students are participating in a constructive manner. If an instructor can anticipate problems before they occur, there is a good chance of finding a way to prevent them (or at least stop them before they become too unmanageable).

No one is quite sure what teaching will be like in the next millennium. Will we become an even more faceless society? Will computers become just another teaching aid, no more useful than the overhead projector and VCR? No one really knows. However, while we are waiting to find out, we can try to incorporate new, different and exciting approaches into our teaching. Maybe Usenet newsgroups, or at least online discussions, can be one of those approaches.

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APPENDIX A

1. Has your University established Usenet newsgroups for any of the courses offered in your University calendar?
 - a) Yes
17 universities (see question 2)
 - b) No
5 universities

2. If yes, to what extent does your University provide these newsgroups?
 - a) a select few courses
9 universities
 - b) some courses, but not all
6 universities
 - c) all courses in some departments and none in others
None
 - d) all courses in some departments and some in others
1 university
 - e) all courses offered in your University's calendar
1 university

3. If no to question 1 or anything other than e) to question 2, what are your University's plans in this area in the future (if any)?
 - e-mail is checked more often than Usenet newsgroups
 - e-mail is delivered faster than Usenet newsgroups
 - for newsgroups to be effective, the instructor must monitor them
 - using shared folders
 - strategy to use WWW-based approach for Internet delivery of course material
 - Usenet newsgroups in many cases are only accessible from the campus domain
 - web-based newsgroups such as Web-CT
 - newsgroups created at the instructor's request
 - web conferencing (Caucus)
 - a good tool for the 80's!
 - web-based conferencing, such as Caucus, offer access control, control over deleting responses and full HTML content in responses

Those who did not respond:
13 universities

ENDNOTES

1. Full results are provided in Appendix A.
2. The author began attending Carleton University approximately five years ago and was a student during these advances.
3. Taken from an e-mail received by the author on 05 Aug 1998.
4. Taken from an e-mail received by the author on 27 Jul 1998.
5. An off-topic discussion which usually involved students verbally attacking, or "flaming", other students.
6. Note that messages can be removed (or cancelled) from Usenet newsgroups, although most Internet users do not know how this is done. In addition, there are individuals who monitor Usenet for cancelled posts. Once they find users who have cancelled posts, they sometimes harass that individual both through e-mail and publicly in the particular newsgroup.

TECHNOLOGICAL DETERMINISM AND THE ENGLISH CLASSROOM

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As curriculum planners are swayed more and more by the influences of technological determinism, it becomes imperative that all educators try to get a broader sense of the changing socio-cultural interactions that take place within classrooms. Digitized information manipulation, on-line communications, the incorporation of electronic files and graphics into texts, the transferring and downloading of World Wide Web data, and the inclusion of HyperCard and other interactive multimedia programs into documents are all becoming part of the regular high school English curriculum as we move toward the next millennium (see the 1996 *Atlantic Canada English Language Guide*). In addition, for high school English students, the experimenting with Home Page technologies (using HTML language) "to become information providers on the Internet..." the creating of a "broadcast/ Home Page for their schools," and the planning of publicity campaigns in a range of media, are all part of the changing English language arts curriculum (p. 155). This essay will discuss some of the challenges these types of curriculum objectives have for the English classroom and give some insights into their pedagogical implications.

English, as a discipline, has been taught in schools for about 130 years (Applebee, 1974). Its general structure has remained the same within the university; a literary canon is studied and appropriate composition skills are used to demonstrate an understanding of various literary works. This decoding/analytic literacy is typically marked by generic concepts delivered to learners through anthologies or textbooks. In turn, students individually study the material and demonstrate the power of their textual engagements through analytical papers, tutorials, and/or examinations.

Canadian and U.S. high schools typically used this form of English instruction until the 1980s. Scholars such as Rosenblatt (1978), Iser (1980), Crossman (1982) and Sholes (1985) challenged this methodology and moved English teaching toward a transactional/critical form of literacy. In the process, individual learning succumbed to collaborative learning, preconstructed learning outcomes gave way to student constructed meaning, and the quests for the ultimate literary criticism gave ground to confirming and deconstructing personal and aesthetic readings of texts. The 1980s saw an increase in the use of nonprint texts such as music, film, television, and photojournalism in the English classroom. What is important here is that high school English instruction began to take on a very different appearance from university English instruction. An individual student's engagement with literary works became a paramount concern; historical or critic's conception of a particular work took on lesser importance.

English language arts curriculum in the 1990s has greatly expanded the kinds of texts given over to study (See for example the 1996 *Foundation for the Atlantic Canada English Language Art Curriculum* document and the *Western Canadian Protocol- Common Curriculum Framework*). CD Rom technologies, multimedia texts, Internet links, and rock videos are now among the many items to be 'read' for meaning. As the very physical nature of texts has changed so too has the student's modes and methods of recording and responding to textual engagements.

Representing has been added to the traditional strands of reading, writing, listening, and speaking. Students are encouraged to demonstrate their responses to various textual engagements through 3-D constructions and presentations, multimedia assemblages, models, or graphic displays. The result is that high school English as a subject, with its expanded notion of what can be 'read' and its move and acceptance of multiple ways of representing knowledge, is now markedly different from university or traditional conceptions of the discipline.

Information, media, and visual literacies are increasingly taking their place along side more traditional understandings of literacy. To be clear, information literacy is computer based and uses multiple technologies to produce and manipulate data. Media literacy is understood to be an engagement with the mass media in ways that will give insight into how it manufactures and manipulates meaning. Visual literacy is an ability to conceptualize and understand the symbolism in static and moving images, and to understand their impact as they construct meaning.

The result of this all-inclusive conception of English education is a discipline with new and greatly expanded parameters. A vocational/technical conception of education is being juxtaposed against an aesthetic/literary one; efferent readings are challenging aesthetic readings for class time. In this reconstruction, media and computer accessed information is assured a greater and greater role in the curriculum. In some quarters the discipline of English is undergoing a name change. General students will be taking "Communications" instead of English in grades 11 and 12 in Atlantic Canada (*Atlantic Canada English Language Arts Curriculum Guide*. Draft: July 8, 1996, pp. 31, 32, and 35). English will be for the elite--those who are university bound (p. 31). Communications courses are vying with English courses for a central place within the English high school curriculum.

What is disturbing about the direction of the new English language arts curriculum is that it is adding enormous amounts of material to an already overcrowded program of studies. The addition of a course on media studies or the inclusion of a business course on computer-based text manipulation or a computer course in advanced graphic design sounds progressive. However, the incorporation of these topics within the English language arts program, as they are in Atlantic Canada, causes pressure to be placed on limited instructional time. This is not to say that the use of new technologies is not applicable in responding to texts; rather in the literature class it is the response that is of importance as opposed to the packaging. Behind the most technologically advanced special effects Hollywood movie is a written script.

Teachers of English are now expected to engage students in a multitude of texts in a variety of mediums. With the expansion of the definition of text comes an expanded definition of what constitutes reading. To understand and to 'read' the media and advertisements, English teachers need to be versed in the nuances of popular culture. They are expected to build bases of cultural capital that are situated in and engaged within television, Hollywood movies, pop radio, videos and an assortment of pulp journals and novels. In order to lead students in meaningful text discussions, teachers of English are expected to keep current with media happenings. Thus Calvin Klein's pictures of scarcely clad children or Bennington's ads (texts) of copulating horses or Disney's placement of its corporate symbols on

Canadian postage stamps need to be studied. Traditional teachers of English will argue that you cannot have it all. They will say that a blending and rolling of academic, vocational, workplace, technical, personal-growth, and liberal conceptions of English into a 'one-philosophy-fits-all' notion of secondary education will not fly. The rise of electronic communications skills and the decline of literature is challenging traditional conceptions and values associated with the teaching of English. An industrial/technical/vocational model of education raises many new theoretical questions for English educators. As the new curriculum documents are implemented in Canadian high schools, questions arise about the kinds of educational backgrounds and experiences the next generation of English teachers will be expected to have since a literary education seems to satisfy only part of the new requirements of the discipline.

English teachers will need a background in specific computer skills. In *Foundation for the Atlantic Canada English Language Arts Curriculum*, teachers are required to be more flexible in the uses of technology in classroom practice. Included under the document's teaching suggestions are such ideas as having students "use a range of media (including, but not limited to computers) to produce a text..., edit spreadsheets, use formulas, sort information and manipulate data in a number of ways to create meaning", and "apply the principles of good design to produce a variety of desktop published documents using desktop publishing software" (p. 152). Teachers are to encourage students to "subscribe to listservs and news groups of interest to them and participate in electronic discussions," (p. 153).

Assuming the present generation of traditionally educated teachers can set aside the overwhelming weight of tradition and historical precedence that has come to guide and inform the intellectual habits and nuances of English instruction, a host of questions come to mind in light of these new curriculum initiatives. Literature based teachers are bound to ask a number of questions: What are the methods we might develop to evaluate electronic texts? What are the new grammars and genres students will need to learn as they begin to write in networked classrooms and electronic and digitized environments? How will twenty-first century virtual environments support the more traditional educational objectives of English and language arts instruction? As a culture raised on print, are we relying too heavily on print conventions to address virtual communication requirements? Some teachers of English might feel they are becoming the servants of technology and question a curriculum that focuses on Internet communicating rather than looking at the structure of human communications. Others will question the use of multimedia and a cacophony of technologies to make critical judgments about media and technology. They will direct students to more traditional sources and see in them the tried and tested seeds for developing critical thought.

As I have written elsewhere (Barrell, 1996), the exposure to Internet information and databases fails to guarantee much. Just as the existence of community libraries did not guarantee literacy, neither does the availability of computer printouts, Internet search engines, complex statistical graphing, or technological forecasting necessarily improve instruction or learning. In the English classroom it is time, memories, solitude, and companionship that are the ingredients that encourage one's ideas to marinate and mature into thoughtful words and creative actions. Literature study, as Northrop Frye would have us understand it, is there to

educate the imagination. We need to be careful about moving away from time spent on aesthetic textual engagements and creative critical thought. Efferent reading is useful, but it must not come to dominate student readings. Just as I have asked questions about what it means to write in electronic environments, I can also see that a new set of reading skills is required to function well in hypertext. The act of 'reading' on the Internet is not as simple as we might think. Print authors restrict our reading as well as control and filter the flow of information that reaches us. Reading on the Internet, if it is to be done knowledgeably and skillfully, requires an ability to elbow past undifferentiated information and to find links that render access to relevant data. Because of the multiplicity of pathways on the Internet, I see the instructional role of the teacher as being responsible for finding pathways through encroaching distracters and advertisements to worthwhile sites. They must make sure that the lateral reading access the Internet gives students is not done at the expense of depth. Teachers of English in the next millennium will need to develop trustworthy, accurate, reliable, and reapplicable materials and be able to leave markers for students to follow as they venture and read in various sites (Barrell, 1997).

English educators will need to spend time assessing the new conception of high school English instruction being introduced in Canada. Though they have argued over the nature and the thrust of various literary canons, they have tended to agree that aesthetic readings are key to understanding the human condition and for allowing young people to engage with the issues that impact on their lives. They know it allows students to vicariously experience human motives, conflicts, and values. Technology is seriously challenging literature for time and space in the English classroom. A balance must be struck so that English does not simply become a vehicle for working and operating in cyberspace.

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MOTOR LEARNING, METACOGNITION AND TEACHER COMPETENCIES: CRITICAL COMPETITORS IN EDUCATIONAL TECHNOLOGY

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Abstract

The main idea presented in this paper is that successful adoptions of educational technology are usually a consequence of the decisions made by a teacher about her critical competitors. We begin with a definition of "critical competitors" and likely interactions between the humans and their newest technologies. My goal in writing a paper with such a focus is that other educators will choose to examine some of the controversial perspectives and debates associated with using technology in educational settings.

Critical Competitors

The term "critical competitor" first emerged in Scriven's 1981 work on product evaluation (Scriven, 1981). Scriven used "critical competitor" to mean a creative alternative which adds value and provides comparable or even better results. For example, Scriven recommended that during 1970's print-based instruction was still a viable critical competitor to CAI. Ragsdale (1988) extended Scriven's usage to include equally agreeable alternatives to computers in all curricular areas, including Phys Ed. In Math Education for example, peer tutoring was seen as a critical competitor of CAI. Around this time, critical competitor adopted an axiological, more context-dependent meaning: 1.) that something is gained and something lost; 2.) that student literacy is likely to suffer over the short-term; 3.) that student clicking with a mouse will replace the requirement to remember anything; 4.) that typing may replace social interaction; and, 5.) that their student assignments will tend to reflect a group mandate. Then in 1990, Geisert and Futrell introduced four "paradigms of computer use" (i.e., task-defined, timed, milestone and open), and four possible "users-per-station" (i.e., one, small groups or whole class). In this way, critical competitors were seen as important decisions about competing needs among students, facilities and instructional intent. Knowing our critical competitors, therefore, means knowing how to prioritize our computing requirements based on factors under our control.

Motor Learning

A critical competitor for many novice users of educational technology is the time it takes to complete a task with a keyboard, mouse, scanner or other input device. Since the 1950's in fact, completion time has been a critical competitor to student aptitude, motivation, software attributes, teaching method, and other factors in educational technology; that is, time required to access a site, time required to pull down a menu, and required time to type a paragraph. The need for a more accurate prediction model of movement-time in computer input tasks has been stronger than it has been for the past thirty years. Bit mapped displays and office and desktop metaphors have replaced nested menus and command lines. Cursor and function keys have been largely replaced by computer mice and pull-down menus. Arguably, the best understood measure of task difficulty as it applies to the time required to

complete a task is Fitts' Law (Fitts, 1954). Psychomotor studies have shown high correlations between Fitts's measure of task difficulty and the time required to complete a task (MacKenzie, 1991). In comparing four devices for selecting text, Fitts law was found to provide good movement-time prediction for a mouse and joystick. In a Keystroke-Level Model for predicting user performance times, Fitts law was cited as an appropriate tool for predicting pointing time (Card, Moran & Newell, 1980). In weighing the cognitive benefits of movement time and task difficulty then, should one paraphrase text by keyboarding-in the text, scan with a hand scanner, or use a mouse to "block and paste" from someone else's web page? The correct response to this question can now be expected to improve efficiency of using computer software and online services.

Another critical competitor for many novice users of educational technology is the growing requirement for learners' to shift their attention between detailed information presented visually and gist information presented in auditory prompts (Mann, 1995c; Mann, 1997c). We know that gist is best assimilated by listening, and detail through reading; gist and detail may be considered to be critical competitors of one another in educational technology (Mann, 1995b; Mann, 1997b). In this way, sound design is a parsimonious approach to retain our multitasking efficiency while reducing the cognitive load associated with using computer software or online services. Similarly, auditory design as well as visual design should be considered critical competitors in educational technology.

Teacher Competencies

When educators begin to feel informed enough to get beyond the intimidation of technology within the educational system in which they work, they tend ask someone, "What do I need to know?". At this moment, the process of understanding one's critical competitors begins. And a wise response should be, "know something about each of the thirteen 'Technology Foundation Standards For All Teachers' established by the International Society for Technology in Education (ISTE)" (Thomas, 1993). These are:

- Demonstrate an ability to operate a computer system to successfully utilize software.
- Evaluate and use computers and related technologies to support the instructional process.
- Apply current instructional principles, research and appropriate practices to the use of computers and related technologies.
- Explore, evaluate and use technology-based materials, including applications, educational software and associated documentation.
- Demonstrate knowledge of uses of computers for problem solving, data collection, information management, communications, presentations, and decision making.
- Design and develop student learning activities that integrate computing for a variety of student grouping strategies and for diverse student populations.
- Evaluate and select and integrate technology-based instruction in the curriculum of one's subject areas and or grade levels.

- Demonstrate knowledge of uses of multimedia, hypermedia and telecommunications to support instruction.
- Demonstrate skill in using productivity tools for professional use, including word processing, database, spreadsheet and print graphic utilities.
- Demonstrate knowledge of equity, ethical, legal and human issues of computer use as they relate to society and model appropriate behaviours.
- Identify resources for staying current in applications of computing and related technologies in education.
- Utilize computer-based technologies to access information to enhance personal and professional productivity.
- Apply computers and related technologies to facilitate roles of the learner and the educator.

That said, the assimilation process requires diligence with the technology (Poole, 1997). And at the institutional level, the implementation of the assimilation process has been identified as an important catalyst for educational change. There have been three distinct approaches to assimilating technology into educational institutions: "transformationalism", "collaborationism" and "incrementalism". See Mann (1994) for an explanation of each of these perspectives. The preferred position advanced in this paper is incrementalism. Incrementalism is consistent with the Japanese management practice of kaizen, meaning "slow, never-ending improvement in all aspects of life" that focuses on quality control. Continuous improvement differs from the classical Western approach to improvement principally in that it relies on an investment in people, not on equipment. Incrementalists propose that inservice courses in educational computing be provided to assist instructors in how to implement computers in the instructional process. Preparing instructors to cope with and use computers in the classroom and laboratory is considered to be a complex task, continually buffeted by technological advances and constrained by resources. "Unless instructors become advocates of the change, the innovations are implemented pro-forma, if at all".

At most levels of the educational system, successful changes to educational computing with a minimum of discomfort requires policy-makers' attention to certain factors. The first factor affecting the successful adoption of the distributed learning environment is the support and leadership exhibited by the administration. Many educational computing facilities, however, are still planned and managed by non computing administrators. "It is only when faculty see chief administrators using technology do they feel the need to learn it themselves". A second factor affecting the successful adoption the distributed learning environment is an incremental adjustment plan-of-action. This type of planning should reflect the current total quality management trend in business which advocates several small-steps' over the complete replacement' approach. The probability of successful implementation increases when technology plans are tied to the goals of the institution. Carnegie Mellon University has implemented a major inquiry called "The AAAA Initiative" which is expected to produce recommendations in the next few months. The A's ask, "What makes it routinely possible for anyone, to send or receive anything electronically from or to anyplace at anytime?".

In most educational settings, it seems that there is still a range of experience and expertise in educators' knowledge and skills with technology. From the limited

research (Mann, 1994; Schrum & Berenfeld, 1997), it appears that incremental implementations should logically occur in three stages.

- Stage One: From Extracurricular to Curricular Enhancement. At this stage, educators do not redesign their curricula or teaching practices to enhance courses with web-based activity. The use of the Internet and web-based material is often introduced as extracurricular activity, though preferably still within I.S.T.E. Standards. After an exploratory period, these activities are then introduced into specific courses.
- Stage Two: From Curricular Enhancement to CMC Modules. Educators in most educational institutions still lack the training, experience, or confidence to abandon their conventional teaching practices in favour of new and unfamiliar ones. In most educational settings, this lag is apparent throughout the entire educational subculture (See Mann, 1994). Nevertheless, some educators who have successfully augmented their curricula with the Internet and web-based activities tend to approach the next stage of technology integration by inserting specially-designed web-based modules into traditional courses; again, preferably within I.S.T.E. Standards.
- Stage Three: Telecommunication Fully Integrated Into Curricula. At this stage, integrating the Internet and other computer-based activities into daily instruction is more challenging than merely downloading files or sending email. Full integration of technology using I.S.T.E. guidelines eventually requires a redefinition of pedagogical goals, restructuring of curricular offerings, provision for instructor training and support material, and sufficient online tools for the collection of student data.

Unfortunately, most educators do not implement technological integration in discreet stages. What tends to happen is that the initial confusion about how to proceed is compounded somewhat by stochastic and idiosyncratic advice, though this trend may be starting to change.

One of the greatest new areas of confusion about how to proceed is compounded by stochastic and idiosyncratic advice is "tele-learning". As a catchall term, "tele-learning" of the 1990's is replacing 1980's terminology such as, "computer-mediated communications", "telecommunications in education" and "educational networking". Although this new field has already generated many of its own critical competitors, only a few will be discussed here. Most educators now recognize that current web-based technology is a bona fide critical competitor to conventional technology. E-mail is a critical competitor of telephone voice mail. Chat Rooms, though not often used in education, can be seen to be a critical competitor to answering the telephone. And The Internet is a critical competitor to using the local public library, or is it? The Internet is only a distributed environment, not a distributed learning environment. Academic rigor gives way to popular culture, most of questionable origin and character. So it should not surprise educators when the Internet offers them and their students mediocre educational material.

Unlike much of downloaded material from the Internet, an educator's curricular web page can be original and theory-based, reflecting one's own experiences or aspirations in their teachable area. Despite this capability however, instructional

design templates are recommended for instructors who want to design new courses to be taught over the web. In our recent study (Brown & Mann, in press) of using templates in the web site development process, we found that a print-based template served to assist subjects as they restructured school lessons into a personal expression on a public document on the institution's web site. Implied in this process of students' mental restructuring of textual data was that their interpretation of the text for web site presentation changed the mental organization of that information for the student. We found that the web design activity added to their mental restructuring process.

Today, many colleges and universities foresee their future prosperity in terms of the swiftness with which they can create and maintain sophisticated World Wide Web-based courses, or more correctly, "a distributed learning environment website". Toward this end, interest has been re-kindled in instructional design and its application to the Internet environment. And to this end, software developers have been scrambling to offer educators design tools for such a purpose. WebCT is a good design tool for the creation and maintenance of sophisticated World Wide Web-based courses.

WebCT (Goldberg & Salari, 1977) is one example of a tele-learning technology that is being seen as a critical competitor to conventional technology. WebCT incorporates many of these newer web-based technologies (and coincidentally many of the critical competitors) in one teaching tool. WebCT has its own e-mail, now a critical competitor with the University e-mail service, or that of the local Internet Service Provider. WebCT offers four separate Chat Rooms. And of course, unlike these other features, WebCT offers educators and their students a flexible yet structured, distributed learning environment; a critical competitor to most things done by educator with students in classrooms and labs. Of course, everything in WebCT is controlled by the educator or instructional designer. In a word, WebCT is a good design tool for the creation and maintenance of sophisticated World Wide Web-based courses. The open learning environment provided in WebCT works best with experienced, traditional learners and tele-workers (learners on the job). Most of the benefits can be found with this group because WebCT can accommodate individual differences in objectives- setting, assignment completion and flexible test-taking. Less experienced traditional learners and tele-workers can be accommodated in WebCT using a traditional behavioural objectives approach to instructional design. For less experienced traditional learners and tele-workers, conventional timelines would be set by their instructors with the usual requirements to complete quizzes and tests at prescribed time periods.

Metacognition

Contemporary educational technologies place new demands on students' attention and motor learning. The Faculty of Education at Memorial University has recognized these current challenges. Some conventional and online courses have been modified to conform to the I.S.T.E. Standards and Explorer Centres implemented to deliver some of the technology-based tasks (Mann, 1997). An Explorer Centre is a self-contained unit, a computer connected to a videotape recorder by a thin wire through an inexpensive conversion box. There are two Explorer Centres currently in use in the Faculty of Education at Memorial University:

one self-contained unit in a private room connected to the Internet, and the other unit doubles as the video editing suite also connected to the Internet.

Explorer Centres appear to have strengthened the application of the I.S.T.E. standards with teachers (Mann, 1996). For this reason, Explorer Centres are considered to be critical competitors to simple pc set-ups for practicing and assessing student and teacher knowledge and skills. Explorer Centres are individual computer/video workstations wherein a computer and microphone are linked to a videotape recorder. Explorer Centres: 1) can model the appropriate learning behaviour on a demo tape; 2) can give each preservice teacher a platform for generating the appropriate learning behaviour on tape, and; 3) can provide a record from which to assess each preservice teacher's verbalizations about the learning process. Explorer Centres may be less intrusive due to the absence of the investigator's tape recorder, and more accurate than traditional observation transcription. In this way, Explorer Centres are considered to be critical competitors to simple PC and Mac set-ups in The Faculty of Education.

Summation

Many teachers still feel that that they do not always have sufficient knowledge, skills and resources in educational technology (Bartholomew & Hulett, 1996). This paper has highlighted a few of the challenges for those who are considering the integration of technology into their daily teaching routine. In doing so, my intention was to illustrate the complexity that can affect making decisions about using technology in educational settings, particularly where budgets and jobs are likely to be affected. The challenges ahead are continuous, from co-ordinating activities between eye and hand, to gaining minimum competency as a computing educator, to metacognition through an Explorer Centre. What I hope to have shown here is that, more often than not, what starts out as a good challenge becomes a choice among critical competitors.

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**THREE DIMENSIONS OF LEADERSHIP IN A TELELEARNING
ENVIRONMENT: SCHOOL NETWORKING, COLLABORATIVE TEACHING
AND OPEN ADMINISTRATION**

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Many educators are aware of changes taking place in educational systems as computers, the Internet, interactive television, satellite dishes and an ever expanding range of software provide new and often exciting ways of bringing teachers and learners together. The development and convergence of information and communication technologies provides opportunities for leaders in education to organize inter-school networks, collaborate with one another and administer schools in new ways. This has been particularly important in rural areas with very small schools. The viability of small schools has been the subject of debate in both Canada and New Zealand and the provision of education to rural communities has, accordingly, been a policy issue in both societies. The 'cost effectiveness' of small schools (Bray, 1987) has to be considered in relation to the issue of equity if young people are not to be disadvantaged by the location of their homes.

The following observations are from the author's recent experience working with several regional telelearning networks in New Zealand. Most of the issues raised are relevant to electronic networks that link schools in other parts of the world, while others are peculiar to the unusually deregulated and decentralized system of education in New Zealand.

Telelearning was adopted in many rural areas of New Zealand as a means of keeping schools open in small and isolated communities. By sharing teaching and learning resources through the electronic networking of small schools over wide geographic areas, many small schools have become, in effect, constituent parts of a large school (Stevens, 1995b). In the process, many learners in rural areas are provided with a considerably enlarged range of curriculum choices as well as extended on-line peer groups. In a report on the development of rural school networking (Stevens, 1995a) it was noted that leadership by Principals who recognized the potential of new technologies in classrooms is critical to the survival of many small schools.

School Networking

The academic and administrative interfacing of schools into local, provincial and even national networks using audiographic and video technologies, satellite dishes, the internet and interactive television is changing the way in which education in whole regions of New Zealand is organized. The networking of small schools on dispersed sites into virtual classes has the potential to provide rural students with access to an increased range of teaching expertise and with learning environments comparable to those available to their peers in large urban institutions. According to Tiffin and Rajasingham (1995), a virtual class is "where two or more people can come together as telepresences for instruction." This involves a situation " where everyone can talk and be heard and be identified and everybody can see the same words,

diagrams and pictures, at the same time. This calls for the use of telecommunications and computers. At its simplest, it can be done using two conventional tele phone lines at each site, one to link telephones and one to link computers."

Schools that are networking with one another and thereby providing a basis for virtual classes to develop, use computers and other technologies as integral parts of the day to day life of both teachers and learners. By integrating information and communication technologies in classrooms and by applying these to the development of educational networks, schools can provide students and teachers with access to non-local industrial and commercial environments. Links with industry, commerce, polytechnics and community colleges considerably extend the scope of the education that young people, particularly those in rural areas, can experience from their schools. These technological developments provide students with expanded horizons when considering their educational and vocational futures. The introduction of computers, the internet, email and, in some schools, satellite dishes, to develop virtual classrooms covering dispersed sites has the potential to redefine the ways in which teachers and learners interact. Within a virtual class there may be more than one teacher with a telepresence at a particular time. Decision making, teaching-styles and inter-personal relations are much more public in electronically-networked classes than they are in conventional classrooms and for some teachers this may initially be threatening. For other teachers, new communication technologies are liberating as they have their skills exposed to an expanded audience. Virtual classes can be a vehicle for professional and public recognition.

There are a number of leadership issues in the interfacing of schools and the development of virtual classes. As one school culture meets other school cultures in the academic and administrative interface of the virtual class, leaders have to be particularly sensitive to potentially competing agendas. In networks that have been developed in schools across rural New Zealand, for example, it has been necessary to have a hub school as the administrative, technological and curriculum centre. Not all teachers want to teach on-line and school leaders will recognize that some teachers will adapt to the emerging tele-environment more readily than others. Tele-teaching is essentially collaborative when provided within school networks and, for this to succeed, a well-developed inter-school framework is most important.

Collaborative Teaching

In a one-room, usually rural school, consisting of a single class of less than twenty students under the care of one teacher, we are likely to find a complex educational environment. Learners in a one room small rural school, however, unlike their counterparts in other educational institutions, usually range widely in age and in educational level while all sharing the same space. It requires considerable organizational and pedagogical skill of the teacher if all students are to receive educational opportunities equal to those of their urban counterparts who are educated in much larger institutions where they will share classrooms with a cohort of peers of approximately their own ages.

It is not necessarily appropriate for all students in a one-room school to participate in the same lesson with their teacher. It is sometimes appropriate for certain students to take time out, without leaving their classroom, if they have access

to a computer that is attached to a network which will provide them with access to classes in other schools. It is possible for a small, geographically isolated and diverse grouping of students to be together in a single classroom under the direction of one teacher while participating in a range of other classrooms simultaneously, none of which is necessarily located in the student's own district. Through judicious application of modern information and communication technologies, teaching and learning can be increasingly individualized and the educational significance of the location of the student's home and size of his or her school becomes unimportant. This, however, requires a considerable measure of organizational skill.

In some of the very smallest schools, teachers have developed organizational and teaching skills with direct application to networked, on-line learning. For many years teachers in these schools have taught students of different ages, with varying levels of academic achievement, different learning styles and different levels of interest in what is presented to them, within one room. The study of multi-grade classrooms (e.g. Mulcahy, 1993) has particular relevance to rural school teleteaching and telelearning.

As an increasing range of technologies becomes available, some teachers recognize the possibility of combining traditional face-to-face teaching and on-line learning in the course of a school day. In New Zealand, some teachers in rural networked schools initially attempted to teach in a traditional classroom fashion when their class was 'on-line' with other schools. A common problem was talking on-line as though they were in front of their traditional classes, something that was not always appreciated by distant learners. Questioning skills become particularly important in the course of an on-line lesson to ensure participation by all students. A degree of independence in a student's learning is required when on-line, including the ability to work without a teacher in the same room.

At present many teachers require assistance in preparing learning resources in ways that are suitable for delivery to students across electronic networks. There are a number of questions to be considered by educational leaders: How is the curriculum to be developed in a multi-media format? Is teaching across networks to be made available to all students in secondary schools or just senior students? How should professional development be provided for teachers within an electronic school network?

Positive outcomes have been found by some rural networked schools in terms of increased student motivation when learning is provided by audiographic technology (Stevens, 1995a). The student's need to concentrate very closely on the audiographic lesson as it is taking place to fully participate in it was noted by some principals. Students cannot anticipate when they would be asked a question on-line and, accordingly, usually came to these classes very well prepared. Particularly positive outcomes were reported in the learning of other languages using audiographic technology, including Maori.

There is considerable scope in the development of rural school networking for the provision of individualized learning programs for students. However, as one skilled on-line teacher pointed out to the writer, "it is what goes on in the head of the

teacher that matters." The teacher is the essential resource base of a successful lesson taught over any electronic network linking schools.

Open Administration

There can be considerable expense involved in maintaining hardware, including the costs of repairs, on-line time, preparation time, 'down time', staff training time as well as the cost of software. Not all schools in New Zealand have computers that can be dedicated to audiographic teaching, an issue that is symptomatic of the bigger problem of the co-ordination of hardware and software across all institutions participating in an electronic network. The abolition of regional school boards in New Zealand has not helped in the development of school networks. Many regional networks began to take shape before the need for inter-school co-ordination of hardware and software was fully appreciated. The constant changes in the design of hardware and software and the need for continuous upgrading is now recognized by networked schools as a shared cost. "Bulk buying" for a network rather than for an individual school is now widely accepted by principals, as is the need for a close relationship with the suppliers of technology to obtain expert advice and support.

It is often difficult to coordinate the timetables of schools across a network and, accordingly, a considerable measure of inter-institutional and intra-institutional cooperation is required. Much of the success of rural school networks to the present time has depended on the goodwill and enthusiasm of participating teachers and principals. In an educational system in which educational institutions often compete with one another for students, many small rural networked schools have developed collaborative teaching and administration structures. Rural school networks in New Zealand have, remarkably, developed in the absence of any national program to support them.

Conclusion

At present small rural schools that are networked are providing a model for teaching, learning and the delivery of the curriculum that makes considerable use of new technologies. The advent of electronic networking of schools has encouraged a view of the school that is academically and administratively open to other schools. In many parts of rural New Zealand, communities have schools which are, in effect, sites within teaching and learning networks. Some parts of a small rural school, such as the teachers of subjects not provided locally, may be located in widely dispersed locations. Many of the students in a networked rural school in a particular location attend only 'on-line' - as tele-presences for part of a day.

School networks are ceasing to be regional in nature as telephone costs are reduced. Increasingly, regional networks share resources with one another and links have been forged with other educational institutions - community colleges, polytechnics and selected large urban schools. The management of tele-learning in New Zealand has been critical to the survival of many small schools in rural communities. In the struggle to keep small schools open in many parts of the country, a new phenomenon has been created - the virtual class.

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LITERACY EDUCATION

The Literacy Maze: Practice without Policy

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The use of the word "literacy" has mushroomed within the past twenty years. While the word was commonly used in reference to adults, the use of the term to refer to family literacy and school literacy, as well as a host of literacies (computer, mathematical, etc.) is more recent. The author's intent for this paper is to reflect on the implications of using the term "literacy" without a grounded definition, and, based on research and other input, to propose a workable definition for the term.

Attempts to Define "Literacy"

At the 1989 annual convention of the International Reading Association (the largest organization of professionals in reading/writing, literacy) a panel of five experts "known internationally for their scholarship, leadership, and many other contributions to the field of literacy education discussed the future of literacy education" (The Reading Teacher, p. 302). The first question to the panel was clear: "Define literacy". However, the answers were vague and responses digressed. One panelist's response was "Defining literacy is not an easy matter because literacy is really continuous." Another said: "Reading and writing, I believe are what we would consider as literacy, and there are all shapes and forms of literacy and ways to talk about literacy" (The Reading Teacher, p. 305). In all, a clear definition of literacy did not arise from that elite panel.

By not feeling confident, or by not taking a role in defining critical educational terms, educators are abdicating this responsibility to the realm of politics (small 'p' but may overlap with big 'P' politics). The term "literacy" has been used much longer in the adult education field than for school based education. In the last fifteen years or so, the use of this term has mushroomed to include almost any kind of knowledge. Some qualified epistemological domains that have been reported in the media or other literature include:

- cultural literacy civic literacy
- ecological literacy scientific literacy
- musical literacy computer literacy
- moral literacy religious literacy
- biblical literacy visual literacy
- financial literacy technological literacy
- fiscal literacy automotive literacy
- xerox literacy Amish literacy

In 1988, Frank Smith, noted educator and writer, authored a book which he called "Joining the Literacy Club". He was referring to children and pointed out that even before coming to school, children could be members of the literacy club. A general criterion for being a member was that the children participated in literate activities such as being read to by family members. The use of the word "literacy" has led to the development of another type of literacy club. Fundraisers, grant applicants,

and advocates, as well as adult literacy instructors and teachers use the term for their particular purposes which often differ greatly from one group to the next. Fundraisers, grant applicants, or advocates can give a rousing argument why literacy should be promoted, supported and funded, yet vary considerably on the meanings underlying the word "literacy". Using the word "literacy" allows one entry to the literacy club and would include a wide array of individuals: science literacy experts, moral literacy experts, etc. While such a group would do well in promoting the notion of literacy, there would likely be considerable variation in how literacy is actually achieved.

Analysing the Literacy Construct

Literacy has become a very complex issue in today's society. There are many stakeholders with investments in literacy: politicians, policy makers, program developers, literacy providers or instructors/facilitators, community groups, researchers, learners, and funders. The analysis given below is an attempt to delineate what may be identifiable characteristics of literacy and its distinctiveness from related skills and factors.

Literacy as Issue

While the words "adult literacy" have been used for some time (Thomas, 2001), they attained common usage in Canada with the publication of the Southam News survey report (1987), a literacy survey of a sample of Canadian adults. On the basis of this report there was considerable alarm about the status of the literacy levels of adults in this country, but a forced recognition that this was an issue to contend with. In response to this document and the resulting concern about this issue, the Federal Government instituted the National Literacy Secretariat (NLS) to address adult literacy. The Secretariat initiated one national survey, Literacy Skills Used in Daily Activities (LSUDA) (Statistics Canada, 1991) and participated in an international survey, International Adult Literacy Survey (IALS) (Statistics Canada and OECD, 1995). Respondents were placed along a five point scale, ranging from Level 1 where individuals may have difficulty in abstracting simple information from print, such as the correct amount of medicine to take, to Levels 4 and 5 which require the ability to integrate several sources of information or solve more complex problems. One impact of these surveys, in addition to providing estimates of the number of people at different literacy levels was to provide a definition of adult literacy: the ability to understand and employ printed information in daily activities, at home, at work, and in the community, to achieve one's goals and to develop one's knowledge and potential. In an attempt to operationalize this definition, the surveys used three types of print information: prose, document, and quantitative.

About the same time as the Southam Survey was conducted, the word "literacy" was being used in conjunction with activities supported by families for young children. Denny Taylor (1983) is generally recognized as having coined the label "family literacy" during her doctoral study of young children participating in literacy activities in home settings. Later Mandel-Morrow, Tracey, and Maxwell (1995) documented a wide range of family literacy programs in the United States, while a similar listing for Canada was authored by Thomas and Skage (1998).

Literacy as Behaviour

Literacy is best understood as a behaviour that has educational, social, economic, and political overtones. It has characteristics of any other behaviour, characteristics that include acting, doing, thinking, performing, and effecting. Carpentry refers to the behaviour of carpenters; fishing refers to the behaviour of fisher people; lobbying refers to the behaviour of lobbyists; nursing refers to the behaviour of nurses, and teaching to the behaviour of teachers. In order to understand a behaviour, one must know the kinds of knowledge, skills, and strategies which underlie the behaviour. What knowledge, skills, and strategies enable one to engage in carpentry? Can anyone engage in carpentry, or lobbying, or engineering, or nursing, or teaching? Interestingly, during the Northern cod moratorium in Newfoundland and Labrador in the 1990s a decision was made to classify fisher people as professionals and to specify the knowledge and skills by which they would qualify for behaviours consistent with that designation.

Literacy as a behaviour has positive connotations. It is not just reading or writing. It is about interacting through print with people in a way that affects one's thinking or future course of action. This interaction may be directed at oneself in relation to others, such as when one reads a letter from an official within the educational, health, corporate, or other society sector, and decides how it affects her/his life and how to best respond. Or it could be directed at oneself personally, as when a person reads for enjoyment which could also lead to a greater understanding of people based on the content read. The technical skills of reading and writing are at a subconscious level in these behavioural instances.

Literacy is not separate from reading (or writing). People use their reading and writing skills to engage in literate behaviour. The focus is on the behaviour and its effects and not on the technical skills underlying this behaviour. Nursing is immediately associated with the behaviour of nurses; the connotations are caring, assisting, supporting, checking, etc. Of course, nursing is not possible without a strong base in technical skills. It is interesting that "doctoring" is not a behavioural counterpart to nursing (except for Granny on the Beverly Hillbillies). The focus of being seen by a medical doctor is on the doctor's use of technical skills. Somehow, it is culturally common for patients to expect doctors to prod, poke, tell you to put out your tongue, etc., make notes and then leave the examining room. The sense of behaviour is limited; the sense of knowledge and skill is great. However, if a behaviour is promoted without developing the necessary underlying skills, then the behaviour cannot be completely effective. A person may act like a great housekeeper, for example, but on finer analysis, a number of basic housekeeping skills may be missing, and the behaviour would be less than what would be expected.

Knowledge, Skills, and Strategies Underlying Literacy

To understand literacy as behaviour, we must understand the knowledge and skills underlying literacy. The bases of literacy are reading and writing. It is difficult to think of someone as independently literate who is completely lacking in the ability to read and write. Reading and writing are based on knowledge, skills, and strategies. It is generally accepted these days that reading entails using four cueing systems: pragmatic and world knowledge, semantic (words and word relationships that allow

one to make sense out of what is read), syntactic (the sequence and flow of language that enable one to predict, to follow logical thought, to relate information through connectives, etc.) and graphophonic (speech sounds and letter, syllable, and corresponding sound structure of words). Writing consists of using similar cueing systems. The letters/words (spelling) into which the phonological system is encoded during writing is referred to as the graphic system.

A problem occurs when literacy behaviour is equated with reading or writing. When this happens, reading and writing are viewed only as "happening" or "occurring" and the "teaching" of reading and writing, that key reason why schools exist, gets lost. This is what happened during the whole language movement in schools. The focus was on language as behaviour (reading, talking, writing, listening). The focus was on having children utilize language at a level at which they were comfortable. But it was only those children who had a good grasp of the skills of reading, writing and oral language who were able to effectively engage in whole language behaviour. Those who came from homes without adequate skill preparation got caught up in the behaviour hype of the classroom, but there was often little learning of reading and writing skills and strategies on their part. It was the exception for teachers with a whole language philosophy to engage in direct teaching of how children could effectively use the four cueing systems in order to become readers and writers. In fact, phonics, derived from the graphophonic cueing system, was basically non-existent. In most cases, whole language led to the best students becoming better, and the poor getting poorer as they progressed through the grades.

There is no alternative to developing reading and writing knowledge, skills and strategies. For those who do not acquire these skills in incidental or informal situations, there must be direct teaching. There is no substitute for teaching. Coiners of modernistic terms have discarded the term "teaching" which they define as narrow and unchallenging. But from historical sources we know that some of the greatest teachers adopted many roles: disseminators, facilitators, supporters, challengers, models, and strategists. Teaching is something to be proud of, not something to be denied for another vacuous term. Teaching is challenging work. Teaching reading is not a matter of leading children or adults through stories and asking a number of questions. Teaching is providing the learners with strategies for becoming independent readers and writers. It is enabling learners how to effectively and efficiently use the four cueing systems of language in becoming readers and writers.

Literacy as Successful and Non-successful Events

The relationship of reading and writing to literacy may be understood as an analogy of the trees to the forest. Just as the forest is more than the sum of its parts (trees, plant and animal life, etc.), so also is literacy more than the sum of reading and writing skills. Literacy may be described as an event (Barton, Hamilton, and Ivancic, 2000). Literacy events have four components: participants, settings, artifacts or materials, and activities. These are the observational components. Underlying these may be a variety of influencing factors, such as goals, power, and cultural tradition. Whether a literacy event is successful does not depend solely on whether one can read or write, but on the interplay of factors within the literacy event, that is, the literacy behaviours. If the intent of the person who initiated the literacy event has been attained then the event is successful; if, on the other hand, the event does not

lead to the attainment of the initiator's intent, then the initiator has not been able to accomplish what she/he set out to do using reading/writing as a medium.

An example of a successful literacy event concerns a two-day meeting of particular stakeholders at a hotel. Soup and sandwich lunches were served both days. One participant requested vegetarian sandwiches. On day one, these sandwiches were mixed with all the others on large trays and it was impossible to distinguish them from other sandwiches. The participant asked that for the second day, the staff put the vegetarian sandwiches on a separate tray with a sign indicating this. On the next day, on a separate tray was an arrangement of sandwiches with a label "Vegetarian". The literacy event was successfully completed.

There are many examples when literacy events are not successfully completed. One concerns a request made under the Access to Information Act in which information was denied with reference to a particular clause in the Act which gave the Government bureaucrats that power. Literacy events are not completed when a person to whom written correspondence is directed, decides not to acknowledge nor respond to that correspondence. A person employed in the field of literacy who does not respond to correspondence is a literacy contradiction, for that person does not practice what literacy is. Another example of an unsuccessful literacy event involves rules for a contest that were published in a newspaper. A person read the rules, all 672 words but could not understand two key words which indicated where the entry form would be found. These key words were "game page" but this referent was not obvious to the reader and therefore he could not complete the form because he could not find the "game page". Still another example of not being able to complete a literacy event successfully is the 2000 US presidential election when a number of people claimed that they were unable to understand the format of the ballot and therefore may have voted for a person who was not their choice.

There are examples when people choose not to participate in a literacy event because they do not feel confident in the behaviours necessary for the event to be successful, yet they have the appropriate reading and writing skills. One example concerns a family which had questions about a family member's stay in hospital. They declined to pursue the matter because they did not understand the bureaucracy, did not know where to begin, were fearful that the issue might become public and the family would be embarrassed.

Interestingly, a person without adequate reading and writing skills may be a participant by proxy in a successful literacy event. Fagan (1999) documented the literacy activities of 157 people across four generations in rural Newfoundland. Those who did not have high levels of reading or writing, particularly seniors felt they had participated successfully in a number of literacy events. They had used scribes, the most common being the provincial government elected member, followed by medical personnel (doctor or nurse), and the local clergy. This type of proxy or "surrogate" literacy event is common in the corporate world where much of the reading and writing transactions are carried out by lawyers, CEOs, public relations personnel, or secretaries. In fact, the person for whom the literacy action is taken, are akin to the young children that Frank Smith referred to who felt they were members of the literacy club. They are successful in literacy events through association and direction.

Contexts for Literacy

The terms "multiple literacies" or "multi-literacies" are frequently used in describing literacy (Barton, Hamilton & Ivanich, 2000) and include such terms as "computer literacy", "ecological literacy". etc., which suggest that each area of knowledge entails unique reading and writing skills. In most cases, the particular reading and writing skills do not differ across different fields of knowledge; what differs is the context or events in which reading and writing are used. That is, there are different goals, participants, settings, activities, power relationships, etc. What these various contexts or events entail is a particular set of circumstances in using reading and writing; they do not usually refer to the teaching of specific reading and writing skills. Being able to operate within different literacy contexts is crucial and indicates transfer and flexibility in using reading and writing skills. It is possible that a goal of a literacy project could be to provide participants with a familiarity and understanding of using reading and writing skills in different contexts/events. However, it should be very clear that the focus is on the application of reading and writing skills to particular contexts rather than on the development of the actual reading and writing skills. The relationship to these contexts is conjoint (science and literacy, ecology and literacy, computers and literacy) and not isomorphic. Failure to distinguish developing reading and writing skills versus applying them to different contexts/events often leads to confusion as to the kinds of experiences to which learners are exposed. This often occurs in the case of workplace literacy. The workplace is a context in which there are many events for the use of reading and writing. Workplace literacy, in the true sense of this term should focus on applying reading and writing skills to workplace tasks so that workers can better function in their employment. It is possible that some reading and writing skills may be taught as part of the application process. But the focus must be application to specific workplace tasks. Sometimes, programs focussing on teaching reading and/or writing skills operate in a workplace setting. That is, a program to teach reading and/or writing is housed in a workplace building; it is not the application of these skills to specific workplace tasks. This is not a literacy program per se (workplace or otherwise) but a reading and writing program that could be offered in any number of venues. Fagan (2001) has distinguished these kinds of workplace programs as FOR the workplace (when the program is designed to help workers better accomplish workplace tasks through reading and writing - a literacy program), and IN the workplace, which means that a program to teach reading and/or writing is merely housed in a workplace setting or building.

Another context in which the use of the term "literacy" leads to confusion is that of adult basic education when that label and literacy are used synonymously. Granted there is a high correlation between education and literacy, but it is not unusual to encounter high school graduates who have severe difficulty in reading and writing. A common assumption is that anyone who enrolls in an adult basic education program is considered to have enrolled in a literacy program. This supposed synonymous relationship caused some confusion during the Northern cod moratorium period in Atlantic Canada in which millions of dollars were allotted for educational programs. The general understanding as revealed through newspaper items during that time period was that the money was being used to improve adults' literacy (reading and writing skills). However, in many programs reading and writing were not taught, and when they were, it was largely via computer packaged programs that were not

interrelated with literacy events where they could be applied. A study by Sheehan-Holt and Smith (2000) examined the data of the National Adult Literacy Survey in the United States of 2399 respondents who had been enrolled in adult basic education programs in order to determine if participation in basic skills programs was related to their "literacy proficiencies and reading practices" (p. 231). They concluded that enrollment in adult education programs does not necessarily lead to improved literacy skills of the type that give the learners greater expertise in extracting information from prose and quantitative documents. The outcomes of a program can be best understood in terms of its goals and content. If it is not a goal of an adult education program to develop basic reading, writing (and math) skills, then it is unlikely that the development of such skills will be a result of program involvement.

A Literate Culture

Of three major goals in the Strategic Literacy Plan of the Government of Newfoundland and Labrador (Words to Live By, 2000), the second is "promoting a culture of literacy". The document states, "Government can play a major role in fostering a culture of literacy by promoting its value in the social and economic development of our province" (p. 19). Further on in the document there are two suggested goals for creating a culture of literacy: increasing public awareness of literacy, and increasing parents' awareness of strategies for promoting their children's literacy development. In light of the above points, this view of a culture of literacy is rather limited. First, it suggests that literacy is for the benefit of government, and secondly, awareness and parent responsibility are the key factors in making this happen.

In order to develop a knowledge base on what a literate culture might look like, the author sought or obtained input from 287 individuals. These came from many walks of life: students entering their professional year in the Faculty of Education, community groups, blue collar workers, social welfare recipients, website users, conference attendees. The selection was not random but based on accessibility with an attempt to sample people from a range of backgrounds and educational levels. Below are a number of suggested characteristics of a literate culture and a scale on which to measure the literate cultural level of a geopolitical area. Comments provide additional information or insight.

Scale: 5 - 1

- 5: Absolute. Literacy behaviours occur to the ultimate. There are no omissions or exceptions.
- 4: Behaviours occur almost always. Exceptions stand out; they are not typical.
- 3: Behaviours occur on a 50-50 basis. For every instance that a behaviour is present, one might expect one in which it is not existent.
- 2: There are instances of the behaviours but on a hit and miss basis, with more misses than hits. There is little expectation that the behaviours will be present to any degree.
- 1: Rare. It is unusual to find instances of these behaviours.

Literate Culture Behaviours:

1. There are high reading levels in schools. 5 4 3 2 1

Children are assessed periodically on their reading performance that provide benchmarks for levels of reading. Results of the IALS Literacy Survey (Statistics Canada, 1995) indicate that only about 16% of the graduates of schools in Newfoundland and Labrador score at the two highest levels: 4 and 5.

2. There is a strong professional development literacy program for teachers. 5 4 3 2 1

Becoming an effective reading and writing teacher is a lifelong professional endeavour. Professional development must be meaningful, provided by a range of professional stakeholders, coordinated, and occur in a variety of formats, one being the reading of professional journals.

3. There is a strong reading and writing component in undergraduate and graduate degrees for teachers/educators. 5 4 3 2 1

Language Arts courses in undergraduate programs provide for the initiation of prospective reading and writing teachers. Graduate degrees provide for the development of "master" teachers. Alberta scores at the highest levels of literacy in Canada. The University of Alberta is one of two universities in Canada which provide for the clinical study of reading at writing at a graduate level.

4. There is a high rate of adult reading skills. 5 4 3 2 1

Those who do not leave school with adequate reading and writing skills will only attain these when they enroll in adult reading courses developed for that purpose. Results of surveys referred to earlier in this paper indicated that Newfoundland and Labrador is at the lowest levels in terms of adult reading skills.

5. There is a broad definition of reading development. 5 4 3 2 1

One must distinguish between "reading", "teaching reading" and "developing reading". "Reading" means engaged in the act of reading, and "teaching reading" is providing knowledge/skills/strategies to become a better reader. "Reading development" involves any and all factors that support or encourage reading. Too often, campaigns are too narrow in their focus. Prizes are given for the number of books read, which leads to a scramble to "get through" as many books as possible in the shortest amount time. This kind of focus would certainly discourage a child from reading Harry Potter books. It also prevents such actions as reading to or with others, discussing books, extending

books through drama, art, etc. all of which encourage and support the development of reading.

6. Learning is approached as thinking, analysing, and constructing, rather than as memorization and transmission. 5 4 3 2 1

Decades ago schools were characterized by memorization and transmission as the common modes of learning. Results on the Council for Higher Education (CHE) Exams were a verification of the results of these teaching styles. Unfortunately, much of this kind of learning still occurs, in schools, universities, and other post-secondary, and adult education programs.

7. Parents take a prominent role in immersing their young children into literacy activities. 5 4 3 2 1

Parents are their children's first teachers. Parents must be recognized for this role and must be provided the necessary expertise and resources to fulfill it. Parents are by and large dedicated to the educational progress of their children. Once government or schools begin to take this role away from parents, there is a large gap in promoting a literate culture.

8. There is parental involvement in schools. 5 4 3 2 1

If parental involvement in the literacy development of their young children is fostered, then it follows naturally that parents will want to follow the progress of their children at school age. But there must be meaningful roles for parents in schools. Duplicating worksheets and doing secretarial tasks should be minimal.

9. Several time during the week, families share stories, events in their lives, etc. 5 4 3 2 1

There is an old saying, "You don't know what you've got 'till it's gone" which typifies the situation with regard to family talk time. In days gone by, without television and the pressure to work two jobs, families usually sat around the supper table and talked and shared events of the day. There must still be times during the week when this kind of talk and sharing happens in families.

10. Public libraries are accessible to all people. 5 4 3 2 1

Every school-based community should have a public library. There are significant gaps in Newfoundland and Labrador. There is not a single public library in one whole region (St. Mary's Bay) for example. Not only must there be a public library for every school-based community, the hours when these libraries are open must be generous and flexible to meet the needs of the patrons.

11. There are viable bookstores in all large towns and cities. 5 4 3 2 1

When literacy is valued, bookstores are essential. Every large town and city should be able to support bookstores where a range of children's and adults' books are available. Books should be encouraged as presents for different occasions. This was a point made by my renowned author, Bernice Morgan, at a talk to the St. John's Rotary in April, 2001. (The Telegram, April 24, 2001).

12. Youth engage more in reading than in watching TV or playing computer games. 5 4 3 2 1

TV and video games have usurped time that normally could be spent reading. People, including youth, prioritize what they engage in. If youth are imbued with the value and enjoyment of reading in school, then they will make time for reading, in spite of the lure of TV and video games.

13. Internet is used frequently and for accessing print information. 5 4 3 2 1

Computer time is not all empty time when it comes to reading. The internet is a valuable source of print information on all topics. This use of the internet for this purpose should be encouraged.

14. People keep informed of local and world events, particularly through the print media and radio. 5 4 3 2 1

Knowledge is the backbone of literacy. In order to discuss, read, and write intelligently about local and world affairs, people must be familiar with events. Print media and radio, focussing on the medium of language, provide such information, and insight. However, all information must be approached from a critical rather than an accepting perspective.

15. People, know and respect history and tradition. 5 4 3 2 1

In a recent letter to the editor of the Gazette (Memorial University, December 13, 2001), Frank Cluett, Retired Provost of Queen's College states, "History is exhibit A of the human failure to know how to live, to seek the common good, honesty, truth and beauty. These ideals have to be taught; they are not, at least in our time, acquired by some process of natural absorption." Without a sense of history, Cluett maintains there is likely to be a pragmatic, a band-aid or quick-fix solution to global (or even local issues). History is knowledge, the foundation of literacy. When schools are named after rivers, and trees, rather than after great role-models and statespeople one wonders if there is more interest in fish, leaves, and nuts, than in fostering knowledge of the past and of educators whom the children might emulate.

16. There are many letters to the editors, challenging policy, 5 4 3 2 1 action, etc.

Letters to the editor are a mirror of the activity of the public in knowing and addressing concerns, and public matters. The more literacy active the public, the more letters to the editor will be generated. However, the quality of the letters in terms of addressing issues with a knowledge of facts reflects the level of literate culture.

17. The print media is prominent in addressing literacy 5 4 3 2 1 issues.

Literacy should be news. This should cover a wide range, from actual literacy programs and experiences, to literacy surveys and policy, to awards and literacy events.

18. Background experience and expertise in the area of literacy 5 4 3 2 1 are necessary for people who take leadership positions in literacy.

There is a myth that anyone who can read can teach reading. Yet, by the same reasoning, we would hardly accept that anyone who speaks can provide speech therapy, or anyone who walks can deal with problems of the feet. Experts in the area of reading have a difficult time in having the stakeholders in literacy recognize the required knowledge and skills for expertise. The International Reading Association, the largest body in the world of reading professionals, has clearly set down standards for people engaging in different positions involving reading responsibility. These must be recognized in hiring people for reading positions.

19. Research and expertise form the basis for literacy decisions. 5 4 3 2 1

Literacy policy should only be formulated on the basis of research and expertise. Literacy programs should be developed on a similar basis. Expertise should not be self-acclaimed but should be based on the International Reading Association Standards. Pertinent data for policy or practice should be widely researched and research should be critically evaluated to determine its validity and reliability.

20. There is freedom from cell phones in places of relaxation 5 4 3 2 1 and socialization, such as restaurants, concerts.

Literacy involves a respect for language and the appropriate use of language. In certain locales, such as restaurants, concerts, a particular kind of language is expected and respected. Those who use cell phones show little regard for these language events but superimpose their business and personal lives on them.

21. Drivers follow the rules of the road and posted signs.

Drivers engage in literacy practices that involve the safety of the public. Ensuring safety is based on drivers engaging in literacy practices of knowing the rules of the road and following posted signs.

22. The Provincial Government invests sufficient funds 5 4 3 2 1 in sound literacy policy and effective practice.

Literacy cannot be developed on the backs of volunteers. Certainly, volunteers do and can play a key role in the development of reading and writing skills. There must be sufficient funding for the implementation of programs which offer children and adults effective reading and writing programs based on sound literacy policy and research.

23. There is a Government in power that encourages and 5 4 3 2 1 accepts opinion, constructive input, proposed action.

A secretive, closed, or threatened government constitutes an interference in developing a literate culture. A government that tries to defend the indefensible, or addresses key issues via language circles only hinders the formation of a literate culture. Governments are highly visible by their actions. They will foster a literate culture by entertaining opinion and constructive input. They will admit to poorly thought through policy or practice, investigate challenges to existing policy or practice, and welcome the voice of the public via language in furthering literacy development.

24. In discussion and debate, issues and not people nor 5 4 3 2 1 personalities are addressed.

Focus is an important characteristic of a literacy event. A discussion of an issue must focus on that issue and not on peripheral matters, particularly the people or personalities involved. A key venue for observing this kind of behaviour is within legislature questioning and debate. Rather than directly responding to a question, an elected official may resort to grandstanding, flippant remarks or person attack.

25. Decisions about people are made based on first hand 5 4 3 2 1 knowledge and not on hearsay.

There is an old expression that a person should only believe half of what one sees and nothing of what one hears. Yet people who "profess" to be literate may formulate opinion, make decisions, and base judgments on what they hear. If such people were asked to document what they know firsthand of the person/situation, they would be able to list nothing. Such kind of behavior, the opposite of being literate, is unfortunately, the basis of prejudice and bigotry.

26. People distinguish between "what is" and "what might be" 5 4 3 2 1

We must distinguish between what others say or write, what we think they said or wrote, and what we wished they said or wrote. Confusing

"what is" with what we think there might be, is often due to people being emotionally charged about an issue so that their feelings provide an interpretation of a case rather than understanding the case as presented. Being literate means understanding with the "mind" rather than with the "liver". Confusion between what is and what may be, may also be due to a superficial understanding of a situation. For example, a person announced that "as everyone knows, CAPITAL LETTERS in an e-mail message mean that the writer is shouting at you." When my friends and I use capital letters in an e-mail, they are used to mark emphasis, or when a document is being circulated for input/review, they set off the edits. It is common in group discussions for a person to say, "I hear (another person) saying ___", or "What (another person) means is ___". This person is trying to match what is with interpretation or what might be, and is one strategy that people use to distinguish these when they are not clear.

27. There is freedom from fear in raising opinion, different 5 4 3 2 1 viewpoints, etc.

While we maintain that we have freedom of speech in Canada, the perception of speakers is often otherwise. Certainly, a person is legally free to comment on public matters, to offer opinion. But people often believe that if they do, this freedom comes with a price. People feel that if they adversely comment on matters affecting an employer or authority, they may suffer the consequences, whether of losing a promotion, a job, a bonus, a contract, a grant, etc.

28. There is literacy leadership in government, labour, 5 4 3 2 1 business, and education sectors, which models and promotes literacy.

Literacy is everybody's business. All facets of society have an obligation to display, support, and promote literacy. This is not just in terms of providing funds. Just as significant is the modelling of literacy by the leaders of the various sectors of society. This may mean engaging in a literacy event initiated by a member of the public. A common such event is when a person corresponds in writing regarding a concern. A true literacy leader, regardless of the sector, will not ignore that letter and consign it to the wastebasket but will provide or have a response provided for the initiator. Leaders who deny a person the courtesy of a response, are, in fact, promoting a non-literate culture. It is equally important that recognized members of society model literacy. How often are sports figures or politicians recognized for literacy achievements? Within school systems, there are often very few male role models for boys in the primary/elementary grades, yet boys tend to perform less well than girls in reading and writing.

29. The impact of different sectors in promoting literacy 5 4 3 2 1 is marked by partnerships.

All members of society must work together in supporting and promoting literacy. Literacy needs, whether space for an adult literacy program, or resources for schools should be a concern of all society sectors. There is often considerable empty space (particularly in the evenings) and resources that could easily be made available for providing reading and writing programs for adults and children. There must also be partnerships within the literacy field. Unfortunately, it is often the bickering, pettiness, or jealousy among literacy groups or organizations which get in the way of literacy, rather than promoting it. Some literacy stakeholders often have difficulty seeing the larger picture, that of society and culture, above their own image, policies, and programs.

30. People take control of print/language that affects their 5 4 3 2 1 lives.

A final characteristic of a literate culture is that people take control of print/language that affects their lives. This, is perhaps, a culmination of many of the points made above. People who have developed the ability to think, analyse, construct, challenge, focus on issues, base decision on research and first hand knowledge, and are free from fear in enacting these abilities, control the print/language that affects their lives.

A Literate Culture or Not?

After the above 30 characteristics of a literate society were developed, they were submitted to twelve experts who were asked to indicate to what degree these should be present to affirm a literate society, that is, what percent or what overall rating would be the minimum to declare a literate society. The overall general consensus was that there should be a rating of at least 5 on the scale for Characteristics 1 and 4, plus a minimum rating of 4 for another 22, with the rating of each of the remaining 6 being at least 3 on the scale.

Conclusion

The word "literacy" has generated a maze in the very promotion of the construct it represents. Statements on the quest for a literate culture are often grandiose and pseudo-policy based without practice. In order to make such statements meaningful, it is first of all necessary to try and understand the meanings underlying the word "literacy" and how these relate to but are different from reading and writing, and particularly the teaching of reading and writing. To declare a literacy utopia, one must know when we have arrived. For that reason it is necessary to define characteristics or parameters of such an existence. This paper has attempted to do both. It should be a start in providing a meaningful referent for statements or pronouncements by relating them to the test of reality.

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Literacy Development: A Community Perspective

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Schools, Departments of Education, and Universities are often considered to be the key stakeholders in literacy development. Schools are where the teaching of reading and writing occurs, which is the basis for literacy. Departments of Education are responsible for establishing policy for the enhancement of literacy, setting school curricula, organizing professional development experiences for teachers, and providing funding. Universities provide the context and resources whereby teachers are prepared either initially as pre-service teachers, or as "master" teachers/educators via graduate programs. Community often gets overlooked in the above equation. The notion of community is often global and fuzzy. When the term is used, it is usually in a unidirectional manner - from the key stakeholders to community. The community is supposed to be the benefactor of the services of all of the above.

Partnerships

Susan Newman, a noted early literacy educator, former director of the Center for the Improvement of Early Reading Achievement (CIERA), and now assistant secretary for elementary and secondary education in the US Department of Education, made the statement that "schools cannot do it alone" (Newman, 1996). Newman was not criticizing schools; she was simply reminding them that society has become very complex with more and more demands being made on schools. Consequently, if schools are to be effective in their prime mandate, to educate children, they must rely on the strengths and cooperation of others, particularly that of parents and community.

Unfortunately, this message is not always heard and a strong resource in the form of community is not tapped. Currently, the Department of Education is promoting pre-kindergarten orientation, and that is a positive step. But it will not, nor cannot replace the place of parents in the literacy and educational lives of their children. Parents are their children's first teachers and parents through meaningful interaction and role-modelling will have a major impact on their children's educational progress. Community and schools must work together hand-in-glove. Children are the common concern of both. When schools decide that children shall repeat kindergarten, or shall not be admitted to kindergarten because of "immaturity" or insufficient knowledge, this should not be unilateral educational policy but should be a more global issue that is addressed by school and community. Educational policy with regards to literacy is based on literacy development being emergent and continuous. Within this framework, "stage assessment" such as entry to kindergarten or grade one, does not make sense. Schools must take the children from the point on the continuum of literacy development which they have reached at the chronological age for legal entry into the school system. Community and schools together can best understand the

range of this continuum and the implications for parents and schools. Telling parents to "upgrade" their children to an acceptable level is not the answer. Some children come from families which have not had a history of educational success or positive memories and which are managing on minimal and often insufficient incomes. Children, in all their innocence, are eager to begin that journey of education starting with school entry in the presence of their peers. Being denied that chance often strikes the first negative blow to their educational achievement.

Community Curriculum

The concept "school curriculum" is usually readily understood, at least in a general way. What must be equally understood is the concept of "community curriculum". When a child performs poorly on a school test, it cannot be concluded that the parent/community is at fault. Likewise, when a child performs well on a school test, it also cannot be concluded that the school alone is responsible. When a child completes a test, the resources available to him/her may come from school and/or community curriculum. It therefore makes sense that both schools and community understand more the support that each provides for the literacy success of children.

The MacMorran Community Centre, through partnerships with groups and individuals, has been very active in providing a community curriculum to support and supplement the learning of children in the school curriculum. Some of these programs are described briefly below.

PRINTS (Parents' Roles Interacting with Teacher Support)

This is a family early literacy program piloted at MacMorran seven years ago. After the pilot, two parents from the community have taken over as facilitators which fulfills a goal of the program, of community taking ownership. The program is broad based and focusses on having parents capitalize on all aspects of literacy in young children's lives which are developed as STEPS to literacy: play, talk, book sharing, environmental print, and scribbling, drawing, and writing. For those STEPS to become meaningful in children's lives, parents adopt a number of ROLES as they engage in a number of literacy based activities. Overall, 33 activities are available for parents. The roles they take in making these activities effective are: providing opportunities for involvement, giving positive feedback, interacting effectively, setting guidelines for involvement, and role modelling. There is established a partnership and commitment between parent and child. While PRINTS is aimed at pre-school children, parents with children to age eight, who are not doing well in school, attest to its effectiveness. The facilitators meet with parents for a two-hour block over a 12 week period to provide them with the skills to foster their young children's literacy development. Parents work with children at every opportunity.

SLS (Strategies for Success)

While PRINTS is aimed at pre-school children, SLS is directed at providing support for school age children to grade eight. SLS involves various activities, including a strategy teaching based program known as STEPS (Strategy teaching, empowerment, partnerships and success). SLS provides two sessions during the

week (an after school day and Saturday morning) when children learn and practice various strategies and techniques to help them become better readers and writers. There is also an evening session (over a 15 week period) when parents and high school tutors learn and practice the reading and writing strategies and construct learning materials for the children to reinforce and support these strategies. The program is fairly structured and consists of strategies for developing reading and writing skills, related and enjoyment activities, general teaching tips, and observation or watchful hints.

Books on Wheels

This is an innovative way to bring books to the community which does not have ready access to a public library. In collaboration with Brighter Futures, this service began in July when, an employee, with a cart filled with books moved through the neighbourhood. From ten families which immediately accessed the service, to 45 families in November, the popularity of the availability of books has increased. During the colder weather, a van owned by the Centre is used to bring books to a "street near you".

Others

In addition to the above, other support programs are provided by the community. For example, in Playtime, parents and children engage in story telling, nursery rhymes and games. Seniors volunteer as "grandparent" role models and mentors, and provide day care assistance. The GED Program provides an opportunity for parents and other adults to upgrade their academic skills and complete a school leaving certificate.

Low-Income Communities

The community served by MacMorran Community Centre is a low-income, public housing area of St. John's. Like other low-income communities, and not different from low-income rural communities, there are various challenges to educational and literacy development.

There is often a negative image on the part of the educated and gainfully employed public towards low-income communities. This is often due to a lack of understanding of the community. Some of the factors which typify the low-income community include: baggage from school experiences, limited funds, single parent responsibilities, and lack of identity with the more privileged community.

Baggage from school experiences. The school system has failed many of these people. Their memories of school are not positive. Books and print materials are items to be avoided rather than embraced. They often find themselves in a predicament; on the one hand they want the best for their children, on the other, they do not have the self-efficacy and security to become involved in educational activities. Yet, many parents, with support, do overcome these constraints and participate in numerous ways to help their children, from attending programs

described above, to volunteering in Center activities, to acting as bus monitors, to volunteering at their children's schools.

Limited funds. This is a capitalistic age and a person without capital is disadvantaged. Lack of money imposes many limitations on parents and the support they would like to provide for their children. School fees, as an issue, has been addressed by the Centre. While it is not required by law to pay fees, some parents, often through the pressure of pre-teen children, do pay them, while doing without other necessities. In a poll by the Telegram reported on September 22, 2001, 60% of respondents reported that school fees were causing them difficulty or inconvenience. In a recent poll by the Telegram (December 1, 2001), 70% of the respondents agreed that school fees should be abolished. Limited funds also restrict the goals and ambitions of the community's youth. Very few can aspire to attend university. In fact, a recent Statistics Canada survey (December, 2001) showed that youth of low-income communities are disadvantaged in terms of their chances of attending university. They are two and a half times less likely to attend than their richer counterparts. This has multiple effects. It limits the job and professional opportunities open to youth. It limits the number of students entering Education Faculties from low-income areas, which in turn, limits the number of teachers from low-income areas as role models in schools for low-income children. The recent Federal Budget (December, 2001) announced \$1.1 billion over three years to support skills, learning, and research, such as support for people with disabilities who pursue higher education. There is no such help for low-income families.

Single parent responsibilities. Many families in low-income communities are headed by single parents. When the parent resource is reduced by half, this puts an added burden on the home-maintenance parent. However, this should not be viewed as a causal factor but as life-factor, which necessitates more support. Research on the effectiveness of a family literacy program (Fagan, 2001) showed that children of single parent families performed as well as children from two parent families after the parents participated in a family literacy program to learn how to help their children. As long as the child has one adult role model, one literacy mentor, the child will make literacy progress.

Lack of identity with the more privileged community. The province of Newfoundland and Labrador has been going through a period of school reform. This seems to have been based in eliminating church influence in education and the "reconfiguration" of school districts, catchment areas, etc. What it did not address was the inequity of low-income families. There is more in common between rich Catholics and rich Protestants, for example, than between rich and poor Catholics, or rich and poor Protestants. "Neighbourhood" schools have not been based on a solution for income disparity, with the result that children from low-income areas often continue to suffer from feeling disenfranchised from the educational system. It is difficult for parents and children from low-

income areas to relate to literacy campaigns which portray a life-style which to most of them, will remain fantasy.

Upsetting the Education Cart

For true reform to occur in education, there must be some major changes in how education is administered. For a start, the elimination of school fees will help reduce inequity and a feeling of exclusion. Education should be provided for all children, without constraints, barriers, conditions or fees. Children should not feel embarrassed that they do not have the fees to pay, and parents should not feel that they are shirking their parent role if they do not pay.

A second thrust which was not highlighted in the school reform movement was the presence of male role-models as teachers in the primary and elementary grades. Boys, in general tend to do less well academically than girls. In the 2001 Awards for Excellence for Avalon East and West School Districts, the numbers of males and females receiving this distinction were 25 and 56 or a ratio of less than 1 to 2. The disparity between the achievement of boys and girls is even more apparent in low-income areas where there are many single parent families mostly headed by females. Boys often do not have access to male role-models who have been successful in education. Currently, there are approximately 150 pre-service teachers in the professional year in the Faculty of Education at Memorial University, yet only ten are male, or six percent. That means, that for the next cohort of teachers entering the school system, boys will have a chance of 6 out of 100 of encountering a male teacher in kindergarten to grade 6.

Literacy development must be endorsed as continuous and emergent. Children are not stopped along the way and told to "get off." There must be an understanding between community/parents and school as to where children are on this continuum and where they may go, and what supports are necessary to foster this.

Schools, school boards, Department of Education officials, and universities must understand community, particularly low-income community. A day in the life of the community centre is often an eye-opener for the uninitiated. One of the first things that volunteers, especially volunteers in literacy support programs, must learn is that you do not structure the community; the community structures you. It is a prime example, where you must "go with the flow." The structure of schools does not usually work in a community setting, yet much significant learning can be attained by the children. In light of the few, if any, prospective teachers from low-income areas, the Faculty of Education should consider providing for various kinds of observation experience for pre-service teachers, one of which would be to volunteer for a certain number of hours in a low-income community centre.

Prospective

Low-income communities are never daunted. This is not in their nature, nor can it be a part of their nature, for life in many cases, is a struggle. As documented above, the MacMorran Community Centre is an active and energetic place. Not documented are the many other programs of a non-educational nature that it offers

that focus on health, socialization, recreation, community garden, and youth development. Its contribution to the community education curriculum is major. One of its goals, based on the theme of the opening lines of this paper, is to form positive partnerships with schools so that all are winners and there are no losers. To accomplish part of this goal, a new program, SHARING (Schools and Homes as Active Resources for Interests, Needs, and Goals) will hopefully be implemented in January, 2001 between the community and the elementary school which most of the children from the area attend. The Community Centre will continue to work towards the attainment of other goals embedded within this article.

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Validating The *IN* and *FOR* Distinctions of a Workplace Literacy Program

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Canadian companies spend \$4 billion annually on training and development in the workplace. Yet, as Haccoun and Saks (1998) point out, this is far less than what is spent in the US, Europe, and Japan, and must be increased. The challenge for this investment is highlighted by Latham and Sue-Chan (1998), who state: "The changes that will occur in the workplace as Canada enters the 21st century are contrasted with those that occurred when this country entered the 20th century in terms of knowledge, skills, and abilities required of employees . . ." (p. 14). One important segment of workplace education and training is that of literacy. Bloom et al (1997) note that "enhancing literacy levels in the workplace improves bottom-line performance for Canada's employers and gives employees a better chance of success for their careers" (executive summary). The importance of adequate literacy skills in the workplace is further noted by Krahn and Lowe (1998), who point out that "the ability to read, write, and use numbers is crucial for the labour market success and social well-being of individuals" (p. 7).

While advocacy for workplace training and development (including literacy programs) is clear, what is uncertain is the impact of such programs. Haccoun and Saks (1998) note that one of the reasons why the impact is not clear is that the area remains largely unresearched. The goal of this study is to analyse the impact of a workplace literacy program through validation of "IN the workplace" and "FOR the workplace" concepts in terms of implications for employee participants.

Defining Literacy and Literacy Programs

One of the difficulties in providing a definition of literacy is that the meanings for this term have been changing, particularly in the past twenty years. Nevertheless, most agree that the key components of literacy are reading and writing skills. Some researchers and educators also include numbers (numeracy) and oral language skills. Literacy is usually considered the socioeconomic behaviour associated with these skills. What one does as a reader, writer, user of numbers, etc., supposedly gives an indication of the literacy expertise of an individual.

The National Literacy Secretariat makes a further distinction between reading as prose reading and document reading. Prose reading (or literacy) is defined as the knowledge and skills required to understand and use information from texts, including news stories, poems, and fiction. Document reading (literacy) involves the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables, and graphs. Since reading can only exist through writing, these subtypes (prose and document) would also define writing. Furthermore, in the case of document literacy, the proportion of reading to writing varies, and there may be more or less of one in relation to the other.

Literacy IN and FOR the Workplace

Analysis of workplace literacy programs indicates that these may be distinguished in terms of their general intent. The concepts IN and FOR become the overall distinguishing characteristics. A literacy program offered IN the workplace refers to a program offered IN the workplace setting. The general intent is to provide employees with additional skills in reading and/or writing. These programs have not been tailor-made for the workplace. They are usually programs that are offered in a variety of other community settings: colleges, schools, church basements, or community centres. The general impact of such programs is that employees upgrade their reading and/or writing standards. An indirect impact is that employees feel better about themselves, develop greater self-confidence, and thereby become more committed and productive workers. Adult Basic Education (ABE) and General Educational Development (GED) programs may be included under programs IN the workplace. Receipt of an ABE or GED certificate often provides employees with credentials necessary for job transfer or promotion.

A literacy program FOR the workplace is developed specifically to meet workplace needs. The intent is that workers will perform better on various aspects of their jobs. A literacy program FOR the workplace would make provision for workers to talk about their work reading and writing needs, and to share tasks and materials necessitating these skills.

The Workplace Context for the Study

This study was conducted in a city in Atlantic Canada. The workplace literacy program was made possible through the collaborative efforts of a national agency, a local committee with representation from city management, and three labour unions. The program was offered in the evening for a two hour session, once a week, for a period of ten weeks. Sessions were designed to allow for a break after the first hour, which allowed the participants and the facilitators to interact and build rapport. Participation in the program was voluntary. There were no monetary or other advantages to those who participated. Those completing the course did receive a certificate.

Steps in the Validation Process

Conducting a Workplace Needs Survey

An advisory committee developed two questionnaires, one for management and the other for employees. Both questionnaires included forced choice items and open ended questions. The goal of each questionnaire was to determine the educational/ development needs of workers in the workplace, as perceived by management and by the workers themselves. Forty-seven supervisors, and 49 employees completed the questionnaires.

It was predicted that management would be more likely to focus on skills that would enhance a worker's performance. These responses would more likely be "job focused". The prediction for the workers' responses was that they would be more

"person focused" and would identify skills and knowledge that would be more to their advantage as people and as workers.

The results of the needs survey supported these hypotheses. The top five types of programs recommended for workers and the percent of management recommending them were:

Better report writing	77 percent
Basic computer literacy	69 percent
Better communication skills	54 percent
Understanding work related printed material	54 percent
Better writing skills	46 percent

When the employees were asked to rate the areas which would be to their benefit, the top five choices and the percent of employees recommending these, were:

Dealing with on-going change	47 percent
Dealing with difficult people	47 percent
Handling stress	43 percent
Better communication skills	37 percent
Better writing skills	35 percent

An interesting finding was that 71 percent of the employees had experienced change in their work environment within the past five years. These changes were of three types: greater use of technology; downsizing and more responsibility; and change of jobs or job descriptions.

Developing a Literacy Program FOR the Workplace

The program was called Writing for the Workplace: Writing Process with Workplace Content. This was a literacy program FOR the workplace as it was developed specifically to meet the needs specified by management and workers. The strategy was to "kill several birds with the one stone" so the program was written to deal with a number of the identified needs. Three of the needs expressed by management (better report writing, better writing skills, and better communication skills) and two of goals expressed by the employees (better writing skills and better

communication skills) formed the basis of the program. The other goals expressed by the employees were integrated as content.

A prototype for the program was developed. Improving writing skills constituted the underlying thread. Since the act of writing is process, the goal was to include workplace content that would help attain the other needs - from report writing to dealing with difficult people and stressful situations. A framework for developing the program was as follows:

- Plan to involve learners in understanding writing as process.
- Identify workplace situations and tasks involving writing.
- Apply writing process skills to accomplish these tasks.
- Use writing as communication.
- Identify sources of stress within the workplace.
- Write scenarios illustrating stressful events and difficult people.
- Apply writing skills to understand and deal with stressful situations.

Implementing the Program

Writing for the Workplace: Writing Process with Workplace Content was advertised among the city employees. The course was first offered from April to June, 1999, and was followed by a second offering from October to December, 1999. Twelve participants completed the course during the first offering, while eight did so during the second offering. The course was offered on Wednesday evenings from 7:00 to 9:00 p. m. Shift work and family commitments were barriers for a number of people who had registered but who had to discontinue. There were no enrollment requirements in terms of a certain writing level. Employees represented a broad range of departments within the municipal structure. Two facilitators assumed a variety of roles throughout the sessions, including information sharing, directing group activity, putting information on flip charts, and taking responsibility for different topics. Since a range of skill levels were represented in the group and there had not been a minimum writing level entry requirement, the availability of the two facilitators made it possible to provide individuals with one-to-one assistance when necessary. Plans for each session were specified and these were basically followed. Participants were encouraged to bring in samples of writing requirements from the workplace. They were also invited to hand in any writing they had done if they wanted individual feedback on it.

The goals for each session were shared with the participants. The sessions then proceeded through information sharing, explanation, group activity, individual activity, sharing, and reflection.

Gathering and Analysing Data

The data were mainly supplied through the process of self-report. While there has been criticism of this technique for data generation, one study has documented validity for this form of obtaining feedback (Fox and Dinur, 1988). Haccoun and Saks (1998), too, believe that this technique has considerable merit. For the purpose of the present study, self-report was considered appropriate, as the goal was to determine the impact of an experience on the lives of the participants, who should best know

(perceive) its effect. Certainly, objective observation to verify what the respondents said would have provided for greater credibility, but that was not possible.

Evaluation sheets were completed at the end of every second session and focused on the goal for that and the preceding session. A more extensive evaluation was completed at the end of the program. This involved completing a rating scale on the goals for the course on a 3-point scale and responding to open-ended questions. Some open-ended questions were addressed in a focus group discussion, while others were responded to in writing on an individual basis.

Results

Fourteen goals for the program were rated using a 3-point rating scale.

- 3 - really met this goal; feel satisfied you have learned what was intended by this goal
- 2 - partly met this goal; would like additional practice
- 1 - have not met this goal; are not sure what was intended

The goals and ratings are as follows:

to understand writing as process	2.85
to learn how to plan for writing	2.71
to know how to choose an audience and write for this audience	2.42
to get one's thoughts on paper	2.85
to understand how to structure a specific writing task	2.71
for example, report writing	2.71
to become a critical reader during writing	2.71
to make changes when necessary	2.71
to understand the role of editing	2.85
to develop appropriate editing knowledge, including spelling	2.85
to improve one's writing ability for the workplace	3
to address personal and workplace concerns through writing	3

to improve one's communication abilities	3
to become a better writer outside the workplace	2.85
to feel more satisfied as a person and as worker	3
Overall Average Rating:	2.82

These results indicated that the participants achieved the goals which were set for the course. What is perhaps interesting is that the four goals which received a mean rating of 3.00 (the maximum) dealt with the participants as workers, thereby lending validity of writing FOR the workplace.

Two of the open-ended questions dealt with the participants' use of the knowledge and skills they had acquired: use on the job, and use in their lives outside the job. Responses to the two questions were as follows:

What did you learn in the course that you were able to use/may use on the job?

- How to deal with other people
- Improved report writing
- Better communication techniques
- Dealing with stress
- Being able to get ideas together and get them on paper to whomever concerned
- Developing a spelling strategy
- Completing report forms
- Understanding the writing process.

What did you learn in the course that you were able to use/may use in your life outside the job?

- Understand my learning style
- Be able to write to someone effectively
- Write to understand issues
- Better understanding of writing
- Spelling strategy
- Insight into how to write a letter and the impact of audience
- Getting along with people
- Improved communication skills
- Better understanding of dealing with the public
- Better understanding of grammar
- Understanding my child's experiences in writing

Discussion

The concepts of "IN the workplace" and "FOR the workplace" are meaningful in terms of describing workplace literacy programs. A needs survey of management and workers indicated responses consistent with this distinction. As would be expected, the responses of management were more directed towards success in specific workplace tasks. The development of a writing program for the workplace showed that it was possible to construct a program to meet the needs of workers in terms of improving their communication and writing skills and dealing with stress. Finally, the results of the self-reports showed that the participants benefitted both as workers and as individuals from their involvement in the course.

Haccoun and Saks (1998) point out that data are not yet decisive on whether investment in workplace training pays off. The controversy centers around whether such training may be too specific. When training is too specific, such as showing a worker how to operate a particular machine, it is likely to benefit only a few. If this is a new skill for the workers, then those trained may find a job involving this skill, which may lead to a high turnover of workers (Gattiker, 1995). This argument could also apply to literacy programs. For example, showing a worker how to complete a particular inventory might not have much transferability beyond that task. If the program is too general, such as learning how to pronounce words by sounding them out, then it may not enable workers to complete certain tasks, such as completing a particular inventory. The challenge of a workplace literacy program FOR the workplace is to make it applicable to job demands but, at the same time, make it general enough so that there is knowledge transfer across a number of reading and/or writing tasks.

An advantage of *Writing for the Workplace: Writing Process with Workplace Content* is that it was developed FOR the workplace and therefore provided the workers with those skills needed to accomplish various tasks, such as writing open-ended reports, completing report forms, communicating, or writing memos. At the same time, because it was based on writing as process, it was general enough so that the skills developed could transfer to a range of writing demands. Skills like planning, determining audience, composing or generating ideas, transcribing information, ordering or sequencing information, revising, and editing are general enough to apply to all writing tasks. This kind of knowledge helped the participants apply their skills to situations outside the workplace as well.

Another advantage of the program was that part of the content for writing activities was based on stressful situations and difficult people. Not only were the participants learning appropriate writing and oral language strategies to analyse various interpersonal scenarios, but they were also engaging in conflict resolution.

The concepts of literacy programs "IN the workplace" and "FOR the workplace" are very useful in understanding the kind of literacy program to which the workers are exposed. They can also act as a guide for choosing a workplace literacy program to meet workers' needs and as a framework for developing evaluation procedures. If a program was designed FOR the workplace, these concepts also make it possible to determine whether there were spin-off effects in the workers' personal lives as well.

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**EXPLORING LITERACY DEVELOPMENT: A COMPARATIVE STUDY
OF LOW-ACHIEVING GRADE 9 STUDENTS IN NEWFOUNDLAND
AND ALBERTA**

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The results of the most recent literacy survey of Canadians 15 years and older showed that 16 percent functioned at Level 1 (out of five Levels), the most basic level of reading prose type material, with another 26 percent at Level 2 (Literacy, Economy and Society, 1995). Mishra (1987) expressed concern that the increase in low-literacy in adults in Canada each year approximates 30,000 due in large measure to a 30 percent dropout rate of Canadian high school students. In order to address the problem of literacy standards, it is necessary to understand why young Canadians can spend years in school and yet not acquire adequate reading and writing skills. It is likely that some factors leading to failure and dropout surface when a student reaches high school. It is more likely that such factors have their beginnings in the early stages of schooling and even in the home/community, prior to schooling (Speece and Cooper, 1990).

The purpose of this study was to identify which factors influenced the literacy development of a sample of grade 9 students in two Canadian provinces: Newfoundland and Alberta. These two provinces were chosen since literacy surveys show that Alberta enjoys one of the highest adult literacy rates in Canada, while Newfoundland experiences one of the lowest. This is a cross-regional and not a cross-cultural study and is pertinent in light of current cross-Canada testing in various subject areas, such as the evaluation project of the Councils of Ministers of Education Canada (McEwen, 1993). Provincial results are often compared without regard to the many factors that contribute to success or failure.

For the purpose of this study, literacy was defined as competency in reading and writing, including both the strategies or procedures which subjects employ in reading and writing, and the use of reading and writing in various contexts. The influences on literacy development and use, including affective reactions and interpersonal-social relations, were considered essential to understanding literacy achievement. Part of this definition is not unlike that used in the National Assessment of Educational Progress studies in the United States (NAEP Profiles of Literacy, 1985), in which literacy is defined as using printed, written or spoken language to function in society to achieve one's goals and to develop one's knowledge potential. Part of the definition is also consistent with Schiefflin's (1986) notion that literacy is a "social and cultural phenomenon, something that exists between people and something that connects individuals to a range of experiences" (p. viii).

A Model for Understanding Literacy Development

It is important to understand the model which provides the analytical framework for interpreting those factors which affect literacy achievement. The model chosen for this study was termed the Support Systems Model and was developed by the author on the basis of his earlier research (Fagan, 1987, 1988, 1989a, 1989b,

1990a, 1990b). The model consists of three categories of variables, referred to as Phases. One phase was termed Tertiary in the sense that forces at this level were generally no longer present in the student's life, such as one's early home environment and early community experiences. The Secondary Phase includes school related experiences. The Tertiary and Secondary Phases are distinguished by sequence of time. The Primary Phase variables may be considered as encompassing residual affects/effects from the other two phases. They were designated Primary because, in the studies which led to the development of the model, they were the factors first mentioned when low-literate adult subjects were questioned about the nature of their school and home experiences. Furthermore, the factors were still dominant in the orientation or attitude of these adults towards literacy development or academic upgrading programs. An underlying assumption of the model is that each individual experiences support (positive) and non-support (negative) factors or forces during the course of his/her academic development. The influence of such experiences on child development is aptly described by Cochrane, Cochrane, Scalena, and Buchanan (1985):

Each of us is made up of pieces that we get from one another. Everyone we meet has an impact on us, no matter how small, and the experience becomes a piece of what we are. Our experiences with other human beings are the means whereby we gain our own humanity (p.134).

Considerable research exists in the literature supporting each of the phases of the model. The Tertiary Phase of the model contains eight variables: literacy models, literacy events, general experiences, academic knowledge, orientation toward beginning school, cultural influence, and physiological factors. The importance of these as the basis for support and non-support influences on low achievement is documented in many research studies (See, for example, Almy, 1949; Clark, 1976; Doake, 1981; Heath, 1983; Schickedanz and Sullivan, 1984; Torrey, 1969). Research indicating the relevancy of the Secondary Phase or school-related variables has been conducted by Baker and Brown (1984), Berkowitz (1986), Garner (1980), Goodman (1969), Miller and Yochum (1991) and Paris, Lipson and Wixon (1983). The specific variables within the Secondary Phase of the model include: home involvement, academic related experiences, academic assistance, perceptions of success, interpersonal relations/teachers, interpersonal relations/peers, commitment, concepts of literacy/metacognition, effective instruction/ strategy use, cultural influence, and physiological factors. The third category, Primary, refers to the formation of beliefs and feelings based on one's exposure to various experiences (successes and failures). This phase may be considered residual in the sense that it occurs and remains as a result of prior experiences in the home and at school. In a sense it transcends the other two phases. The three specific variables within this Phase are attribution, general attitude and, in the case of those experiencing considerable failure, learned helplessness. Research results identifying the significance of these variables have been reported by researchers such as Bloom (1983), Johnson and Winograd (1983), McDermott (1977) and Wilcox (1982).

In order to overcome a weakness of models identifying factors correlative with literacy development, it was necessary to understand the interrelationships of these variables and how they operated across different grade levels (sequence). The

importance of accounting for sequence and interrelationships is supported by Reynolds (1981) who studied the early schooling of children at risk and also by Willett and Singer (1991) in their research on student dropout and teacher attrition. The guiding question for the latter was "when?" rather than "whether?", that is, noting "when" a significant event occurs as opposed to noting "whether" or not it has occurred. Such a question, according to Willett and Singer, is best addressed through methods known as survival analysis, event history, or hazards modelling (p. 409). One adaptation of Willett and Singer's work for this study was the use of the concept of "at-risk probability." At-risk probability was calculated as a percentage of the non-support factors which the students experienced within each grade level. This allows the researcher to identify which year or years the students were most vulnerable and were most at risk in terms of school failure and whether these years occurred in isolation or in clusters.

In summary, the type of learner an individual becomes depends on the cognitive and affective meaning which he/she abstracts from the impact of school and community experiences (positive or negative) over a particular course of time. Vygotsky (1981) describes the formation of the learner as follows:

We could say that it is through others that we develop into ourselves. The individual develops into what he/she is, through what he/she produces for others. This is the process of formation of the individual (pp. 161-162).

Methodology

A survey research design guided the choice of procedures for the collection of the data. The specific measures within the survey design included interview, strategy tasks in reading, and a Concepts of Literacy Task.

Interview. The interview was the main data gathering instrument and consisted of a number of questions on the factors at each phase of the model. Mishler (1986) states that the goal of an interview is to provide an opportunity whereby interviewer and respondent can jointly construct meaning based on an understanding of shared contexts. By having a common core of questions "you are confident of getting comparable data across subjects. . . ." (Bogdan and Bicklen, 1982, p. 136). A structured interview, according to Mishler (1986), need not be limiting or prevent "storying". Mishler states that "Telling stories is far from unusual in everyday conversations and it is apparently no more unusual for interviewees to respond to questions with narratives if they are given some room to speak" (p. 69).

The interview methodology may be considered a modification of the critical incident technique (Borg and Gall, 1989) which allows the interviewer to tap time related events of the respondents. In this study, subjects in a particular group were asked to report incidents which they felt were significant (critical) in their schooling. The use of open ended questions ("Think back over your time in school - what was important in helping you do as well as you have done") in the interview facilitated the collection of this type of data.

One difficulty with interviews is the possible discrepancy that may arise between perception and reality. One attempt to deal with this was to pose the same questions in different format at different times throughout the interview so that responses could be cross-checked. Also, whenever possible, the respondents were asked to describe specific happenings and the nature of feelings engendered were probed in relation to the experiences encountered. The interview was developed by generating a number of questions for each of the category variables in the three phases of the model. The questions were then arranged randomly and an independent rater was asked to assign them to the different categories of variables. The percent of agreement was 94.6.

Strategy Tasks in Reading and Writing. There were five reading tasks that were written so that they measured the use of seven particular cognitive processes: word analysis and identification, meaning derivation, synthesis, prediction, inference, generalization, and monitoring.

Concepts of Literacy Task. This task consists of eight photographs of people engaged in reading or writing activities. In an attempt to lessen any bias in the subjects' responses, the photographs had been selected to represent a variety of reading and writing tasks, and to portray people of different ages and gender.

For both the Strategy Tasks in Reading, and the Concepts of Literacy Task, reliability had been obtained in an earlier study by readministering the tasks to 24 subjects after a six month interval. The average percent of agreement for respondents across both administrations was 89.

Data Collection Procedure

Each subject was seen individually. The Strategies Tasks and the Concepts of Literacy Task were interspersed within the interview. In addition to yielding specific data, they also served the purpose of leading into another topic of the interview.

Subjects

Two groups of low-achieving grade 9 students of 20 subjects each were chosen from Alberta and Newfoundland. Grade 9 was chosen because it is the last year of junior high and a time when many students may drop out of school.

The students from Alberta were chosen in cooperation with two large urban school boards. Low-achieving students were defined as those who scored at least one-half standard deviation below the mean on a standardized reading test administered by the school boards (usually, the Canadian Test of Basic Skills). Students were chosen randomly from those who received parental/guardian permission to participate. The rankings of the students were confirmed by the students' homeroom or classroom teachers. Academic achievement over the course of a year was also taken into account. End of year tests were used to verify the achievement status of the students and only those students who were consistent in their low-achievement placement prior to the research project and at the end of the year were included in the sample.

All subjects were at least of average IQ as measured by a standardized test, usually the Canadian Cognitive Abilities Test, although a large number of low-achieving students had been administered the WISC-R. Information was collected on socioeconomic status, chronological age, and gender. Students who were recent immigrants and who had little experience with the Canadian school system were excluded from the sample.

An attempt was made to choose a Newfoundland sample as similar as possible to the Alberta sample. Students were also chosen in cooperation with two large urban school boards and the same number of students per group (20) was chosen randomly from those for whom parental/guardian permission was given to participate in the study. While the Alberta students lived in a large city (population greater than 500,000), the Newfoundland students lived either in a city of approximately 100,000 which also encompassed schools in a rural area, or a in city of approximately 20,000. Unlike one of the criteria for the Alberta sample, standardized reading and IQ test scores were not always available for all students and the criteria for choosing low achieving students were homeroom teacher and counsellor judgments and the general achievement record. This was considered acceptable since the goal of the study was to focus on less-successful students. As in the case of the Alberta sample, end of year results were also examined to note consistency of achievement placement. Teachers of students in both provinces considered the "mix" of students in their classrooms to be "typical" of in that province.

Other characteristics of both samples of low-achieving students are given in Table 1.

Table 1
Characteristics of Grade 9 Low Achieving Students (Alberta and Newfoundland)

	Alberta	Newfoundland
Mean C.A.	14.4	14.8
Number of Males	9	9
Number of Females	11	11
Mean SES	2.8*	2.8*
Mean Number of Siblings	2.5	1.9
Mean No. Siblings at Home	1.4	1.5
Number of Separation/Divorce	8	1
Transfers after September	8	6

*1=Professional/Technical; 2=Skilled Trade; 3=Clerical/Sales; 4=Manual Labour; 5=Unemployed

The age differences can be explained by the fact that the data for the Newfoundland students were gathered two to three months after the data for the Alberta students. The only other meaningful difference is the number of families in which separation or divorce had occurred. Out of a sample of 20, eight Alberta

students lived in families experiencing separation or divorce, compared to one Newfoundland student.

Data Analysis

An assumption underlying the results was that low-achievement is due to a lack of support within one or more phases of the Support Systems Model. The responses from the interview questions were converted to numerical scores. For example, if in response to the question, "Do you remember having books in your home when you were small, before you went to school?", the student answered "No", this was coded as 1; if the answer was "Yes", it was coded as 0. A rating of 0 was interpreted as the absence of a non-support or interfering factor. Only questions that were common across all subjects were converted to numerical scores. All scores were summed within Phases of the model.

Results

Phases of the Model

The analysis of variance data for the low achieving students on the three Phases of the model are given in Table 2.

Table 2
Analysis of Variance for Non-Support Events at the Tertiary, Secondary, and Primary Phases for Low Achieving Grade 9 Students (Alberta and Newfoundland)

Variable	Source	DF	Sum of Squares	Mean Squares	F Ratio	Probability
Tertiary	Between	1	640	640	0.32	0.57
	Within	38	74360	1956.84		
Secondary	Between	1	455.62	455.62	0.08	0.775
	Within	38	209913.75	5524.04		
Primary	Between	1	16000	16000	39.45	0
	Within	38	15410	405.52		

The means and standard deviations are reported in Table 3. The students in Alberta and Newfoundland differed on the Primary Phase variables of the model.

Table 3
Means and Standard Deviations for Tertiary, Secondary, and Primary Phases

Variable	Mean	Standard Deviation
Tertiary (Alberta)	124	37.75
(Nfld)	116	49.88
Secondary (Alberta)	303.25	59.72
(Nfld)	310	86.49
Primary (Alberta)	89	19.5
(Nfld)	49	20.74

During their school career, the Alberta students experienced almost twice the mean number of non-supports as the Newfoundland students in terms of Primary Phase variables: attitude, attribution, and self-helplessness. It seems that the lack of success of students in both provinces were likely to be equally affected by factors within the Tertiary and Secondary phases of the model. However, the Alberta students were more likely to be influenced by factors of a more personal and affective nature.

Sequence and Clustering of Non-Support Factors

The distribution of non-support factors across grade levels is given in Table 4.

Table 4
Non-Support Probability for Low Achieving Students Across Grade Levels

Grades

	K	1	2	3	4	5	6	7	8	9
Alberta	4	7	6	7	12*	13*	13*	13*	9	11
Newfoundland	3	9	6	5	5	6	8	17*	18*	22*

AB = Alberta, NF = Newfoundland

** Those grades on which there were statistical significant differences (t-tests) between students from both provinces
Summing across grade levels equals 100 percent of non-support factors experienced.*

A very definite pattern emerges for both low-achieving groups and differs by group. The Alberta students experienced a greater percentage of non-support factors at the elementary grade levels; the corresponding peak for the Newfoundland students occurred at the junior high school levels.

An analysis of the sequence of non-support factors in terms of their occurrence across consecutive grades showed that they were likely to occur in clusters of grades

rather than being experienced in a single grade. Alberta students experienced considerable non-support in grades 4, 5, and 6, while Newfoundland students experienced such non-support in grades 7, 8, and 9. If a student has a "bad year" that is immediately followed by a year of support, it is possible that the effects of the "bad year" may be offset. However, when students encounter "bad years" three grades in a row, this is likely to have a more significant effect on their subsequent achievement. In order to obtain additional information on the significance across different grade levels, the students were asked which grades they remembered as "worst" in their school career. The results are shown in Table 5.

Table 5
Number of Low Achieving Students Remembering "Worst" Grades

Grades

K	1	2	3	4	5	6	7	8	9
AB	0	1	0	78	8*	8*	6	5	3
NF	1	5*	3*	1	2	1	0	5	8*
9*									

AB = Alberta, *NF* = Newfoundland

* Those grades on which there were statistical significant differences (t-tests) between students from both provinces

Not only did the Alberta low achieving students experience a greater percentage of non-support factors at the upper elementary grades, but these factors apparently had a residual or continuing effect on the students as most remembered these grades as the worst grades experienced. The Newfoundland students' data on grades least liked were also consistent with those grades when a relatively greater percentage of non-support factors were experienced at the junior high school levels, particularly grades 8 and 9. However, Grades 1 and 2 were also noted by a greater number of Newfoundland students as the worst grade experienced. It seems that from the very beginning, the Newfoundland low-achieving students perceived school as a less than satisfying experience.

Perceived Significance of Support and Non-Support Factors

Responses to questions probing the students' perceptions of which factors were most significant in supporting (fostering) or non-supporting (hindering) their literacy development are categorized and percentages are given in Tables 6 and 7.

Table 6
Percentage of Perceived Significant Support Factors (At Least 10 Percent of the Total) for Low Achieving Grade 9 Students (Alberta and Newfoundland)

	Alberta	Newfoundland
Effort	32	35
Personal/Family	28	25
Teachers	15	17
School/Program	---	14
Peers/Friends	12	---

Both groups were fairly similar in their identification of perceived significant support factors; effort, personal/family, and teachers were the top choices of both groups.

Table 7
Percentage of Perceived Significant Non-Support Factors (At Least 10 Percent of the Total) for Low Achieving Grade 9 Students (Alberta and Newfoundland)

	Alberta	Newfoundland
Effort	46	16
Attitude/Motivation	13	14
Teachers	11	---
Self/Concept/Affect	11	---

The Alberta students also identified peers/friends, while the Newfoundland students believed that the nature of the school/program was a significant factor contributing to success.

While both groups saw lack of effort as the factor most likely to interfere with success, this factor was cited almost three times as often by the Alberta students. Both groups were fairly comparable in noting the effect of poor attitude and little motivation. The Alberta students also mentioned teachers and low self-concept/affect as being significant non-support factors.

Data on concerns of the low achieving students are given in Table 8.

Table 8
Percentage of Factors Which Cause Concern (At Least 10 Percent of the Total) for Low Achieving Grade 9 Students (Alberta and Newfoundland)

	Alberta	Newfoundland
Success/Achievement	55	30
Job	23	2
No Concern	---	21

Again there was similarity in the pattern of responses for both groups. However, while both groups were concerned about future success/ achievement, this constituted over one-half of the concerns of the Alberta students but less than one-third for the Newfoundland students. Alberta students, while low-achievers, were more ambitious than the Newfoundland students in terms of future goals. Both groups were similar in identifying obtaining a job as a concern. "No concerns" made up 21 percent of the responses of the Newfoundland students.

Summary-Discussion

Low-achieving students may be understood in terms of the lack of support they receive from their beginning school years, and even before coming to school. Support factors are defined in terms of positive experiences, and non-support factors in terms of negative experiences which they have encountered. These may range from physiological difficulties (vision) to the attitude they develop toward school and school tasks.

The results suggest that different patterns of non-support experiences may contribute to lack of school success. The Newfoundland students tended to be more at risk in the very early grades and again at junior high. The Alberta students, on the other hand, felt that the elementary grades represented their most negative school experiences. The influencing factors on both groups of students tended to cluster rather than occurring in single years. A single "bad year" may not be too crucial in determining a child's lack of success, but a sequence of such years would likely be a compounding factor, so that without special help or intervention, a child would likely continue a pattern of failure.

The Alberta and Newfoundland students differed in the number of Primary non-support factors: the attitude, attribution, affect, etc. that they encountered. The fact that a large number of Alberta students came from homes which had experienced divorce or separation could have resulted in their being more inclined to examine their feelings and security. The findings raise a number of questions. Do Newfoundland students who are low-achievers become more complacent by junior high, while the Alberta students are more likely to express their negative feelings? The Alberta students were more conscious of non-support factors at this stage of their lives than were the Newfoundland students. In spite of their low-achievement, the Alberta students set higher level goals for their future than did the Newfoundland students. The Alberta students had been more at risk in the elementary grades but, whether through intervention or some other reason, were feeling more positive about their current grade experiences. Is a combination of setting high level goals and overcoming the greatest at-risk period of their school lives more likely to lead to better academic performance in the high school years and a lower likelihood of dropping out of school? On the other hand, are Newfoundland students who are feeling at-risk at junior high, who are more complacent in their attitude and feelings about their achievement status, and who have set lower goals for their future, more likely to "give up" and - unless a major change occurs in terms of intervention and academic support - may not complete high school?

Implications

The Support Systems Model provides a suitable framework for understanding literacy development (or educational development, in general). This model can be used as an evaluative model and allows teachers not only to identify factors which the students perceive as significant in influencing their success (or lack of it), but they can also identify the years when students were more at risk and whether several "bad years" compounded their chances of success. If this were the case, such as students having a bad experience in grades 4, 5, and 6, the teacher would then be more likely to understand the skills and knowledge which the students had not mastered. This also points out the importance of teachers understanding the school continuum in terms of expected learning outcomes.

Teachers, through preservice and inservice training, should develop a greater awareness of the impact of various socio-cultural factors on student achievement and learn to capitalize on the strengths (supports) and compensate for weaknesses (non-supports). Unless a pattern of failure is interrupted, it will only become exacerbated. Once students begin to experience difficulty, the total context of that child's environment (as specified by the model) must be examined for the purpose of detecting where the child might be most at risk and how intervention might be most productive. Counsellors might note which non-support events continue beyond a year.

The importance of success for continued success cannot be underestimated and may underlie such other factors as self-concept, attitude, and effort. Teachers should plan and arrange tasks so that at some time each student experiences success and this success is acknowledged. There is still much truth in the old adage, that nothing breeds success like success.

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ADULT BASIC EDUCATION (ABE) AND LITERACY: NEWFOUNDLAND AND LABRADOR

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Reading and writing are necessary but not sufficient conditions for literacy. Reading and writing both involve the construction of meaning via print and prior knowledge. Literacy entails both attitude and action with respect to reading and writing and is influenced by social, economic, political, and cultural conditions.

Adult Basic Education and literacy are two significant constructs for adult learners who have not completed high school and who choose to increase their level of school achievement, possibly leading to a high school certificate. The purpose of this paper is to try and understand the relationship between literacy and adult basic education as educational experiences for the attainment of this goal.

Historical Insights

Literacy programs have a long history in Newfoundland including the Opportunity Schools of the 1930's. These entailed six permanently employed teachers who travelled from community to community assisting people with their reading skills. The work of Dr. Florence O'Neill continued this tradition in the 1940's. In the 1950's and 1960's the approach to literacy (called reading then) was much more traditional and any adult programs tended to use reading materials from elementary schools.

Adult Basic Education was initiated in 1968 when the first Basic Training and Skills Development (BTSD) program (a federally funded program) was established in the province at Stephenville. For students who were unable to cope with the academic demands of this program, a pre-BTSD literacy component was developed. By 1970, the Literacy portion of the BTSD program "had become clearly established as a program in its own right and the Adult Education section of the Department of Education undertook to put a curriculum in place" (p. iv). The Educational Development Laboratories (EDL), a United States program formed the basis of literacy instruction in the province for the next eight years. The BTSD program had a pre-employment orientation. Initially there were courses offered in mathematics, communication skills, science, and social studies; the latter was dropped from the curriculum as it was not a prerequisite to any trade. The BTSD program was a mastery based, individualized program patterned after the Saskatchewan Newstart Program. In 1973 the BTSD program was revised and three basic streams were developed: technical, biological, and commercial. The Generic Skills Research conducted by the Occupational and Career Analysis Development Branch of the Canada Employment and Immigration Commission was used to determine which parts of the program would be prerequisites for entering different occupational training programs. As part of this revision, a life skills course was added. The Department began issuing certificates for the BTSD program based on the completion of courses in three areas: mathematics, communication skills, and science. Students who received certificates were eligible for admission to trade and technical programs in vocational schools.

With a downsizing of Federal support for the BTSD program, the Division of Adult and Continuing Education established a Provincial Literacy Committee in 1978, the mandate of which was to develop a Literacy program for the province, suitable for full-time and part-time delivery. The Literacy program introduced in 1978 was very similar to the EDL program - a self paced literacy skills instructional program. In the 1980's with the restructuring of the high school program by level, the ABE program was revised to parallel this approach. In 1985, ABE certification was accepted for entrance into Memorial University.

In June 1988, the Department of Career Development and Advanced Studies established a committee to examine the Literacy Program, the ABE Program, the BTSD program, and the Academic Support (Concurrent Training) Program. In March 1989, the committee recommended that the Department "create one provincial program consisting of Levels I, II, and III, to encompass and integrate the Literacy, ABE, and BTSD Programs" (ABE Level I Program Guide, 1995, p. I). A 1990 revision to the ABE Level I (Literacy) program marked a significant shift in the approach to literacy programs. Instead of basing the program on a set of resources, such as EDL, it was based on general learning objectives. The manner in which the program was to be executed was not specified so that the onus lay on the instructors. In 1993, the ABE Monitoring Committee was established to continue to examine and evaluate the program; this committee evolved into the ABE Standing Committee in 1994.

Purpose of ABE Levels I, II, and III

Literacy preceded ABE as an area of study. Quigley (1997) points out that the origins of ABE must be understood within a human capital model. In 1962 the first bill to promote literacy education in the United States House of Representatives did not get beyond the Rules Committee. It was then considered more "politically and economically correct" to have adults enroll in ABE programs which would tie their educational experiences more closely to the labour market. Literacy as expertise in , and critical use of language (reading and writing) was perceived as too general for this purpose. This was an unfortunate turn of events as the basis for the development of critical reading and writing skills transferable to a wide range of contexts was minimized. The focus on the relationship between ABE programs and entry into the workforce is characteristic of the Newfoundland and Labrador ABE program.

According to the ABE Level II/III Instructors' Handbook (1995), the ABE program was "designed with the intent of providing adults who have not completed high school with the opportunity of acquiring a **solid, high quality educational background** to allow them to function in society, and to access avenues to further education, training, employment, and personal enrichment" (p.10). The ABE Level I Program Guide (1995) delineates this goal somewhat by specifying that learners enter the ABE program for a variety of reasons. While some may aspire to obtaining a certificate, others may use this as a stepping stone to further education, or trade skills instruction, while others may attend to assist their families, or for their own personal goals. However, there appears to be a discrepancy between the stated goal of the program and the content. As indicated above, social studies was dropped from the ABE curriculum, not because it did not contribute to a "solid, high quality, educational background" but because it was not a prerequisite to any trade. The prominence of the work orientation is evidenced by such statements as "Prevalent education and

training theory . . . stresses the importance of providing more rounded basic educational opportunities to prepare people to cope with the pressures of information technology and a fluid labour market" (ABE Levels II/II Instructors' Handbook, 1995, p. 10). The Handbook authors also quote from Carnevale, Gainer, and Meltzer (1990, p. 2), "Today's workplace demands not only a good command of the three R's but more. Employers want a new kind of worker with a broad set of workplace skills - or at least a strong foundation in the basics that will facilitate learning on the job". The Handbook authors continue that "Confidence and independence, and the ability to seek and use many learning resources are desirable attributes to foster in adult learners" (p. 11).

Literacy Within the ABE Program

Regardless of the focus on preparation for the workforce, there is provision for literacy instruction within ABE. Literacy at the three ABE levels is briefly distinguished by describing Level I as being synonymous with literacy, Level II as constituting a transition between literacy and high school, and Level III as being synonymous with high school. In more detail, Level I is described as "designed to enable adults to achieve the fluency in reading and writing, to acquire the knowledge, and to develop the skills required to participate fully in their day to day lives as citizens, workers, parents, consumers, and students (ABE Level I Instructors' Handbook, 1995, p. vii). The encompassing objective of ABE Level I "is that at the time the adults leave the program their facility in reading, writing, and critical thinking, and their ability to transfer knowledge to the development of life coping skills will be enhanced" (ABE Level I Program Guide, 1995, p. x). "Level II is meant to provide the transition between the literacy skills adults need to function in our society and those that are associated with high school completion" (ABE Level II Program Guide, 1995, p. xi).

Literacy components/courses are addressed within the Communication Skills section of the ABE Program. ABE Level I also contains a content area section, the overall objective of which "is the development of functional literacy" (p. 43).

Program Requirements

Following are a list of required courses with a literacy component at the three ABE levels:

ABE Level I Communication Skills, including:

- Reading
- Writing
- Oral Communication
- Mathematics
- Science
- General Knowledge

ABE Level I - 18 courses
Communication Skills, including:

- Reading

Writing
Spelling
Oral Communications
Mathematics
Science
General Options (Level III Credits)

ABE Level III 36 credits required

Minimum of 6 Communication Skills
Minimum of 6 Mathematics
Minimum of 6 Science
Minimum of 4 Employability Skills

Plus 4 additional credits from above

Maximum of 10 General Options (may include equivalency and maturity credits)

Estimated Time for Completion

The suggested time for the completion of one course is seven weeks or one-half semester, part-time at 3 hours a week. Full-time day attendance would allow a learner to complete the course in 2 weeks.

Level II would take a year to complete on a part-time basis, or 6 to 8 weeks on a full time basis. Completing Level I would depend on how quickly the learner completed the general learning objectives specified for that Level. The ABE Level I Program Guide states that "Students whose reading skills are already fairly advanced usually need a few months to brush up on their skills and get used to being in an educational program before going on to Level II" (p. 5). It is recommended that "About three weeks after the initial assessment, a student who has attended classes regularly could be introduced to the reading and writing evaluation charts" (p. 173) which are given in the Handbook.

The ABE Level II/III Handbook states that full-time students who are HRDC funded are often under pressure to complete the program in 65 weeks. Another statement indicates that "Those who enter at a low level usually take a long time to complete, at least three years" (p. 53). It is not clear if this reference is to students in Levels II and III or one or the other.

Issues in the ABE/Literacy Program

The experiences which adult learners have in ABE/Literacy Programs depend on a number of factors or issues. Because of space, a few of these which are under the control of program developers will be addressed here. These include: nature of literacy, nature of instruction, and instructor preparation/support.

Nature of Literacy

There is no single definition of literacy so one must abstract its meaning from the proposed content and intent of the Program. There is no doubt that literacy is the main function of Level I for the Program Guide states that "While it can be argued that basic math skills are a part of functional literacy, the ability to read and understand and communicate in print are more central to what it means to be literate" (p. 32).

Literacy for ABE Level I is addressed in 25 general objectives. Some are prefaced by a condition, such as: "Given a text of appropriate difficulty, relevant to personal interest or program content areas . . ."; also each general objective may have sub-objectives. The main objectives are:

Critical Reading Skills

1. Paraphrase to demonstrate clear understanding of author's message.
2. Identify author's purpose and audience.
3. Distinguish between fiction and non-fiction.
4. Distinguish between fact and opinion.
5. Identify major ideas and supporting detail that is explicitly stated.
6. Identify unwritten meanings.
7. Evaluate for personal significance.
8. Scan to locate specific information.
9. Skim to choose a book or item or (a) interest, or (b) relevance to the purpose.
10. Locate, interpret, and apply information.
11. Classify and categorize information.

Purpose of Reading

1. Identify ways in which reading is used.
2. Identify different forms of printed information.
3. Select appropriate reading or print material for the location of required information.
4. Identify situations in which printed materials may be presented orally.
5. Use appropriate study skills.

Oral and Written Communications

1. Present personal information orally and in writing.
2. Present personal experience orally and in writing.
3. Express personal opinion orally and in writing.
4. Write a narrative paragraph.
5. Write a descriptive paragraph.
6. Extend the principles of paragraph writing to a short composition of 3 or 4 paragraphs.
7. Perform practical writing exercises using the appropriate format.
8. Perform handwriting exercises with reasonable speed and legibility.
9. Read orally with expression and a reasonable degree of fluency.

In addition to these general objectives there are 126 Skill Areas, and 7 Pre-Reading Skills listed. The relationship between these skills and literacy is explained at various points. ABE Level I Program Guide states that "While the attainment of the general learning objectives assumes full literacy (my emphasis), the skill areas refer to very basic steps in the development of literacy" (p. xvii). This point is made elsewhere in the Program Guide that the simple acquisition of the skills required to read cannot be equated with literacy. The Skill Areas appear to be prerequisites for literacy. The assumption appears to be that if the Skill Areas and Pre-Reading Skills are developed, they are done so separately, or in addition to these exercises which would be used for the general literacy objectives.

It is not expected that students will attain the full literacy implied by the general objectives at Level I. The ABE Level II Program Guide states: "Because most adults entering Level II will have underdeveloped reading skills, it is imperative that every instructor encourage students to read as often as possible, and as widely as possible" (p. 1). There is no similar admonition with respect to writing. There is a shift in philosophy and emphasis on the nature of literacy in Level II. Rather than being guided by general objectives, there are three specific courses plus one in literature. The three courses directly dealing with instruction in literacy are:

- IC 2012: Vocabulary
- IC 2013: Reading Comprehension
- IC 2015 Writing Skills
- (IC 2013: Literature)

There is also IC 2011: Study and Research Skills, which includes topics related to literacy development. There seem to be more commonalities between the suggested reading course at Level II and the Skill Areas in Level I, than with the General Literacy Objectives at Level I. The writing course for Level II contains much more content on the mechanics of writing (Grammar, Punctuation and Capitalization) than is implied by the General Literacy Objectives at Level I. The sequence of literacy development appears to move from a more general to a more narrow perspective across Levels I, II, and III.

Level III continues the philosophy guiding the nature of literacy at Level II. A rationale is provided: "Writing, reading, speaking, listening, viewing, study, and all communication skills are crucial to learning in all content areas. Development of these skills must continue throughout all Levels of the ABE program, in all content areas" (ABE Level II Program Guide, p.1). Apart from four literature focused courses, there are 7 courses devoted to the development of literacy. These are:

- IC 3211: Basic Grammar
- IC 3112: Writing Skills
- IC 3113: Evaluative Comprehension
- IC 3214: Oral Communications
- IC 3215: Research Writing
- IC 3116: Business Communications
- IC 3117: Vocational English

There is some overlap between the Oral and Written Communications General Objectives at Level I and the related Skill Areas, and the Writing Skills, and Oral Communications courses at Level III. The courses relating to literacy at Level II appear to be isolated from the literacy activities that a learner would encounter in her/his environment. Business Communications is a written language course; the first section, Basic Skills Review appears to be a review of the Vocabulary and Writing Skills courses from Level II. Vocational English, with the exception of a section on "Technical Writing" is very much a "job search" course.

The graduation requirements for Level III (Program Guide, p. 275) specify the following required courses from Communication Skills.

IC 3211: Basic Grammar IC 3116: Business Communications
IC 3112: Writing Skills plus one of: IC 3215: Research Writing
IC 3221: Optional Literature

No course in reading is required for graduation at Level III.

Overall, the literacy program may be described within an autonomous model of literacy (Street, 1984). The objectives are based on content/skills to be mastered rather than arising from the personal/social/political/economic needs of the learners. The focus is on text (the nature or structure of the written passages) rather than on task (the event or occasion when literacy may be used) (Purves, 1991). A writing stage framework (Graves, 1991, 1978) does not guide the writing courses. For example, rather than being addressed as significant to the "editing" stage of writing, grammar, spelling, and punctuation are studied in isolated courses. The literature courses tend to be focussed within Rosenblatt's (1978) efferent model as opposed to the aesthetic model, and there appears to be minimal emphasis on "response to literature" (Langer, 1995).

Nature of Instruction

Language is perhaps one's worst enemy in trying to delineate or explicate a particular construct, such as nature of instruction, because there are often so many meanings of the same words. For the purpose of consistency in meaning, the following terms often occurring in discussion on instruction will be defined as indicated:

Delivery: this relates to the manner or the mechanisms by which a learning experience is provided to the learners, and may include: instructor, computer, video, teleconference, internet, etc.

Organization (for delivery): this relates to how learners are structured, assigned, or organized to take advantage of the experiences. This may include: individualization, small groups, large groups. There may be interaction between the mode of delivery and the organizational arrangement; for example delivery by computer would more likely entail individualization organization.

Methodology: This may be used synonymously with instructional procedure, or instructional strategy. Methodology may be superficial such as "exposing" learners to an experience (asking them to read a section of text, write a summary, read the newspaper). This often entails learners practicing or demonstrating what they already know. It may also entail in depth strategy by which the instructor attempts to engage the learner both cognitively and affectively in the learning act. An example would be to help the learner acquire the steps for writing a summary, the techniques for effective study of words for spelling, how to monitor one's comprehension and what steps to take should the learner go "off track. " (Examples of literacy strategies may be found in Fagan, 1992). There is also interaction between methodology and organization and delivery. For example, superficial methodology is often found in computer programs, while highly interactive methodology, with a give-and-take between learner and instructor is best accommodated in a small group situation.

Integration: This usually entails an interaction between methodology (or process) and content. One may be expected to memorize content without any knowledge of how to best process this information for memorization, or strategies for memorization can be interwoven into the goal of remembering or mastering the content.

A rationale for stating general objectives of literacy at ABE Level I is that there will be flexibility in how the program is delivered, how learners are organized, what methodology is selected, and how integration may take place. This places a major responsibility on the instructors. There are many suggestions throughout the ABE Handbooks that instruction should be learner-centered; however, the definition of this concept is not always clear. The ABE Level II/III Handbook states that "the instructor creates an educational environment in which learning can occur. A variety of instructional techniques can be used. Learners are expected to assume ever increasing responsibility for specific content determination and acquisition" (p. 57). However, this suggestion is not compatible with a program in which course content is specified. It does not appear that learner-centered necessarily means individuals engaged solo in activities. In fact, there are many supportive points for group instruction and interaction. The following are taken from the ABE Level II/III Handbook. Individual instruction "emphasizes individual responsibility for efforts in performance" (p. 58). However, individual does not mean isolation, and individual responsibility could be promoted in a group situation. "An investment of time is required to build a community of learners" (p. 61). "Interactive teaching methods and materials allow adults to actively use the information they are seeking to learn" (p. 89). "Group support is important for effective learning" and "social and personal development are important facets of the learning experience" (p.89). However, in contrast to this emphasis on group learning and interaction, there is also strong support for particular computer instructional programs.

A difficulty with the use of computer instructional programs as a means for delivering communication skills is that they are limited to providing reading and writing skills. Literacy, involving attitude and action in response to reading and writing in current, everyday activities cannot be easily developed via computers. It is very

difficult to provide for the insert of new material (such as today's newspaper) or to engage in spontaneous interaction between learner and instructor over an issue initiated by either of them.

While the concept of integration is promoted in the ABE Handbooks, the focus is on content: "What the integration means, rather, is that the major focus of the program in terms of resources should be on material relating to the program content are as" (p. 37). An examination of the balance between focus on content and methodology in the Program Content section of ABE Level I indicates that the emphasis appears to be on mastering content rather than on developing effective reading and writing strategies for mastering content.

Instructor Preparation/Support

When many decisions on delivery, organization, methodology, integration, and selection of content for literacy development are left to the instructor, it puts a significant responsibility on the instructor's professional preparation/support, time, and experiences, and further responsibility for provision for support and professional development experiences. Several references are made in the Handbooks regarding this responsibility: "Although the majority of ABE teachers may not have specific training in the teaching of adults, many will be familiar with some of the literature on adult education" (ABE Level I, p. 8). "Teachers should have a basic knowledge of word processing before attempting to use it as a teaching tool" (ABE Level I, p.143). "Most instructors in ABE arrive there indirectly. Many have experience in secondary or even elementary systems. Consequently they bring many routine practices which served them well or were required in dealing with children and adolescents" (ABE Level II/III, p. 35). The focus appears to be on having instructors understand reading and writing skills rather than on understanding literacy and what it means to be literate. And even the requirements to understand reading and writing skills necessitates a broad background of knowledge by the instructor. For example, at Level I, an instructor would have to be knowledgeable of 126 Skill Areas and 7 Pre-Reading Skills and know when these are pertinent to one of the 25 general literacy objectives and know how to best develop them so that they enhance the attainment of the general literacy objectives. The "andragogical principles" promoted by Knowles are addressed and compared to "pedagogical principles". While the andragogical principles still apply to working with adults, one must be cautious in the nature of the comparisons, for with the introduction of "whole language" in schools, the pedagogical principles suggested by Knowles are long outdated.

There are no suggestions as to the literacy knowledge and experience that literacy instructors should have. It is assumed that the instructors understand "literacy", "skill areas", "pre-reading skills", and how these relate. The International Reading Association, the largest professional reading organization in the world, provides standards of knowledge of reading for different educational personnel. For adult literacy instructors, 102 knowledge goals are suggested under the following headings.

Philosophy of Reading Instruction
Language Development, Cognition and Learning
Knowledge of the Reading Process

Creating a Literate Environment
Organizing and Planning for Effective Instruction
Knowledge of Instructional Strategies
Demonstrating Knowledge of Assessment Principles and Techniques
Communicating Information about Reading
Planning and Enhancing Programs

The relationship between instructor support interacts with the generality-specificity of the program objectives. When objectives are stated generally or globally, and there is considerable flexibility in how these are implemented, there is a much greater responsibility on the part of instructors to have a comprehensive understanding of the discipline and to make many decisions; on the contrary, when objectives are specified, and the delivery is controlled, such as by computer, there is little responsibility on the instructor for decision making about program implementation.

Conclusion

There is no doubt that literacy is a major part of the Newfoundland and Labrador ABE Program. It encompasses almost all of Level I, much of Level II, and six credits within Level III. The sequential relationship across Levels, however, is not that clear. "Full literacy" appears to be a goal of Level I and is guided by a number of general objectives and specific skill areas and pre-reading skills. Courses with specific literacy related content occur at Levels II and III, sometimes with overlap of the Level I program.

The literacy program is traditional in nature and may not be conceptualized within reading/writing, literacy theories of such educators/researchers as Street, Graves, Rosenblatt, or Langer, or within the nature of literacy by such writers as Courts, Lankshear, Meek, Mitchell and Weiler, Morris and Tchudi, Shannon, and Taylor. However, there is an expressed need for literacy development to be meaningful for the learners. "A program which reserves meaningful material until a student has achieved a certain reading level, will in all likelihood lose the majority of the beginning level students before they ever significantly increase their reading level" (ABE Level I Handbook, p. 39). While, there is suggested flexibility in the nature of the delivery, organization, methodology, and integration of the literacy program, the effectiveness of any such decisions is dependent on the support given instructors and on the opportunities for professional development. The instructor is a key factor in the success or otherwise of the program.

In order to get a better view of how the literacy components of the ABE program meet the needs of learners and of society, an evaluation checklist could be drawn up covering both theory and practice against which the current program could be rated.

Recommendations

1. There should be a clear definition of literacy so that it is related to and distinguished from reading and writing. As the initial quote in this paper states, reading and writing are necessary but not sufficient conditions for literacy. The

word "literacy" is a frequently used but often misunderstood term. The study of almost every subject, whether science, computers, or religion, is prefixed with the word "literacy", which in these cases, simply means knowledge. Literacy is best reserved for the applicability of a knowledge of reading and writing to peoples' lives, an applicability that entails critical awareness, attitude and action.

2. The purpose of literacy at each of the three ABE Levels needs to be clarified. For example, the purpose stated for Level II is that literacy is to provide transition from society to high school functioning. But literacy can never be separated from society and peoples' lives. (The words reading and writing rather than literacy, would be more appropriate in this stated purpose.)
3. Reading and writing should be taught interactively with literacy development. When reading and writing are taught separately as in a computer program, there must be provision for developing a literacy context for these skills.
4. A basic and comprehensive reading/writing/literacy program should be available for Level I and Level II learners. The focus on reading and writing may vary, depending on the current reading and writing expertise of the learners.
5. At ABE Level III, more specific courses in reading and writing, such as Reading in Response to Persuasive Writing, or Writing for Research Purposes may be included.
6. Specific aspects of writing such as Grammar or Spelling should be introduced as part of the Editing Process of Writing.
7. Reading and writing skills and strategies as taught in specific reading and writing courses/components, should be integrated with the study of content area courses. That is, there should be simultaneously teaching or planned transfer of strategies appropriate for content area study.
8. There should be an optional literacy component that focusses on leisure time reading and writing for those learners who seek literacy for these purposes.
9. In light of the fact of the high out-migration rate of residents from Newfoundland and Labrador, and that the majority of those are the most educated, it is likely that people with ABE certificates rather than university degrees will remain in small communities. In light of the fact that if rural communities are to be sustained and remain viable, then there is a need for strong leadership. This point was made in a study by the Canadian Institute for Research on Regional Development (1995) after a study of 12 communities in Atlantic Canada (six in Newfoundland and Labrador) that had become dependent on TAGS for their main source of income. A literacy component focussing on literacy for leadership should be included within the ABE Level III program.

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EARLY LITERACY DEVELOPMENT: CIRCUMVENTING THE HOME-SCHOOL GAP

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Abstract

The significance of early literacy development and the importance of the home for this purpose has been widely recognized by educators. However, the nature of the model by which early literacy best occurs has not been critically addressed. Both home and school are necessary and crucial partners in fostering children's early literacy development. Models cannot be unidirectional in focus but must recognize parents and teachers, homes and schools as co-partners.

Early literacy, family literacy, and intergenerational literacy tend to dominate current writing, research, and projects on literacy development. Within the past 25 years or so, the focus on early literacy has shifted from the school to the home (Spreadbury, 1996). This shift was partly based on the realization that early literacy development extends beyond school - that teachers cannot accomplish the task alone (Neuman, 1996), and that parents, regardless of home conditions, are generally interested in their children's educational welfare (Snow et al, 1991). However, many models conceptualizing this shift have become lopsided in that schools have generally been given the role of telling parents what to do to help their children. This approach is most commonly used with lower socioeconomic and poor working class parents whose homes are often viewed by schools from a deficit perspective.

The purpose of this paper is to argue that while early literacy, family literacy, or intergenerational literacy are key to literacy development, a unidirectional model from home to school is not the most appropriate model. If children, especially children from non-middle/upper class families are to have the necessary opportunities and experiences for literacy, then there must be a co-partnership model between school and home.

Valuing Home Literacy

One reason why a school-home unidirectional model of literacy development does not work is because it fails to recognize that parents/caregivers are the children's first, continuous, and most important teachers, a point emphasized by Voss (1996). It does not respect parents' knowledge or what they already have accomplished with their children. It ignores the fact that even with few literacy materials in the home and/or with low levels of formal education, parents have the best interests of their children at heart, and often automatically and subconsciously do things which support and foster their children's learning. Taylor and Dorsey-Gaines (1988) found this to be the case even among inner-city families growing up in great poverty.

Purcell-Gates (1997) argues that there is a significant influence on school literacy from the reading and writing experiences of the home. In the home children learn important literacy concepts such as intentionality, written language register, and the alphabetic principle. These concepts are generally learned at home for as Meier and Britsch (1997) point out, literacy is a dynamic and developmental process involving language, thought, and social interaction which children experience from a very early age. In fact, Roskos (1997) notes that the integration of play and literacy by children is no accident. Play and literacy are normal aspects of development - play provides a social context for literacy.

A project, PRINTS (Parents' Roles Interacting with Teacher Support) was initiated by the author and two colleagues in two community centres in St. John's (Fagan, Cronin, Anderson, 1997). This project was based on an asset oriented model. The goals of the project were:

1. To empower parents as early literacy providers.
2. To help parents become more aware of the roles they play and can play in their children's early literacy development.
3. To support parents in initiating positive changes in the home environment to foster literacy development.
4. To help teachers become more aware of the roles they play and can play in children's early literacy development.
5. To support teachers in initiating positive changes in the school environment to foster early literacy development.
6. To help parents and teachers become more aware of each others' roles in early literacy development and to foster co-partnerships. This also entailed acquainting parents with "technical" or "school" terminology whenever the occasion arose.
7. To provide a cost-effective model for fostering home-school partnerships and early literacy development.

Parents were provided opportunity to demonstrate the range of literacy activities in which they engaged their children. They were already very much involved in their children's learning; there was much for which they could be given positive feedback. Parents were aware of their children's knowledge, such as being able to recognize letters, and count. One parent brought sheets of scribbling/drawings of her child to the Program to show what the child could do. Parents sang and recited nursery rhymes to their children, and when the words of the song, Hush Little Baby, was given out in a session, one parent said now she could sing all the words because it was her child's favourite. They played a variety of games with their children. One of the parents, who also had a child in grade four, had enrolled the child in a special reading class offered at the university. They read to their children; they were aware of which books were appropriate for young children. One parent told of how she used a trip to the supermarket to help her child recognize letters by directing the child to the letter which began an item, such as "b" for "beans". The parents demonstrated great patience with their children. When they returned from the centre at the end of a project session, it was not uncommon for the child to be waiting and have the parents read and re-read a book five or six times (books were given to the parents for the children). Most parents knew the stories of the books by heart. Some parents took their children to the public library (a bus ride) to borrow books, and to performances

by child entertainers. A parent of one kindergarten child, who wanted to attend the Homework Haven sessions at the centre but who had no homework from school, went to a local general store, and purchased a book with exercises which the child could take to the centre for that purpose. They were very aware of their children's needs and abilities and monitored their children's progress. Two of the parents noted that initially their children (age 2 and 3) were not interested in books and print, but then during the project became very involved and demanded that books be read to them and that the parents make various letters of the alphabet for them. Similar results of literacy in the home were documented in studies as far away as Texas (Williams and Lundsteen, 1997) and Oxford, England (Grimes and Davies, 1997). Meier and Britsch (1997) suggest that educators have been using the wrong metaphor for home-school relationships - bridging the gap. This metaphor suggests a divide, a chasm, a separation. Instead they promote strengthening connections. Positive literacy experiences already exist in the home as well as at school. The task is to recognize and acknowledge both and to make connections so that one reinforces the other and children become the key beneficiaries.

Strengthening School-Home Connections

While home and school entail many literacy experiences, these sometimes differ in their nature and in the contextual setting in which they occur. Purcell-Gates (1997) reminds us that literacy experiences of the home come from the lives of the children - their living rooms, the playground, the streets, their family context and from community involvement. Literacy in school, on the other hand, is usually based on books. Strengthening connections may originate from various directions.

Home-Literacy Projects

In home-literacy projects, the mediator is usually a professional, a community worker, researcher or facilitator. Workshops or sessions with parents (and perhaps the children) are important in early literacy development, according to Williams and Lundsteen (1997) as they "allow parents to be active participants in their children's education" (p. 10).

The outcome of PRINTS was highly successful based on information on parental involvement, expressed satisfaction, children's literacy participation, and parents' knowledge, and adaptations, of literacy tasks according to their children's needs. A project based on a similar model in Oxford, England, did not have such positive results. The differences in results between both can best be highlighted by noting the different characteristics of both settings. A key factor in the Oxford project was the role of the professionals who initiated the project. The authors of the project evaluation (Grimes and Davies, 1997) state that the "reciprocal relationship between parents and professionals is a complex and challenging task for which there are few common guidelines" (p. 1). According to the evaluators the parents felt either intimidated by theoretical language or patronized by simplistic information, or annoyed by suggestions of keeping records, etc. While the project facilitators modeled literacy activities with the children, the parents were not always clear of the purposes of these activities. Also, parent sharing of home literacy activity was often limited and when comments were made, they were not always responded to in terms of explanation and noting relationships to other activities. The evaluators concluded

that the organization of the project produced an imbalance of power perception between project staff and parents "which served to perpetuate the common perceptions of their 'expert' and non-expert' roles, respectively" (p. 10).

The PRINTS project did not encounter any of these difficulties.

1. The project was community based. The parents gathered at their community centre and not at a school. They took responsibility for setting times, for opening and closing the centre, use of facilities, deciding on the feasibility of literacy activities for their children (who ranged in age from 2 to 5 years). For a final session, teachers were invited to attend their centre. As one parent commented during the program, "These are our Thursday nights".
2. In order to play down any imbalance in facilitator-parent background, little reference was made to university (from which the facilitators came). In introductions, the facilitators talked about experiences in their lives with little reference to the university setting. (About two-thirds of the way through the project, one of the parents asked a facilitator if he were with the university.) First names were used. Adopting an asset orientation helped in that facilitators expressed interest in the parents sharing about what they were doing and did not promote a perception that they were there to tell parents what to do. There was an attempt to avoid theoretical and simplistic language, but when an occasion arose from parent discussion/sharing, a technical or school literacy term would be introduced as another label for that experience.
3. In the PRINTS project, children were not directly involved. The children were considered the "absent participants". This did not mean they were not important; any activities introduced in the project always kept the children in mind and the children were the beneficiaries of these activities from the parents and in a playtime setting at the centre.

When literacy activities were shared with parents by the facilitators, they were modeled with the parents in terms their rationale and procedures to be used with the children. When feasible, parents were involved in constructing and gathering materials and resources for the activities. Parents were given an "activity cue sheet" to help them remember the activity. These sheets tended to include drawings or non-print cues.

4. The parents were never asked to keep records. This was an issue of discussion, especially with respect to transfer of knowledge. But parents seemed to have very occupied days and "demands" on them may have made the workshop a less pleasant experience.
5. The basic structure of the model on which the PRINTS and Oxford projects were constructed was always visible in the PRINTS project in contrast to the latter. Five contexts in which literacy develops were identified: talk, play, books and book sharing, environmental print, and scribbling/drawing/writing; there were five roles which parents and teachers could take in facilitating literacy development in these contexts: providing opportunity, recognizing/acknowledging, interacting, modeling, setting guidelines. Wooden blocks

(2"x3"x8") were used to build a "stairs to literacy" and each step was labeled as one of the contexts; the supporting blocks for the steps represented the roles. Also the contexts and roles were printed on poster cards and displayed during discussions. All literacy activities shared with the parents were discussed in terms of the five roles although the terms were not always used.

6. One of the recommendations of the Oxford project was that specific practical strategies be developed to be shared with the parents. This was an essential part of the PRINTS project. The first part of each session was devoted to having parents share what was happening in their and their children's lives with respect to literacy, while the second part consisted of the facilitators sharing activities with the parents. There were a total of 34 literacy activities across the five contexts shared with the parents.
7. Unlike the Oxford project, PRINTS facilitators capitalized on any comments made by the parents and extended them and related them to other literacy activities so that the parents could better understand the literacy value of the activities they described. For example, when one parent, said she would "go crazy" if she had to read a certain book one more time, the facilitator talked about the importance of re-reading, and memory of stories, as a way of helping children develop competence in book language (written register). On another occasion a parent brought a drawing of her 3 year old which consisted of different size circles but which represented (according to the child) different members of the family and a story line. The parent excused the drawing as being "not very good", at which point the facilitator talked about the important knowledge the child had developed: the meaning of lines/drawings as a code, an awareness that this code could be used to name people and tell a story, and that it was only a matter of simple transfer between the child's lines/drawings and the use of print for similar purposes.

The one place where PRINTS and the Oxford projects were similar was that initially parents did not contribute much in the way of sharing home literacy experiences. Later in the session, one parent volunteered, "You know, we didn't really know what you were looking for. We thought you expected something special. We never knew you were interested in day-to-day things."

Kindergarten-School Contexts

There is no doubt that kindergarten and school contexts differ from home contexts; the question is the extent of these differences and the implications for literacy development. Purcell-Gates (1997) points out that while the home is bounded by the family and community context, and the use of literacy within these environments, literacy in school is bounded by school uses of print which may differ to a greater or lesser degree. The fact that there are more books in kindergarten classrooms may not make a difference, a point demonstrated in research by McGill-Franzen and Allington (1997). They studied a number of kindergarten classrooms in the Philadelphia area under three conditions: providing a significant number of books, providing the books and training sessions (30 hours) for the teachers, and a control condition with neither. It was only the classroom with the books AND training that resulted in a marked improvement in the literacy of the children.

A surprise finding in a study by Meier and Britsch (1997) in preschool settings was the lack of reading to children. Since school eventually moves into more "print contextualized" versus "environment contextualized" demands, the importance of story reading is crucial as Meier and Britsch point out. They maintain that story reading "introduces children to a situation in which language alone is used to create experiences. Since language becomes more and more central to learning as children progress through school, story reading in preschool provides essential preparation for a style of teaching that is frequently part of later school experiences" (p. 14).

But it is not simply a matter of reading stories to children according to Lo (1997). Children benefit most from story reading when the interaction between story reader and child is one of co-construction rather than of a question-answer nature. Neuman and Roskos (1997) maintain that children best develop literacy expertise through social practice. There must be engagement of the children in real life (or simulated) literacy tasks and that such experiences should be available in kindergarten. Meier and Britsch (1997) note that teachers identified lack of consistency in home literacy experiences for many of the children as a problem. If the focus is on making connections, rather than bridging the gap, then kindergarten should form a transitional experience from home to school. Kindergarten should promote socially based literacy activities. The role of kindergarten should not be intervention or remediation, but one of continuation, collaboration, congruency, and challenge. Teachers must foster the interweaving of social and academic factors. While independence for the children may be a goal of kindergarten, this may not be a meaningful goal for children of some families where there has been little parental supervision. The children may already have attained great independence. The teacher's task then is not to help the children attain independence but to develop with them a sense of ownership and responsibility. However, to provide this kind of transition, the kindergarten teacher must understand the home environment. Williams and Lundsteen (1997) suggest that kindergarten teachers be knowledgeable of the earliest literacy development so that they can understand the continuity from home to school. The PRINTS project is based on the premise that children, especially from non-middle/upper class families, will more likely attain success in school if parents and teachers become co-partners. For that reason, PRINTS was also implemented with kindergarten teachers in a school which the majority of the children from one of the communities attended. The teachers were exposed to the very same model as were the parents, except that the school context became the focus for the literacy activities. Information on literacy activities in the home was shared with teachers, and from school settings with parents by the project facilitator.

Parents and Educators

The perceived role disparity between parents and early literacy professionals may also apply to parents and educators/teachers. Since there is a common basis (children), the role disparity seems to result from knowledge base, language used, perceptions, and attitude. Expectations by teachers for parents to have taught their children certain things before entering school seems to be a recent rather than an historical occurrence. In the PRINTS project, the teachers placed more emphasis on activities that were more print related. They believed that parents could be expected to (a) teach their children their address and phone number, (b) introduce the alphabet and beginning sounds, (c) help them develop fine motor skills through such activities

as stringing beads, and cutting, (d) ask questions about things, (e) take time to answer all the children's questions, (f) engage in discussion, and (g) help them read. In fact, school expectations were so dominant that they were known to the parents and influenced what the parents did. Consequently, the parents were more inclined to involve their children in tasks that contained letters or words. They often had difficulty seeing how "play-like" literacy activities would assist in their children's literacy development while they readily saw the connections of print based activities. However, one parent pointed out that "not all parents will have their child up to the expectations of the school so the teacher must do whatever she can to help these children." The parent added - in a low voice suggesting a possible unfamiliarity with a new term that had been introduced during the project, but with pride that she was able to understand and use it - "that is scaffolding, isn't it?"

If parents and teachers are to be co-partners, then the parents must have some access to the technical terminology used to describe literacy development. Such terminology cannot be taught didactically such as a vocabulary class in school. Rather the terms must describe activities or situations shared by the parents and introduced at that time. Some of the terms introduced in this way during PRINTS were:

- " emergent literacy
 - environmental print
 - invented spelling
 - setting (as in a story)
 - metaphorical language/figurative language
 - scaffolding
 - phonics
 - sounding words by analogy

"Scaffolding", for example, was introduced when parents were talking about what was important in their children's lives at that time. One parent noted that her child (age 4) was now imitating her in dusting and in drying dishes. She always wanted the dish towel. The mother made her a small dish towel of her own, and gave her one dish to dry. This occasion was used to illustrate how parents are keenly aware of their children's interests and abilities, and of parents' interest in involving them in different tasks. The experience was used to point out how parents make tasks manageable for children, how they meet the children halfway so that they will be involved and will be successful. The term "scaffolding" was then introduced as a label for how the parent acted. It was pointed out that "scaffolding" was a term commonly used by teachers/educators today, and different examples of scaffolding in a school environment were given. The terms "figurative language" and "metaphorical language" were introduced when an activity about recognizing sights and sounds around the house was discussed as a way for children to attend to detail. When the parents were asked to talk about sounds around the house, one parent mentioned the kettle boiling, and said that her daughter (age 3) described this as the "kettle crying". This example was used to talk about figurative and metaphorical language, and its role in poetry and in school in general.

As a result parents gained considerable confidence in themselves and in their knowledge. At the start of the project, they were cautious about who would be

involved. Towards the end when a Department of Education primary coordinator expressed interest in visiting the project, the parents were excited and anxious for the person to arrive. They were likewise enthused that the teachers were to meet at the center for the wrap-up session.

Williams and Lundsteen (1997) provide an interesting suggestion for making connections between parents and kindergarten teachers. They advise that parents and teachers be shown how, and encouraged, to keep portfolios of their children's literacy work. A parent in their study commented that portfolios contained "evidence" of what the parent knew about her child's literacy development. By sharing examples from portfolios, parents and teachers can better appreciate the similarity and differences in home and school contexts.

A study by Graue (1991) showed how the parents of two communities (one an upper middle-class suburb, and the second a rural working class community) differed in their behaviour during parent-teacher interviews. The parents from the middle-class background usually brought their own agenda, initiated questions, and shared information about their children. The parents from the rural working class community perceived their role as attending and listening. The teacher as authority was to inform, tell, explain, and advise. If parents keep portfolios for their children, then these can constitute starting points for parents (regardless of SES) to share, explain, and advise about their children during parent-teacher interviews.

Socio-cultural Factors

Making connections between home and school is not a simple matter. Teachers may not come from the same backgrounds as many of the parents and may not even understand their communities and their lives. Teachers have developed a particular philosophy on literacy development which may or may not correspond to current thinking and research in the area. A big mistake that is often made in providing for connections between school and home for parents of non-middle/upper class status is that parents within this group are homogeneous. Nothing could be further from the truth. Throughout the PRINTS project, the authors learned that there is a hierarchy of parents based on interest, determination, and involvement in the literacy/education of their children. Given the opportunities, these parents will likely match middle/upper class parents in supporting their children's literacy development. Roskos (1997) points out that literacy is a different experience in different SES settings, but as the authors of PRINTS discovered, literacy is a different experience in different families, regardless of SES. A challenge in making connections between school and non-middle/upper class families is to reach all, especially those parents whose children have the least enriching and productive literacy experiences.

A second important sociocultural factor is the influence of transgenerational experiences and attitudes. A study by Kaplan, Liu, and Kaplan (1997) with students in junior high and with the same group as parents twenty years later, found varying impacts of transgenerational factors. They state, "Parents who have not had successful school experiences may consciously or unconsciously expect and end up reinforcing the negative school experiences of their own children. On the other hand such parents may remember their own negative school experiences, and they may want to do whatever they can to reduce the likelihood that their children will

experience the same types of negative events at school as they did" (p. 10). Whether parents who have had negative school experiences transfer this effect to their children depends on a number of factors, such as the experiences which the children themselves have, the degree of contact between parent and child, the emotional bond between them, the perceptions of the child of parent support, the birth order of the child, and the current relationship between school and the parents. Parent influence may also be based on their experiences in academic programs (GED, ABE) in which they are currently enrolled. The nature of the instruction they receive may become a powerful mediator influencing their expectations of the nature of school learning for their children. For example, one setting in which parents are expected to do much of the work on their own, read information to answer questions or complete "tests", and to redo these tests until they get the expected mark, is going to generate a vastly different model of expectations for learning than a setting in which parents and instructor co-construct problems and solutions, in which the parents as learners are challenged to think, read, and write critically, and engage in literacy related action, when appropriate.

Another factor that has implications for building school-home connections is the gender of the parent who becomes involved. In the case of PRINTS, all parents/grandparents were female. This was also the case in the Meier and Britsch study in California. The reasons for fathers and grandfathers not getting involved, and the significance of this non-involvement needs to be investigated.

Summary

Making connections between school and home is vital if all children are to advantageously engage in literacy development. A quote from Meier and Britsch (1997) provides an excellent summation of this goal. They state there is a "need for a continual and evolving emphasis on central aspects of literacy teaching and learning in early childhood settings, and in particular, the role of literacy as community in the process of better understanding central factors influencing the quality of the collective literacy experiences between teachers, students and families" (p. 3).

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TEACHER EDUCATION

THE PETER EFFECT: ENCOURAGING THE WRITING HABITS AND ATTITUDES OF PRESERVICE TEACHERS

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Preservice teachers need to be enthusiastic, writers so that their engagement in writing may be passed on to their students.

Introduction

In our first week of classes during Fall Semester in Education 3312, a course for preservice teachers of language arts, we engaged in writing poems and publishing them through a literacy practice of 'author's chair' in which students orally shared their poems with the class. A description of the process we followed in composing and publishing our poems "Where I Come From" is found in Reading, Writing and Rising Up: Teaching About Social Justice and the Power of the Written Word by Linda Christiansen (2000) and is described more fully in a previous volume of The Morning Watch (Oldford 2003). The second poem written was a haiku. As the prewriting activity for composing haiku poetry, a summary was prepared based on a discussion of its history, mood and form from A. Watts in The Way of Zen (1957). This summary was discussed and the students then composed their poems. A week after the prewriting phase, the students shared their poems in class. The poems were then photocopied and compiled into an anthology entitled Where I Come From and Other Haiku Poetry. To enlarge the reading audience for the poetry writing, we have chosen to present the haiku selections in this volume of The Morning Watch.

One of the objectives of the writing activity was to illustrate how personal and imaginative language purposes can be included for writing in the classroom. As mentioned previously (Oldford, 2003), language use in the classroom needs to provide a balance of purposes that includes personal and imaginative language, if children are to become competent communicators and develop positive concepts of themselves as writers. As well, teachers seeking to teach writing must be concerned with students' attitudes toward writing. When students are intrinsically motivated to engage in writing for its own sake, they write more often and, consequently, attain higher levels of achievement.

The challenge for teachers is to create classroom environments that promote engaged writing. One important way to accomplish this is for the teacher to be a writing model. Teachers become writing models when they share their own writing experiences with students, emphasizing how writing enhances and enriches their lives. Teachers who are engaged and enthusiastic writers themselves are likely to use teaching strategies that foster a love of writing. In summary, teachers' beliefs about writing, their writing attitudes and demonstrations may have a significant effect upon the motivation, self-concepts, attitudes, and engagement levels of their students. In the literature on reading, this kind of influence has been referred to as 'The Peter Effect' (Applegate and Applegate, 2004). "The Peter Effect" in reading refers to the story of the Apostle Peter, who, when asked for money by a beggar, stated that he could not give what he himself did not have (Acts 3:5). When applied to writing, "The Peter Effect" refers to the condition characterizing teachers who are

expected to convey an enthusiasm for writing that they do not possess themselves. Studies of 'The Peter Effect' in reading have shown that 54.3% of 195 prospective teachers were classified as unenthusiastic about reading, with only 25.2% reporting unqualified enjoyment of reading (Applegate and Applegate, 2004).

Although we have not conducted a research study, a show of hands in our classrooms indicates that our preservice teachers' liking for writing is much less than it is for reading. Writing may be less popular because it is most often experienced in the context of fulfilling academic and evaluative purposes for learning, a purpose often fraught with dislike, rather than with the enjoyment that often accompanies personal and imaginative writing for wider audiences. To foster a positive attitude towards writing and to provide a context that encourages persistence and success, we engaged in some classroom practices that help us conceive of the classroom as a community of readers and writers'. Writing poetry, sharing author's chair and conducting a classroom bookclub are activities that contribute to collaboration among us as students and teacher to help us develop an intrinsic interest in the language arts. Where such classroom contexts can be created, students are more likely to persist, take risks and achieve more than in classrooms where individual achievement is a competitive focus.

Writing Haiku Poetry

The following paragraph contains information about haiku that was discussed in our class during the prewriting phase of the process. It is presented here with our students' and teacher's attempts to compose haiku poetry.

According to A. Watts in *The Way of Zen* (1957), by the seventeenth century, Japanese poets had brought wordless poetry to perfection in the poetic form of the haiku. The haiku poem comprises just seventeen syllables, and three lines, commonly displaying five, seven and five syllables, respectively.

The development of the haiku was largely the work of Basho, a Japanese poet, who wrote in the mid-to-late seventeenth century. To write haiku, he said, we need a child's expression of wonder that returns us to the feeling of seeing our world for the first time. Basho wrote his haiku in the simplest type of Japanese speech, creating a style which, he believed, made it possible for ordinary people to be poets (Watts, 1957).

The haiku poem drops its subject almost as soon as it takes it up, and, to readers unfamiliar with its form, it appears to be more like the beginning or title of a poem than a poem itself. According to Watts, the effect of a good haiku is like a pebble thrown into the pool of a reader's or listener's mind; it can create associations out of the richness of the reader's or listener's memories, which complement the few words of the poem.

The haiku attempts to see things in their fulness or suchness, without any need for comment; hence, the few words are surrounded by silence. The Japanese refer to this as "sono-mama" (just as it is or just so). The effect of the empty space or surrounding silence of haiku poetry produces a silence of the mind in which one does

not so much 'think about' the poem as 'feel the sensation' which the words evoke, an effect brought about because the poem has said so little.

According to Watts, haiku poems reflect four differing moods: (i) *sabi*, (ii) *wabi*, (iii) *aware* and (iv) *yugen*. **Sabi** expresses loneliness in its sense of seeing things happen spontaneously. The quiet thrilling loneliness of *sabi* is conveyed by the following poems composed in our class.

Blanket of whiteness
Burning, stinging at my face
School is closed today.
Lisa Elliott

Warm sun becomes chilly
Leaves change color, petals fall
Autumn's in the air.
Rebecca Furlong

Green becomes crimson
Slowly covering the ground
A crunchy blanket
Kristen Garrett

Moonlight sky above
Feel the crisp cold winter air
So calm and peaceful
Susanne Giles

A flower blooms and
baby animals frolic.
The day has begun.
Krystal Lee Hann

A cold chill in the air
The colours will fall
White glistens everywhere
Andrea Hill

Katrina relief
For the suffering children
Let's make the right choice
Michele Hillier

Brown, red, yellow, orange
Falling slowly to the ground
Empty, lonely trees.
Amy LeGrow

Wabi conveys the unexpected recognition of the faithful suchness of very ordinary things. The following haiku were written in the mood of *wabi*.

Autumn leaves falling.
Shades of orange, red, and brown.
Halloween is near.
Jennifer Curnew

Clumps of butterflies
Fall from the blooming treetops
Break into bright flight
Lisa Evans

Autumn is awesome.
Big piles of leaves to jump in,
Bright colors to view.
Melanie Fudge

The brown and white owl
Sleeps in that tree all day long;
On the move at night.
Melanie Fudge

Sun breaks through the cloud
Snow glistening on the ground
C Green suddenly peaks.
Jennifer Garland

Sleeping in the sun
Padded paws that make no sound
Lazy stretch is cat
Andrea Goodman

The little kitten
Orange, soft fur. Sweet little paws
Sleeping on my bed.
Danielle Hatch

Beating on the roof
Echoing like a tin can
Puddles are forming
Peggy Hatcher

Autumn leaves fall
The wind swirls and whirls
Winter is near.
Kimberly Hopkins

A crisp morning air
Warm sweaters, jeans and jackets
Yellow, red and brown leaves.
Natasha Howell

A proud peacock
A running start and a cloud of dust
A perfect picture

Dena Jacobs

I hear the ferry B
Its horn pierces the morning.
I wake with a smile.

Crystal Kane

His smile lights up his face
His eyes twinkle with wonder
He is my nephew

Jennifer Laing

Winter has fallen
Snow has melted, spring rising
Flowers are growing

Sherry Lewis

The third mood, **aware**, is not quite grief and not quite nostalgia. It is the echo of what has passed and of what was loved. For example, the following poems illustrate this mood.

Wind strips the trees bare
Birds wing southward silently
Summer surrenders

Joan Oldford

Sweeping over me
The silence of the river
Echoes through my soul

Olivia Dunne

The joy of friendship
Brings love to my heart and soul
And peace to my mind

Amanda Edwards

Eyes closing slowly
Escaping inside myself
Precious memories

Jennifer Eveleigh

Quilts, mitts, cookies too
My Nan's love was always true
Without her I'm blue.

Michelle Glavine

Yellow, Orange, Red,

Autumn leaves fall to the ground;
Tell of summer's end.
Andrew Greeley

Ancient walls of stone
There is never-ending green
Above, a rainbow
Melissa Hickey

Curled round or stretched straight,
Shiny, silky coat of white
I love my furball.
Danielle Jacobs
The leaves are changing color
Feet playing with them in the streets
Winter is slowly coming again.
Wendy Kelly

Angels sit on clouds
Crying down their raindrop tears
A loved one taken
Kayla Kenny

Destructive, wrenching, the wind
Heartbreak, sad sorrow
Haunting comes the wind
Beth Loder

Fertile and free
Fading with fearfulness
Futile famine
Beth Loder

Caribbean breeze
Embracing the warm spring air
The palm trees rustle
Caribbean sun
Surrounding me with its warmth
Vibrant golden rays
Caribbean blue
Dancing across the shoreline
Cool upon my toes
Susanne Giles

The final haiku mood, **yugen**, signifies a kind of mystery, when there is a perception of something mysterious and strange, hinting at an unknown never to be discovered. This mood is baffling to describe, but the following poems may capture it.

Night's winds were chilly
My coat I chose to give you

Did you need my coat?
Joan Oldford

The tree in the yard
Reaches up forward the sky
For something better
Nadine Hann

Dancing on the street
Showing sweet faces
Interruption, boots
Beth Loder

Amazing new land
Endless possibilities
Like a child at play.
Laurie Crummey

Illuminating,
Bright starlight high above me.
Make a wish and dream.
Carolyn Hillier

The Sun Is Shining
The Beating Of My Heart Stops
Life Ends Suddenly
Karla Kendell

Rain slides down window
Teardrops fall from broken clouds
The world is crying
Sonya Lewis

Conclusion

The poems from this activity are now being published here by permission from our 'teacher authors'. We invite you as readers to enjoy the collection and respond to our poems by contacting us at:

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IMPROVING THE CONNECTION: FACILITATING STUDENT INTERNSHIPS

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Introduction

The challenge of preparing students to become teachers and educational leaders is a formidable one. The Faculty of Education at Memorial University of Newfoundland provides courses to meet the requirements of fourteen degree and diploma programmes at the undergraduate level in addition to graduate programmes in Counseling, Educational Leadership, Teaching and Learning and Post-Secondary Studies. It is recognized, however, that the acquisition of a theoretical base for teaching is insufficient to prepare students properly to meet the many challenges which they are likely to face in the classroom. Consequently, students enrolled in undergraduate degree programs are required to complete a fifteen credit hour practicum over one semester which affords them an opportunity to integrate theory and practice in a working situation. According to the Memorial University of Newfoundland Calendar (2000 - 2001), the internship is intended to help students develop their individual styles of teaching, to enable students to recognize the scope and complexity of a classroom teacher's role and responsibility, and to provide opportunities for the study of children as individuals and in groups, both in the classroom and other school settings' (p.291).

The importance of this component of their preparation is generally recognized by student interns not only as the part of their program that has the greatest potential for contributing to their future success as teachers' but also as the most interesting part and the part that plays the most attention to their individual needs (Sue, cited in Singh et al., 1997, p.107). Studies conducted by Doyle et al. (1994) support this view as expressed by recent graduates of Memorial University of Newfoundland. In a study involving co-operating teachers and supervisors, Singh et al. (1996) maintain that >supervising teachers and co-operating teachers perceive the internship experience to be a significant element in the professional and personal development of all parties involved in teacher education (p.73).

Current Models of Internship

The successful completion of an education internship program at Memorial University requires the full participation and cooperation of many individuals who are involved in the field of education. School district personnel, principals, and teachers must enter into partnership with the Faculty of Education to ensure that the experiences which students are engaged in are most appropriate and beneficial for their preparation to become teachers. Although there is no single model which is followed by all those who are involved in the delivery of the internship, several components are essential to its functioning. Student interns must be placed, provided orientation, supervised and evaluated during their placement period. Each intern is assigned to a co-operating teacher for the duration of the internship. Due to the close proximity of Memorial University and the *Avalon East School District*, interns assigned to that board are supervised by either an academic staff member of the Faculty of Education or a person appointed by the faculty for intern supervision. In

school districts outside this area, *supervisors* and *co-operating teachers* are identified by school district personnel. In many districts, the *principal* assumes the role of supervisor.

The Faculty of Education maintains a connection with interns in the more rural districts by appointing members of its faculty who serve as *District Liaison Officers*. According to The Internship Handbook 2000-2001(All Districts Excepting Avalon East), District Liaison Officers have responsibilities for:

- meeting with co-operating teachers, interns, supervisors and principals in individual school districts within the first three weeks of a semester;
- facilitating at a further point in the semester a reflective session for interns in each district to focus on topics of general concern such as teacher welfare matters, reflective journal writing, evaluation, etc.;
- maintaining communication links with intern supervisors in the school districts to ensure procedural standardization;
- serving as a troubleshooter; and
- liaison with the co-coordinator, undergraduate programs. (p. 5)

Research Findings

Singh et al. (1997), in researching the fear that teacher interns have about classroom management, maintain that interns struggle, individually and collectively, with dominant discourses in many areas such as classroom management, instruction, resources, discipline, the ability level of students, the purpose of the internship program, the culture of school life and many other such matters' (p.105). This is supported by the present author's experience in the role of supervisor in one school with four interns and as a district liaison officer in five of the ten school districts in the Province of Newfoundland and Labrador. Student interns frequently reported a great deal of satisfaction with the internship practice but expressed concerns about their ability to "manage" their classes, in particular as it relates to discipline. They often expressed the view that their courses on campus did not prepare them adequately for the challenges faced in managing classes at the school level. Several described their experiences with students with special needs and the challenges faced in attempting to provide suitable learning experiences for them. The time required to prepare for instruction was always an issue raised during reflective sessions held. This time requirement was extended in rural areas where interns maintained that resources were unavailable to facilitate preparation of lesson and unit plans. A number of interns indicated a sense of isolation in small communities with schools with small staffs, where opportunities to discuss issues of concern with fellow interns did not exist or were difficult to maintain. The need for a "built in" communication structure with the Faculty of Education was also expressed by several students.

The findings of the author indicate that there exists a high degree of satisfaction with the process and structure of the internship program. However, students generally believe that approaches can be implemented which will reduce the time and effort required and maintain a more effective communication mechanism between faculty and students when doing their internship.

During the week of March 18, 2001, each Faculty of Education in Canada was sent an E-mail and asked to describe the nature of the system being used at their institution to monitor and maintain contact with students during their internship. Attempts were made specifically to determine if any electronic mediums were being used and, if not, if any were being considered. Finally, views were solicited with respect to the potential benefits and barriers to the use of an electronic medium within the internship program.

At the time of writing, the response rate was low. However, in responses received, it was clear that the models used to monitor student internships and to communicate with students during this period were not significantly different from that used within the Faculty of Education, Memorial University. Supervisors were generally faculty, retired or part-time teachers who visited interns at their schools and communicated via E-mail, telephone or fax. machines. All see the benefits of using electronic mediums but several described the barriers as issues of confidentiality, access, interest, and the impersonal nature of these forms of communication.

A review of the literature indicates that many attempts have been made during the past decade to integrate various forms of technology within both practicum and internship stages of training. This is in response to the obvious limitations of phone calls or voice messages and limited supervision meetings. The use of an electronic network is one such technological advance to link interns and teachers generally in a communicative and collaborative way. Bull, et al. (1989) maintain that electronic communities have the potential to break down these teacher isolation barriers and to provide a support network for teachers in the classroom.

Casey (as cited in Casey et al.,1994) described such a network known as *TeacherNet* which began as early as 1989 at California State University, Long Beach. This network was intended to link, through electronic conferencing and E-Mail, 15 student teachers, 7 classroom teachers, and 11 university based resource people(direct supervisors plus experts in related fields). Members of TeacherNet signed in with their password through their computer and modem to a local phone number. They then checked the "teacher's lounge" for public notices that were of interest and entered reactions or new postings for others to read. They then chose to send or review private communication exchanged with one or several other network participants. Any written communication could be saved on the members' own computer for future reference. Student teachers were given free loan by the university of hardware and software for the year, in exchange for a commitment to log on daily to the TeacherNet. A 1990 evaluation of the project indicated participants experienced:

- a widespread sense of correctness over isolation;
- more frequent and more thoughtful contact between supervisor and supervisee;
- expanded opportunities for collaboration and input from a wider spectrum of consultants;
- enthusiasm for the expanded range of topics the network triggered, including job frustrations and satisfactions, classroom management strategies, and career opportunities, and

- satisfaction with efficient exchange of paperless communication that is easily stored, edited, and retrieved.

A thorough review of the literature would, no doubt, reveal other examples of electronic networks which have operated in various institutions throughout North America over the past decade.

A Learning Village

IBM Global Education has developed an electronic network called "*Learning Village*" designed to facilitate communication and collaboration between schools, parents, and the community via the Internet. Learning Village can also be used to facilitate communication and collaboration among students and teachers within a school or district via the Internet or a school's intranet.

Learning Village provides the tools to allow the following activities to occur:

- teachers and families can access a variety of communication applications;
- parents can view homework assignments, their child's completed work, and teacher evaluations of their child's progress during and after school hours;
- on line, private conversations can be held between teachers and parents, teachers and teachers, and students and teachers;
- family and community members can access a wide range of school news, from lunch menus to event calendars;
- approved mentors and tutors can participate in on-line discussions with students and teachers;
- students can work collaboratively on-line with other teachers and students across the room or across the world;
- projects can be accessed from home providing an extended school day with more opportunity for parental guidance and involvement;
- teachers can create their own unique web page in ten minutes with no HTML experience required.

Learning Village is being tested in various locations throughout the United States. The State of West Virginia is one of ten states receiving substantial funding for a project called *Reinventing Education* in an attempt to enable educators to share innovative lesson plans, the latest teaching strategies, creative student project ideas and other valuable information with teachers throughout the state and around the world.

Within the province of Newfoundland and Labrador, the Avalon West School District has been piloting Learning Village in six of its schools. This district covers the geographical area of the western part of the Avalon Peninsula with a student population of slightly over 11,400 in a largely rural setting. This diverse rural geography has contributed to a sense of isolation. Personnel within the district have decided to utilize technology and in particular, Learning Village, to reduce this isolation and to improve communication and collaboration among its students, teachers, parents and members of the community. Currently, teachers are developing web pages, developing lesson plans/unit plans and engaging in discussions with

other teachers within the district related to important issues affecting their attempts to provide the most effective learning environments for their students.

A Teachers Village

As described earlier, The Faculty of Education, Memorial University of Newfoundland, offers a wide variety of degrees and diplomas in which students are required to complete a period of internship. In a province of over 300 K-12 schools, over 90,000 students and a geography that spans 371,636 square kilometers, students doing internships could be located in small remote areas at considerable distances from larger centers, separated from other interns, from school district offices and from The Faculty of Education.

Currently, The Faculty of Education is developing an electronic network which builds on the structure of Learning Village intended to improve communication and collaboration among its student interns. The project is unique, in that the focus is on the internship program and access is currently restricted to faculty, staff and students involved. It is believed that the internship program would be facilitated by the implementation of a number of applications found within the Learning Village structure. These include:

- an *Events Calendar* which could contain information related to the schedule and important professional and social events during the internship. A hotlinks could be made to the main university calendar.
- a system of *Private Conferences* which links interns with members of The Faculty of Education and with one another. Issues of a professional nature or discussions as a need for socio-emotional support could take place. Student interns from any locations could engage in private discussions about issues which concern them. *Forums* could be established for faculty members in which issues pertinent to the internship could be addressed.
- an *Online Repository* where interns could store their electronic portfolios and curriculum vitae for access by potential employers.
- an application known within Learning Village as *The Instructional Planner*. This application allows students to develop instructional tools and place these on the system for future access. Lesson and Unit Plans incorporating activities, resources and assessment rubrics could be electronically linked to provincial, Atlantic or national outcomes. Many of these supports could be developed by students while doing methodology courses on campus, vetted by faculty to ensure a standard, and placed on the system. Students could then access these tools while preparing for their classes when doing their internship.

Other base applications could be incorporated to ensure an efficient operation of the system.

During the fall of 2000, a pilot was conducted involving the Faculty of Education and four students doing their internship with Learning Village pilot schools in the Avalon West School District. Essentially, the extent of the pilot involved the calendar and private conferencing applications. Each intern was linked with a member of the faculty of education. Student involvement in these applications was

quite limited. However, discussions between one faculty member and a student intern did occur frequently with the faculty member offering pedagogical advice and socio-emotional support to the intern. The reason given by the other interns participating in the pilot for not utilizing the private conferencing system extensively was a one of time limitations. In a study conducted by Schlagal et al. (1996), teachers cited lack of time, in an overly full day, as the major reason for their lack of participation in an electronic system intended to provide teachers opportunities to communicate with one another. One student who participated frequently during the pilot conducted by the faculty described to the author that extra effort and considerable time had to be expended in order to carry on discussions with the faculty member.

A decision was made near the end of the fall semester to continue the pilot with another group of interns during the winter semester. Some consideration was given to extending the pilot beyond the Avalon West School District. However, after some discussion, it was agreed to restrict it to the eight students who would do their internship in schools within that board. An orientation session took place with these students, usernames and passwords were assigned and each was linked with a member of the Faculty of Education. Again, the interaction with faculty members was very infrequent. Interactions which took place were very superficial. At a meeting with these interns, explanations were sought related to this lack of participation. Students expressed the view that the current internship model has sufficient supports to allow them to carry out their responsibilities during this period. Cooperating teachers, supervisors, who were often the principals, and other members of staff are on site to give advice and support to the interns. Students also stated that faculty members are not prepared to give the best advice on matters that affect the day-to-day operation of the classrooms during their internship.

During Winter 2001, eight students opted to do their internship in Harlow, England. This was convenient in that Memorial University has a small campus in this community which provides accommodations for students while they gain field experience in the United Kingdom. These students were given appropriate orientation, usernames and passwords and linked to their faculty supervisor. Technical problems at the Harlow Campus prevented the use of the system to any extent during the internship period. Substantial funding will have to be put into technical support in order to make the system functional.

Conclusion

The internship program introduced by The Faculty of Education more than a decade ago has many features which enable students to acquire the experiences needed in their development as primary, elementary, intermediate and secondary teachers. Students are accepted and play an important role in an environment where they are exposed to the wide variety of activities which are associated with the "normal" operation of a school. They are given the opportunity to facilitate learning to at least 50% of their co-operating teacher's program. Co-operating teachers and supervisors are generally selected on the basis of their interest and expertise. Monitoring and communication with the Faculty of Education is done either by direct supervision or through a district liaison role.

The experience of piloting private conferences between faculty and students and among students within an electronic network in a single school district and in Harlow, England, has had very limited success. Students did not feel the need for this form of communication in a relatively small geographical area and where the support structure for the daily conduct of classes existed. It should be noted that any contact with faculty or with other interns was optional. In an investigation conducted by Thomas et al.(1996), in an attempt to understand how university-based instructors and novice teachers can integrate electronic mail and other uses of telecommunication into teacher education, it was found that communication will not occur just because free accounts and easy access exist. Rather, as revealed by the literature examined and the pilot reported here, students may use a conferencing arrangement if there is a perceived need or if there is a requirement as part of internship program. The question as to whether a greater need would exist by interns in remote or isolated parts of the province is yet to be addressed.

As indicated above, certain members of the faculty are examining the possibility of having lesson and unit plans, resource lists, assessment rubrics, and activities, developed by students during their methodology courses, placed within the Instructional Planner application of Teachers' Village. It might be argued that such "products" exist in abundance on the Internet. Many of these have not undergone appropriate scrutiny. If this application is pursued, it will be unique in that these instructional and assessment aids will be developed by students, vetted by faculty, linked to Atlantic Canada Educational Foundation outcomes and accessible to students doing their internship. Initial reaction from student interns to this concept has been positive.

The Teachers' Village Electronic Network under development has the potential to maintain a number of other applications. The success of these is dependent on the expressed needs and the time and willingness to participate by all those involved in the internship program.

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VIEWS OF POST-SECONDARY INSTRUCTORS AND THEIR EMPLOYERS ON THE IMPORTANCE OF PRE-SERVICE TEACHER TRAINING

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Introduction

The positive effects of outstanding curriculum, excellent administration and management, and above average students may not be realized if the classroom instructor does not provide the learners with quality instruction; quality learning may not occur (Hansen, 1993). Teacher preparation has long been viewed as a vital component in the teaching-learning continuum in all educational endeavors, including post-secondary education. Indeed, those teachers who are seen as having a clear understanding of the teaching-learning process themselves are better equipped to improve the process. The literature that describes the relationship that exists between teaching and student performance for post-secondary education was reviewed by Walker, Gregson, and Frantz (1996). They indicated the existence of broad agreement that student performance was closely linked to the quality of teaching and "the quality of teaching will not improve without dramatic improvement in teacher education" (p.19). Such findings have not been unnoticed by representatives in the Newfoundland and Labrador Department of Education who reported curriculum delivery as an essential component of a high quality education program (Government of Newfoundland and Labrador, 1998, p.89).

Background

Newfoundland and Labrador post-secondary instructor certification differs from that required for elementary and secondary school teachers. Typically, post-secondary instructors are selected because they have acquired expert status in any number of technical fields. They tend to be recruited directly from training schools, colleges and universities or from business and industry, largely because they had been employed in any of the many programs that are reflected by offerings in the Province's post-secondary schools. Where the former group, K-12 teachers, have been typically drawn to the profession with a host of post-secondary academic courses and acquire teaching skill in a post-baccalaureate teacher training program, the latter group - technical trades persons- are recruited to teach technical content in post-secondary programs offered in colleges, and their technical skill is viewed as the mainstay requirement for employment as a technical instructor. For many of these post-secondary instructors, unlike their K-12 counterparts, teacher preparation is more likely to occur after they have been engaged in employment in teaching and this is the source of a problem. Indeed, Meikle (1991) observed, with amazement, that unlike K-12 school teachers, training of college instructors is often not seen as compulsory (cited in Griffiths, 1993).

While it is generally necessary that college instructors possess sufficient knowledge and skill in a technical area, it is also considered advantageous that they are also aware of, and can use, methods that utilize the elements of the effective teaching-learning processes to better relay their technical expertise (Osgood and

York, 1992). To better understand the needs of such instructors, preliminary interviews were conducted with beginning college instructors. These interviews quickly provided evidence that a fair degree of frustration existed regarding their perceived lack of knowledge regarding appropriate use of instructional techniques and expressions that they needed instructional orientation before entering the classroom. Instructors stated that they found it difficult to complete the required courses that were available to them in teacher training, while they themselves were struggling, preparing and teaching lessons for their students, particularly during their initial period of employment as instructors. Difficulties in accessing teacher training was also evident for those instructors who resided in an area where courses were not easily accessible. The preliminary interviews indicated that for some instructors, teacher education requirements were "forced" upon them by their employer who attempted to comply with the Provincial Policy Document #6 (Government of Newfoundland and Labrador, 1989). Most indicated that a large gap in time existed between starting teacher employment and obtaining teacher preparation courses.

Statement of the Problem and Design of the Study

The problem that this study sought to investigate was the view of two groups of individuals, instructors and their employers, regarding the importance of pre-service teacher training for post-secondary instructors prior to the commencement of teaching.

A sample of instructors and college administrators who were involved in post-secondary college instruction was drawn using a systematic sampling from four geographical sectors: east, central, west, and north. This was done to insure that both rural and urban instructor and administrator views were represented in the data. They were provided with a survey instrument designed to yield data on the types of training they believed would be most beneficial as the expansion of post-secondary education continued in the Province. The two groups that comprised the sample from which data were collected were as follows:

1. instructors: those who had been teaching in the post-secondary education sector for five years or less; and
2. employers: those who had jurisdiction over the hiring of instructors in both public and private colleges.

These two groups were chosen since they had first hand knowledge of the needs and difficulties associated with pre-service preparation of teachers in the post-secondary system. Essentially, they would have knowledge of their professional teaching preparation relative to what is needed, or is perceived as important in preservice training of post-secondary instructor. Also, they were considered the groups most likely to have had a forceful opinion regarding the requirements for effective delivery of pre-service needs of new instructors in the post-secondary education sector.

Delimitations of the Study

In a study of those institutions that employed post-secondary instructors, it was decided to exclude Memorial University of Newfoundland. This decision was made

because "all instructors hired to teach university courses and who are approved by Memorial University of Newfoundland are not required to complete the requirements for the Technical and Vocational Instructor's Certificate" (Government of Newfoundland and Labrador, 1989).

Secondly, it was decided to focus on those instructors who had five years or less teaching experience in the post-secondary education sector because the main focus of the study was to obtain the perspectives of beginning teachers.

Limitations of the Study

Since the questionnaires were administered by each college's administrative personnel, designation of those instructors who had, or did not have, pre-service training was viewed as a potential limitation. As well, the political climate at the time of the survey may have affected the outcome of this study. At the time the survey data were being collected, Dr. Phil Warren, commissioned by the Provincial Government, conducted a review of legislation and registration governing private colleges. These potential limitations were addressed with the use of an optional provision for a telephone interview beyond the mail-out survey.

Methods Used in this Study

A total of 26 colleges, which included 116 instructors and 18 employers, participated in the study. The population of this study was all 1152 post-secondary instructors in Newfoundland and Labrador (Government of Newfoundland and Labrador, 1998, p. 89), this included both public and private college instructors, along with the population of all 83 private college employers and public college campus/site administrators (Government of Newfoundland and Labrador, 1998, p. 3) who had overseen the hiring of those instructors.

A geographical cluster method was used to select the sample surveyed from the above population. It started with a clustering of the population in the four geographical sectors of the Province. From these clusters 20 percent of the population of those involved in teaching in a college was drawn, both from the instructor and employer populations. A sample of 235 instructors was drawn in the following manner in all four geographical sectors of the Province:

- East(Avalon/Bonavista/Burin Peninsulas) sector had a sample size of 58 percent (n=135);
- Central(Gander to Grand Falls-Windsor) sector a size of 22 percent (n=51);
- West(Corner Brook to Port aux Basques) sector a size of 13 percent (n=34) and
- North (Northern Peninsula and Labrador) sector a size of 7 percent (n=15).

For the employer survey, it was decided that each college that was randomly selected using the process described above would also receive an employer survey. The resulting sample of employers, which totaled 31, corresponded to a sample size

of approximately 37 percent of the total population (n=83) of employers and was dispersed across the geographical sectors in the following way:

1. East Sector - 17 employers;
2. Central Sector - 7 employers;
3. West Sector - 4 employers; and
4. North Sector - 3 employers.

The Survey Questionnaire

A questionnaire was the survey instrument. The instructor questionnaire contained a total of 53 items and the employer questionnaire a total of 47. The questionnaires were composed of ten open-ended items, six closed items that elicited demographic information (on the instructor questionnaire only), and a series of 37 items that asked the individual to respond on a five-point Likert-type scale. The 37 items were broken down into nine major sections or areas of teacher training, which had been identified through the literature review. The nine sections were as follows:

1. Teaching Methods;
2. Use of Instructional Media;
3. Lesson Presentation Skills;
4. Communication Skills;
5. Positive Reinforcement and Motivating Skills;
6. Managing the Learning Environment;
7. Evaluating Student Performance;
8. Questioning Skills and Techniques; and
9. Preparing Evaluation Reports.

Included at the end of the questionnaire was an option for a voluntary follow-up in-depth interview. This last option was included for any needed clarification among participants as well as for use in the event of a poor questionnaire return rate. The personal interviews, however, were in fact never requested by the researcher.

The total return of instructor surveys was 116 (49%) and employer surveys was 18 (58%). This resulted in a combined (instructors and employers) return of 134 (50%) surveys. Statistical Package for Social Sciences (SPSS) version 8.0 for Windows (Norusis, 1998), was used to analyze both the Likert-type items and closed-ended items.

Specifically, Cronbach's Alpha and the chi-square test were used in an effort to see if "non-respondents" would have had an effect on the overall results had they responded. This was applied to the surveys received prior to the deadline and those received after the deadline following prompting and reminders, with the idea that the "late responders" would be similar to "non-responders". The two groups were then cross-tabulated for any significant variations in responses at a significance level of .05. With this procedure it was determined that there were no significant differences in reliability between "on-time responders" and "late responders", and with the exception of one item, item 22, which had a significance level at .05, no significant differences on the chi-square test.

Cronbach's Alpha, the internal reliability statistic, was applied on each of the nine major sections that contained Likert-type items. A reliability coefficient of .70 was chosen to signify internal reliability within the sections. All nine sections produced a reliability coefficient .70. Following this, the Likert-type items on both the instructor and employer surveys were analyzed by calculating frequency distributions, means, and standard deviations for each response. One-way analysis of variance (ANOVA) and the chi-square test were applied to the two main groups being studied, that is, the instructors and the employers, and the sub-groups and the geographical sectors, to determine if a significant difference existed between the groups and sub-groups. A significance level of .05 was used.

Descriptive statistics (frequencies and means) were generated from items 48 to 53 on the instructor survey. These were then used to compile a profile of the instructor survey respondents.

The data were analyzed using the following independent variables:

1. instructor;
2. employer; and
3. geographical location (east, central, west, or north) of instructors and employers.

The dependent variable for all analyses was the respondents' views regarding the importance of pre-service teacher training for post-secondary instructors.

Findings and Their Implications

There were essentially two main research questions for this study:

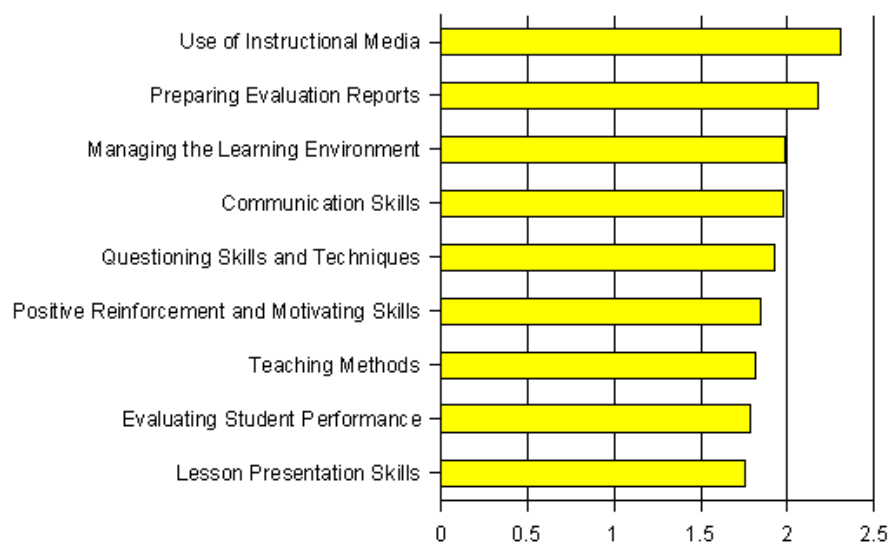
1. Are there any differences between the views of instructors and those of employers across the Province with regards to the importance of pre-service teacher training for post-secondary instructors?
2. Are there any differences among the four geographical sectors in the views of both instructors and employers (combined) with regard to the importance of pre-service teacher training for post-secondary instructors?

The data indicated that there were no significant differences between the views of those instructors and employers who participated in the study. Overall, it appeared that both instructors and employers, who reside in the Province and participated in the study, had the view that pre-service teacher training for post-secondary instructors has importance. The means for both groups, instructors and employers, were consistently <2.5, indicating positive views regarding the importance of pre-service teacher training for post-secondary instructors. The implication of this finding was that some type of formal requirement for post-secondary instructors and pre-service teacher training, acquired prior to the commencement of classroom teaching, is viewed as beneficial.

The following are areas of pre-service training viewed to be most important, ranked by means:

1. Lesson Presentation Skills (X=1.76)
2. Evaluating Student Performance (X=1.79)
3. Teaching Methods (X=1.82)
4. Positive Reinforcement and Motivating Skills (X=1.85)
5. Questioning Skills and Techniques (X=1.93)
6. Communication Skills (X=1.98)
7. Managing the Learning Environment (X=1.99)
8. Preparing Evaluation Reports (X=2.18)
9. Use of Instructional Media (X=2.31)

Figure 1. Areas of Pre-service Training and Means



Note that a lower mean indicates higher importance placed on the pre-service training area.

From these findings, it would appear that there is a high level of consensus on the importance of these training areas and that they should be addressed in a pre-service training program for post-secondary instructors. It follows that they should be made a part of core and formal requirements used to obtain entry into the field of post-secondary instruction.

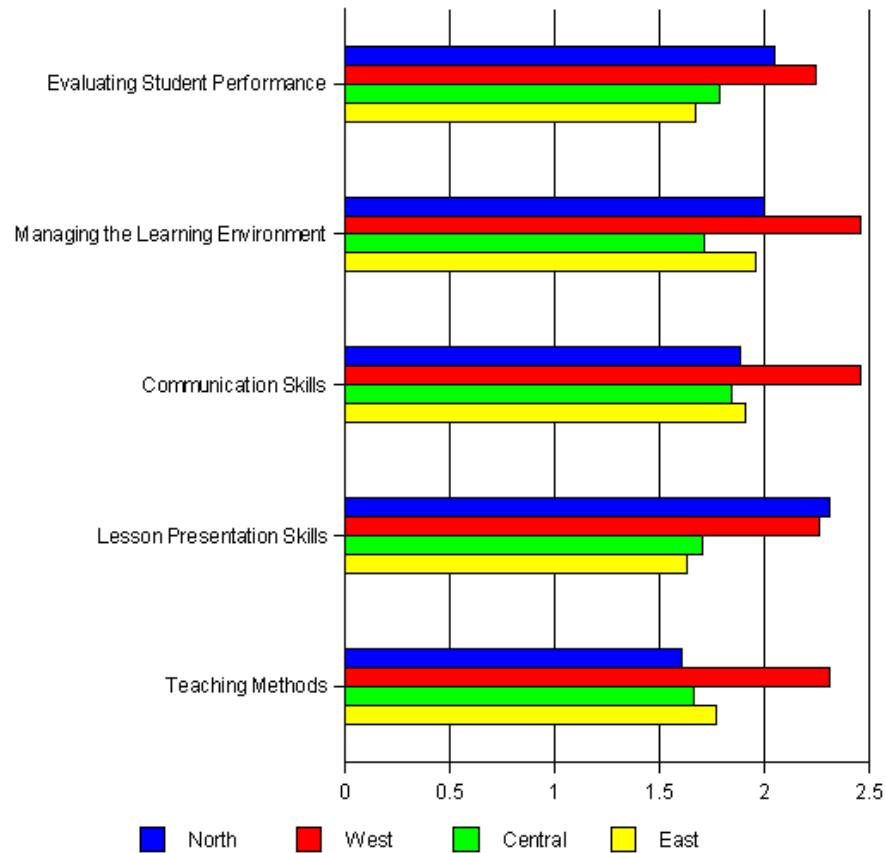
There was a significant difference, however, in the views of instructors and employers (combined) from the different geographical sectors towards pre-service teacher training for post-secondary instructors. The west sector instructors and employers generally placed less importance on pre-service teacher training than their counterparts in the east, central and north sectors. The five areas of pre-service training where a significant difference was found are as follows:

1. Teaching Methods (p=.019)

2. Lesson Presentation Skills ($p=.003$)
3. Communication Skills ($p=.033$)
4. Managing the Learning Environment ($p=.013$)
5. Evaluating Student Performance ($p=.050$)

The other four areas of pre-service training, Positive Reinforcement and Motivating Skills, Questioning Skills and Techniques, Preparing Evaluation Reports, and Use of Instructional Media, displayed no significant difference on the variable of geographical location. Figure 2 is a graphical representation of the variations in means for the four geographical sectors in each of the pre-service training areas where a significant difference existed.

Figure 2. Means of Geographical Sectors in Pre-Service Training Areas Where a Significant Difference Existed



Note that a lower mean indicates higher importance placed on the pre-service training area.

In reviewing these findings, the availability of pre-service teacher training was seen as having an effect on the views of participants as a whole. For example, sector differences were seen as attributable to difficulty that teachers have in accessing teacher preparation courses, due to remoteness or other factors that might include less stringent requirements or monitoring for teacher certification.

The research literature indicated that poor quality instruction may be attributed to a lack of teacher preparation (Stone, 1990; Boyer, 1991; Osgood and York, 1992; Tsunoda 1992; Kort, 1992; Davis, 1993; Dallat and Rae, 1993; International Board of Standards for Training, Performance, and Instruction, 1993; Wolverton, 1994; Ashcroft, 1995; and Shannon, Twale, and Moore, 1998). Further review of the data in this study indicated that although 38 instructors (34% of those surveyed) had been teaching for four to five years, 90 instructors (81%) did not have a Newfoundland Technical and Vocational Instructor's Certificate. The implication of these findings is not only that some degree of instability exists regarding the availability and utilization of teacher training and that this is likely to affect the quality of the instruction offered in the colleges, but also that such phenomena are somewhat more evident in particular geographical sectors of the Province.

As a result of this, it would appear that more efforts to promote deliverable teacher preparation courses should be made in the geographical areas where the greatest need is evident. Although Policy Document #6 (Government of Newfoundland and Labrador, 1989) allows instructors to teach for a maximum of four years (three years plus a one year extension with extenuating circumstances and written approval from the Minister of Education) before being required to have this Certificate, it appears that this policy has not been strictly enforced. This also raises questions regarding the overall quality of instruction received by students who attend colleges in which instructors continue to teach in their classrooms without obtaining the required, and in the case of this study, recommended teacher training .

Further analysis indicated that 71 (62%) of the instructors surveyed were not involved in any program of study intended to either upgrade their content knowledge or teacher training. As well, of the 41 instructors who had not had any prior teacher training in the four areas listed on the questionnaire, 19 had still not undergone any teacher training in those four areas since their employment.

Interestingly, the findings that college instructors generally do not participate actively in professional upgrading were consistent with those findings of Boice (1991), Wise (1991), and Berry, Filbeck, Rothstein-Fisch, and Saltman (1991). These reports revealed that the overall attitude of instructors towards teacher training was generally poor, as "most people resist being taught what they already think they know" (Eble, 1983, p. 134).

The data collected in the study led the researcher to conclude that there was consensus over the need for teacher training but that there were inconsistencies in the demographic information collected from the respondents. Their actual take-up on teacher training was now reflected in their views. There were a number of reasons for this seemingly inconsistent pattern, namely access to courses and geographical remoteness. There was also an indication that the view of what constituted quality classroom instruction for Newfoundland and Labrador's post-secondary students was

unsettled. It would appear that the term "qualified instructor" was used to denote one who has achieved technical capability with additional competence in teaching, as evident with completion of required teacher training courses. There were few indications of alternative means of obtaining the requisite courses or of attempts to upgrade personal and professional skills in particular specialties.

Conclusions and Recommendations

The conclusions that were drawn from this study and the subsequent recommendations were as follows:

1. Pre-service teacher training for post-secondary instructors has importance. Therefore, it is recommended that instructors obtain formal training in the following core areas, in order of importance, before entering the classroom
 - lesson presentation skills;
 - evaluating student performance;
 - teaching methods;
 - positive reinforcement and motivating skills;
 - questioning skills and techniques;
 - communication skills;
 - managing the learning environment;
 - preparing evaluation reports; and
 - use of instructional media.
2. Research on ways and means of achieving or deploying teacher training of these core areas needs to be conducted, in particular into the ways and means of deploying teacher training to remote areas.
3. Although employers and instructors across the Province view pre-service teacher training for post-secondary instructors as having importance, there existed a significant difference in the views depending upon in which geographical area the instructors and employers resided. The instructors and employers in the west sector generally placed less importance on pre-service teacher training than their counterparts in the east, central and north sectors. It is, therefore, recommended that further research into the reasons why this disparity exists be conducted. As well, research into whether or not there is a difference in the quality of instruction between geographical sectors should be conducted.
4. Even though Policy Document #6 is in place, the majority (81%) of those instructors surveyed were teaching without a Newfoundland Technical and Vocational Instructor's Certificate, some even after the maximum four years had elapsed. It would appear that compliance with Policy Document #6 is not working to the benefit of the post-secondary school system. This is an indication that Policy Document #6 is not adequate to ensure post-secondary instructor qualification since it appears that it is not being enforced and, therefore, not doing what it was set up to do; it is necessary to ensure that post-secondary instructors achieve the teacher training they

require. As the general literature has pointed out, and the data from this study supports, post-secondary instructors are neither enthusiastic about, nor actively involved in, obtaining teacher training once they have been employed in the post-secondary system. It is therefore recommended that policy regarding the minimum teacher qualification requirements for entry into the field, prior to entering the classroom, be reviewed. Alternately, and in this regard, it would appear that means to promote voluntary compliance may be beneficial. Perhaps the creation of a professional association, along the lines of the Newfoundland and Labrador Teacher's Association, would be effective in this regard in that it would act as a voice in the regulation of licensing procedures and requirements for post-secondary instructors. Such an association could also have an active role in advising on professional development training needs for post-secondary instructors. It would appear that dialogue regarding voluntary compliance - through the development of a professional association - or enforced compliance - through the Department of Education - is needed in relation to post-secondary education and its educators.

5. Monitoring, at the level of the Department of Education, to gather information on the level of adherence to Policy Document #6 would appear to be desirable. It is therefore recommended that further research into means to ensure adequate monitoring of post-secondary instructors in Newfoundland and Labrador be conducted. As well, research to determine why instructors are not availing themselves of teacher training should be conducted.
6. The majority (62%) of instructors surveyed were not actively taking part in any type of professional training or upgrading, be it teacher training or subject area training. It is therefore recommended that colleges explore the development of in-house professional development programs that include teacher training as well as upgrading in subject matter knowledge. This last recommendation could be implemented most vigorously through collaboration among Memorial University of Newfoundland's Faculty of Education, the Department of Education, and a post-secondary instructor's professional association.

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Endnotes

There are a number of ways one can enter the post-secondary system as an instructor in Newfoundland and Labrador. Instructors can have a degree, a diploma, a certificate, or extensive experience in their specialty field. Typically, instructors who hold a certificate or diploma and have six years of training and experience in their field of instruction can obtain the licence to teach (Government of Newfoundland and Labrador, 1996).

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THE REFLECTIVE AND CRITICAL INTERNSHIP PROGRAM (RCIP MODEL) AND THE QUAD RELATIONSHIP

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The general purpose of this paper is to underscore the need for reflective and critical internship programs in teacher education. To this end, the underlying premise of the Reflective and Critical Internship Program (Doyle, Kennedy, Ludlow, Rose & Singh, 1994) is described briefly, and each of the four main components of the internship experience (intern, cooperating teacher, university supervisor and context) is examined in light of its unique role in, and contribution to, a reflective and critical internship experience. As part of this examination, I raise a number of issues regarding the very complex relationships that exist between these individual components, and propose that this Quad Relationship (Rose, 1997) is a critical feature of a reflective internship program. In this regard, many basic issues and practices surrounding the development, administration, and evaluation of internship programs, might be clarified by first examining the fundamental nature of each of the individual components of the Quad, and then exploring the many and varied interactions that occur between them. As a starting point in this process, it is my intention in this paper to raise questions surrounding the general development and delivery of an internship program that strives to be comprehensive, meaningful and effective for all participants and stakeholders.

In putting together this paper, I have drawn upon research undertaken by a research group established in the Faculty of Education, Memorial University of Newfoundland, a number of years ago. Both as a member of this group, and as a Faculty member still actively involved in working with music education interns, cooperating teachers and supervisors, I am reminded continuously of the exciting possibilities that the internship program holds as it is identified as being the most important experience of the teacher education program (Doyle et. al, 1994).

It has been the belief of our research group that, in order for teachers to be productive and transformative in their practice, they need to have developed a critical pedagogy (Doyle, 1993; Giroux, 1989; McLaren, 1989; Weiler, 1988; Kirk, 1986; Apple, 1982b). Such a pedagogy stems from a social and cultural consciousness that encourages both self and social knowledge, political awareness, educational relevance and productivity. It is our belief such a consciousness requires reflection, analysis and critique.

One of the most important facets of teacher preparation has to do with the development of both personal and professional knowledge. This includes awareness as to how individuals, e.g., interns and their students, fit into a super-structure of educational, political, cultural and social ideals. A basic premise of our work with interns is that the development of such awareness stems from the process of reflection and continuous critical examination of the various components of education, culture and society (Rose, 1994),

We have found that an excellent opportunity to nurture the process of critical reflection in teacher preparation exists within the internship program (Doyle,

Kennedy, Ludlow, Rose and Singh, 1994). The internship experience can serve as an important step toward the bridging of theory and practice, the formation of teacher identity and the development of social and cultural consciousness. It is our contention that such a step is vital to the ongoing development of a critical pedagogy.

At the heart of the internship experience is the intern. This particular experience represents a crucial and transitional time for interns in that they are juggling many pieces of a very complex whole. They are asking questions and seeking answers, testing theory, discovering rules, expectations, traditions and beliefs, developing new values and meanings, searching for roles and identity, and attempting to build a practice that is relevant and meaningful for them and their students. Given the complexity of this experience for the interns, our research group identified a need for, and ultimately felt a responsibility to develop, a context for the internship experience that not only allowed for but also nurtured the process of acquiring personal and professional knowledge and skills toward the development of a critical pedagogy. Our overall goal was to facilitate and nurture interns' personal and professional growth primarily through the enhancement of both self and social understanding. Through structured and pedagogically devised sessions involving dialogue, sharing, examining, viewing, questioning and analyzing, the interns, as well as all the other 'players' involved in the Internship Program, e.g., cooperating teachers, supervisors and administrators, were actively engaged in the process of reflection and analysis. We felt that this process provided the framework for a comprehensive 'program' for interns that was supportive and facilitative, yet challenging in nature and design. The need for such a dialectical process in the development of reflective and critical practice is pointed out by Kemmis (1985). He states, "Reflection is an action-oriented process and a dialectical process... it looks inward at our thoughts and processes and outwards at the situation in which we find ourselves... it is a social process, not a purely individual process in that ideas stem from a socially constructed world of meanings" (p. 145).

The Reflective and Critical Internship Model (RCIP)

The primary outcome of our research to date has been the development of the Reflective and Critical Internship Model (Doyle et al., 1994: 10-15). Building on the work of Smyth (1987, 1989) and others, the basic framework of this model includes five pedagogical categories, or forms of action, through which pre-service teachers travel in their construction of knowledge, skills, identities, beliefs, values and practices. Specifically, these categories provide a lens and a means through which teacher educators and students can examine the development of teacher thinking within a broad context of educational, socio-cultural and political ideals and practices.

These five pedagogical categories or forms of action are:

- *Describing/contextualizing*, e.g., what is the context, case, situation, orientations and realities of a particular practice? These questions include the elements of who, what, when, where, and how.
- *Bringing and recognizing cultural capital* (Bourdieu, 1977), e.g., what do the various partners bring to, and ultimately come to value throughout the internship program? What theories, ideologies, practices, prejudices and

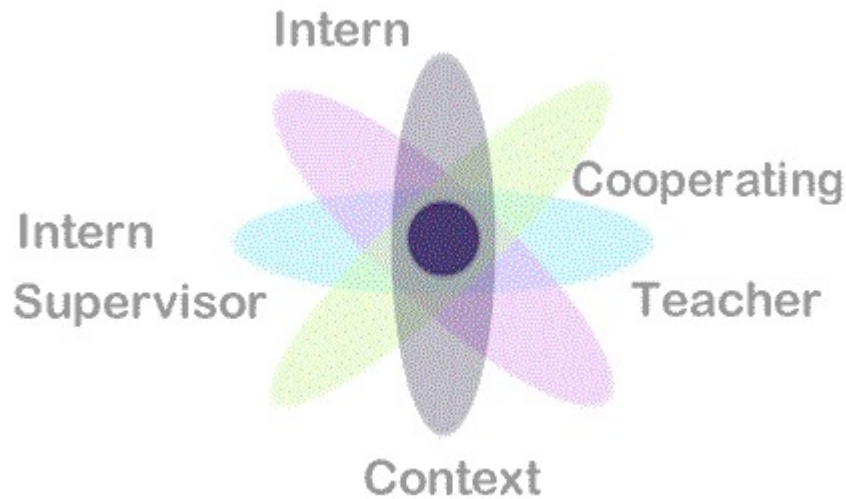
taken-for-granted realities are brought to the process of teacher professionalization?

- *Engaging in communication*, e.g., what are the various forms of engagement involved in the internship process? How do we recognize different voices, communicate effectively with self and others, and reflect on the political and social nature of schooling?
- *Problematizing dominant practices and discourses* (Phelan and McLaughlin, 1992), e.g., is there a willingness and ability to ask questions, entertain doubts, be disturbed about teaching and learning worlds and the discourses that pervade them? How do we create a process of meaning-making in which teachers infuse dominant discourses with their own purposes and intentions?
- *Functioning as transformative intellectuals and cultural workers* (Giroux, 1988, 1992), e.g., how might we transform our practice in a fashion that marks a real difference between being an educator and a trainer? How do we come to view pedagogy as a form of cultural production, as opposed to basic transmission of information and skills? Do we encourage interns to examine the relationships between schooling, pedagogy, cultural practices and social power? Do we strive for a language and a practice of possibility and change?

The Quad Relationship

It is within the context of the RCIP Model, briefly described above, that I now discuss the underlying issues that comprise the Quad relationship in the internship program. The interconnected and interdependent relationship(s) between the intern, cooperating teacher, intern supervisor and local context are at the heart of an internship experience grounded in critical pedagogy. These four 'players' are in constant engagement and interaction. The success of the individual internship experience, in its design, development and facilitation, is very much dependent on the nature and quality of the interactions between each player in the Quad relationship. It is when the intentions and actions of these players are fused in conscious, well planned and organized ways, that the potential for a reflective and critical internship experience may be realized.

As a starting point in understanding the complexities of the Quad relationship, I have outlined some of the primary roles and/or issues surrounding each player in a reflective and critical internship program. These roles/issues stem from the needs of the RCIP Model as it may evolve into practice:



The **INTERN** is:

- exploring, observing, examining and critically analyzing teaching practice
- searching for, and attempting to establish, a professional role and identity
- seeking to work safely and effectively within inherited spaces and practices
- merging personal and professional philosophies and theories with practice (toward praxis)
- developing skills in fundamentals of teaching (communication, classroom management, methodologies, evaluation...)
- attempting to operate 'successfully' within a very complex environment of expectations, traditions, values and beliefs (often involving conflict and contestation)
- making connections between, and developing understandings of, teaching and learning
- recognizing the influence of past experiences and knowledge on current practice
- learning to value the cultural capital of self and others
- striving for success and excellence (e.g., evaluation/recommendations).

The **COOPERATING TEACHER** is:

- providing a context and setting for the internship experience
- demonstrating expertise in teaching (i.e., knowledge and skill)
- facilitating hands-on teaching experiences for the intern
- nurturing the intern's development of professional practice
- providing consistent feedback and general support for the intern's developing skills and understandings
- encouraging and assisting the development of reflection-in-action (e.g., cycle of observation-reflection-action; turning awareness into action)
- encouraging the intern to incorporate own ideas and experiences into the teaching experience (e.g., experimentation, trial and error)
- raising critical questions and challenges about issues and practices inherent in the teaching/learning process (i.e., to aid in the development of critical thinkers and doers)
- assisting the intern in his/her development of understandings about the schooling process (e.g., culture of school, teacher-student relationships, connections to parents and the community, political considerations, economic realities...).

The **INTERN SUPERVISOR** (university-affiliated) is:

- operating as the main link to the University (Faculty of Education)
- guiding both the intern and cooperating teacher through the various process-related and administrative details of the internship program
- working with both the school and university to provide a supportive, safe and meaningful environment for the intern
- assisting the intern in his/her connecting of current teaching experiences with existing knowledge in various educational, social, cultural, political theories and paradigms
- providing safe spaces/sites for the intern, through pre- and post-conferencing and reflective group seminars, to work through and 'make sense of' issues, practices and experiences as they arise
- facilitating opportunities for quality interaction between the cooperating teacher, intern and supervisor (i.e., planning, goal-setting, ongoing evaluation, analysis...)
- nurturing and guiding the intern in his/her formation of teacher identity and professional practice
- providing consistent, appropriate and relevant feedback to the intern regarding teaching experiences throughout the semester (e.g., relating to current issues and practices of a particular subject matter and/or context)
- engaging the intern in critical and reflective analysis (e.g., raising critical questions and challenges about ideologies, belief systems and practices; helping the intern to locate his/her work within both subjective and objective frameworks).

The **CONTEXT** considerations are:

- nature of the site (e.g., rural/urban; large/small)

- history and traditions relating to the context (e.g., values, beliefs, expectations...)
- individual and collective personalities/cultures existing within the context
- the philosophies, concepts, skills, practices, beliefs, traditions and value systems associated with the particular subject area
- the interconnectedness of subject matter with the teaching and learning process (i.e., philosophies, pedagogies, methodologies...)
- the context and setting in which the subject matter is being experienced (e.g., social studies classroom, music/mini/ multimedia/computer workstation, biology lab, choral rehearsal)
- the expertise required of all participants (intern, cooperating teacher and supervisor) in the subject matter, in order to provide the most comprehensive, relevant and meaningful internship experience
- all that influences what teachers and learners do within the discipline or subject matter (e.g., constraints, perceptions, expectations, traditions... that may be peculiar to the subject matter and context).

Implementing the RCIP Model: Guiding Principles

Having identified the main components of the Quad relationship, I will now highlight briefly some guiding principles that underpin the fundamental nature of the RCIP model.

- The importance of the development of a partnership model involving the university, school districts and individual school communities. The partnership model must have as its foundation the realization of, and commitment to, the internship experience as an integral component of teacher education.
- The recognition and need for establishing a partnership program that has as its basis the development of critical, reflective and intelligent practitioners. Such a program would recognize and value the internship experience as more than an apprenticeship program.
- The recognition of the intern as the central figure in the delivery of the internship program. A relevant, meaningful and pedagogically sound internship experience needs to be designed and implemented for each intern.
- The need for expertise in each 'quadrant' of the internship experience - intern, cooperating teacher, intern supervisor, and context. Expertise in this instance would be characterized for example by such elements as appropriate intern preparation and background (intern), identified excellence in teaching and subject area competence (cooperating teacher), appropriate academic preparation regarding the nature of the internship experience (intern supervisor) and, appropriate school/community placement (context).
- The need for the development of a 'system' of partnerships that recognizes and values the contribution of each participant to the success of the internship program. Such a system would require regular consultation, communication, interaction and program evaluation.
- The recognition of the important role of, and need for, ongoing research at the core of the internship experience (e.g., classroom pedagogy, the

pedagogy of supervision, the nature and development of teacher thinking and practice...).

- The need for an efficient and effective administrative component in the Faculty of Education that would serve primarily to support the academic and pedagogical nature of the internship program.
- The need for ongoing professional development for cooperating teachers, intern supervisors and administrators involved with the internship program. The establishment of a standard of academic, pedagogical and administrative excellence would provide the foundation and rationale for the establishment of an agenda for professional development designed to meet the needs of a reflective and critical internship program.
- The need for a renewed commitment to excellence in education, and particularly to teacher preparation.

Summary

Underlying the RCIP Model and Quad relationship are some very important questions about issues such as personnel, expertise, administration and program evaluation that need to be explored and analyzed by all parties involved in the internship program. Some of the questions I pose here will serve to stimulate this process as we strive continually to refine and improve current internship programs. As we realize, some of these questions may not be new, but they do represent the complex issues surrounding the development of an internship program that is grounded in critical pedagogy.

- Who is the intern? What are his/her particular needs and interests?
- Who are the cooperating teachers?
- Who are the intern supervisors?
- How is the expertise of all 'players' identified? How, and by whom, are cooperating teachers and supervisors selected/appointed for their role in the internship program?
- Is there consistency in the delivery of the internship program between urban/rural, small/large school contexts?
- What is an appropriate system for intern placement? (e.g., how are issues relating to expertise and appropriate context accounted for in placement procedures?)
- What is the role(s) of the Faculty of Education? How might the university contribute to professional development programs, research, university-based supervision when possible and/or appropriate, and the overall administration of the internship program? How might an appropriate balance be struck between academic and administrative needs and agendas?
- What is the role of school districts as they partner with the university to provide appropriate and excellent internship experiences for interns and their supervisors.
- How should we deal with the complex issue of intern evaluation in a manner that is fair, consistent and meaningful?
- What are the needs of each partner in the internship program? For example, is the intern matched with a cooperating teacher who has identified expertise? Is supervision occurring on a regular basis? Is there a

clear understanding about the pedagogy of supervision? How are workload concerns addressed for both cooperating teachers and intern supervisors?

- Are cooperating teachers and intern supervisors provided adequate time in their general workload allocations, as well as adequate resources, to meet the needs of the internship program generally, and the individual intern specifically?
- Is there a system in place that provides for ongoing professional interaction between all key players in the internship program? Is there time devoted to professional development in the form of seminars and workshops that focus on the various aspects of the internship experience?
- Is it possible to establish a formalized system within the teacher education program that addresses the issues and questions raised above? Such a system would include for example, provisions for a) the selection of cooperating teachers and supervisors, b) the formation of appropriate partnership connections involving 'official' affiliations, and designations, c) the recognition of excellence within the educational system as it relates to the internship program, d) the development of connections between the internship program, teacher certification, and general professional development plans and policies within professional teacher organizations (e.g., Newfoundland and Labrador Teachers' Association).

Conclusion and Implications

The internship program plays an integral part in teacher preparation. The Reflective and Critical Internship Program can provide an effective site for the nurturing of aspiring educators, as well as for the continued nurturing of many individuals who are already involved in the educational system. The overall goal of the RCIP is the creation of teacher education programs generally, and internship programs specifically, that are focussed on, and engaged in, the development of conscious, knowing, and active participants in the educational process. A critical form of this engagement involves reflection, analysis and critique. A process of engagement that is structured to encourage and facilitate such activities can be a very powerful means toward individual and collective empowerment, leading ultimately to change and transformation.

It is my hope that by exploring the RCIP Model, in conjunction with the Quad Relationship, that we will be encouraged to address, with some urgency, some of the issues and questions raised in this paper. As mentioned earlier, some of these issues are new, others have been with us for awhile. Ultimately, I hope to challenge all participants and stakeholders in teacher education to work toward the continuing development and delivery of internship programs that are characterized by intellectualism, creativity, open-mindedness, flexibility, responsibility and systematic reflection, analysis and evaluation.

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PARTNERSHIPS IN EDUCATION: THE INTERNSHIP PROGRAM

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All educators, at one point in time, were required to complete a student teaching and/or internship program. In previous years, students attempting to complete internships in the rural areas of Newfoundland would be supervised by a member of the Faculty of Education. Unfortunately, the distance between the University and the individual schools created problems with the frequency of supervision. Not wanting to deny students the opportunity to have experience with the smaller school and/or teaching closer to home, the Faculty of Education at Memorial University proposed that supervision of the interns be the responsibility of the cooperating teacher(s) and the school board officials in the district where the intern was placed.

In October of the 1997-1998 school year, cooperating teachers, school board officials, past supervisors and interns came together with members of the Faculty of Education to discuss the Reflective and Critical Internship Program. It was an attempt to define the roles and expectations of the partners more succinctly as well as to make suggestions for the future.

The present internship program is based upon a "quad" model. There are four major partners in the model: the intern, the cooperating teacher, the internship supervisor, and the subject matter. There was some indication during the institute that students should be included in the partnership because they can influence or be influenced by the intern. For the internship to be successful for everyone involved, all partners must work together as a cohesive unit. In this article, I will be focusing on the suggestions that were proposed for the partners in the internship program.

1. Choosing the Cooperating Teacher

The first step in any internship program is to choose the cooperating teacher. This is affected, of course, by the area of training for the intern. It was agreed that the cooperating teacher should have at least 5 years teaching experience, have a positive attitude towards teaching, be devoted to the job and to the students, and perform other duties such as extracurricular activities. Generally, the best person would be one who could contribute to the overall experience of the intern, not one who would take advantage of having "someone to do the work." The cooperating teacher should see the intern as someone who can contribute to his/her knowledge of new teaching methods, current curriculum information, and variety in the classroom. The two should exist as a cooperative unit where team teaching can take place, but also individual teaching on the part of the intern. It is important to realize that the internship is an opportunity for a new teacher to explore teaching methods to determine which one(s) work for him/her, not to emulate or copy another person.

In many schools it may be possible for the intern to have more than one cooperating teacher. It was believed that the intern would benefit greatly from such a situation because he/she would be exposed to different teaching styles, perhaps other courses in his/her field or possibly other fields, as well as different types of

student personalities and learning styles. This situation can also help the cooperating teacher(s) as well. It is very difficult to grade a person who has been team teaching with you on a daily basis. A panel of cooperating teachers makes that task less intimidating.

2. Timing of the Internship Program

The interns who participated in the institute believe that September would be a better time to begin their teaching experience. Currently, internships begin in January and are completed in April. The intern then has to complete another semester before he/she can graduate. The interns at the institute stated that this prevented them from applying for some jobs. It would also be easier for the intern to come into the school at the beginning of the school year rather than the end because there is a disruption in the students daily routines and it may be easier for the intern to integrate into the school community.

3. Cost of the Internship

The cost of the internship to education students is a major concern. Many students want to experience teaching in the larger schools in larger communities away from home or they may have to leave their community because of a lack of opportunity to teach in the area. Therefore, the cost of the internship increases for these students when the cost of tuition, travel, accommodations and living expenses are taken into account. It has been a longstanding argument that the internship should be considered a work term as it is in the Engineering and Business faculties. However, there is opposition to that suggestion. One idea proposed at the institute in October was to require the intern to pay for only one course/credit. This would substantially reduce the financial burden of the intern, especially when you consider that they are actually WORKING as well as learning during their internship.

4. Role of the School Board, Administration and Cooperating Teacher Prior to the Start of the Internship

Prior to the start of the internship, the school board should meet with the administrators involved and the cooperating teacher(s) to devise an information package for the intern. This package should include details concerning such matters as who will be evaluating and the dates for the evaluations, when videotaping of lessons taught will be done, the dates for submissions of daily journals and units of work, the dates the intern will be spending with resource and specialty teachers, and the amount of teaching the intern should be accomplishing at each stage in the internship. Not only will this help the intern, but it will also help the cooperating teacher(s).

5. Role of the Intern Prior to the Start of the Internship

It was also suggested that opportunities for the intern to meet the school board officials, administration and the cooperating teacher(s) of their assigned school be made the week before the program begins. At this time the information package should be provided to the intern as well as any information regarding the courses the intern will be teaching, school policies, discipline codes, extracurricular activities, etc.

In many schools teachers receive such packages at the start of the school year; therefore, the intern, who will be a staff member for a number of months, should also receive this package.

6. Interview of Intern on Completion of the Internship

The school board, it was suggested, could enhance the experience of the intern further by conducting a mock job interview for the interns placed in their schools at the end of the internship. The interns would apply for the job(s) and receive an interview. This process is a very important one for any person leaving school to enter the job market. The intern can get help with job applications and resumes, preparation for interviews, and the types of questions to expect during an interview. After the interview, the interviewer should discuss the results with the intern, pointing out positive aspects of the interview as well as aspects that the intern should improve on. If there are problems, the intern can "fix" them before he/she has to apply for jobs in the real world.

7. Grading Suggestions

One problem that exists with the internship at the moment is the fact that a mark has to be given to the intern by the cooperating teacher (and any others involved). There are many negatives associated with this. For instance, interns may not want to criticize the person who will be contributing to their mark; therefore, they may not ask questions of their cooperating teacher or they may not explore alternative teaching methods. This will also influence their journal entries where they are supposed to be reflecting critically on what they have done and seen because they know that the cooperating teacher has to read it. Another problem with grading is the pressure that interns place upon themselves relative to their performance. Any intern will tell you they feel that they have to receive at least an 80% in the internship to be competitive in the job market. Unfortunately, an 80% for one individual may not be equal to the 80% received by another. Two alternative grading schemes were proposed. One alternative would see either a pass or fail given to intern, the other would assign letter grades. The interns involved in the discussions suggested that they would have been satisfied with the pass or fail alternative. Personally, I believe a letter grade would cause some of the same problems as did the number grade; therefore, a grade of pass or fail would be acceptable. However, there are pros and cons associated with each alternative and competition relative to performance will still occur. The only way to avoid variations in the way different supervisors and cooperating teachers grade interns is by having in-service sessions conducted by the Faculty of Education explaining what is to be expected and what constitutes certain grades, that is, a checklist of sorts. Consistency is the buzzword in education today and we must learn to be consistent with the marks given to our interns if they are to remain one of the ways employers will distinguish between exceptional and good teachers. Letters of recommendation completed by the cooperating teacher and supervisor should also help identify the strengths and weaknesses of new teachers in relation to job performance.

8. Acknowledgment of the Partners

Upon completion of the internship, the contribution of all partners must be acknowledged. There were several suggestions made by the group as to the appropriate reward that would show the value of the contributions made by each person. There is a monetary stipend given to the school boards for each intern in the district. It is up to the discretion of the school board how that money is divided. Some boards give money to both the intern and the cooperating teacher; some boards do not give anything. For any program to be effective there has to be consistency among boards as to the monetary rewarding of those involved with the program. Cooperating teachers and interns who discover that someone else received money when they didn't may not feel valued.

Instead of making monetary rewards, the University can offer the cooperating teacher (and the intern) a free course. Teachers are constantly upgrading their education to keep up with the changing dimensions of the education field. If one of the purposes of the internship program is to bring new teaching methods to individuals already in the field, then it would make sense to reward their efforts with an opportunity to keep learning and improving in their chosen career. This appears to be a solution that would benefit all parties involved. At the very least, a letter should be sent to the intern, cooperating teacher(s), and supervisors thanking them for their contributions.

Conclusions

It is obvious that the internship is a very valuable experience for any new teacher. The experiences of that internship can be negative or they can be positive. If all the partners involved in the program collectively work together to ensure that there are positive results from the internship, then the new teachers graduating from Memorial University may feel as if they are adequately prepared for their chosen career. They must be given the opportunity to explore their own personalities and teaching styles or they will not be able to bring any individualism to a school staff. They must feel that what they are doing actually is contributing to the staff and to the students of that school. It must be disappointing when the intern walks away from his/her learning experience feeling jaded about the teaching profession. Therefore, the key to any successful partnership is, of course, communication. If the partners do not communicate effectively with one another the intern may feel that he/she did not learn anything or did not contribute anything. Some of the suggestions put forth in this article address the issue of communication and collaboration among all the partners.

We must ask ourselves, "What should the intern learn from the internship?" and "What did he/she learn?" If the two questions have different answers then we did not correctly do our job. If the purpose of the internship is to promote reflection about actions and consequences in the intern, we must all accomplish this same task. In effect, isn't it a reflection on us, the partners, if the intern's experience is negative?

**THE PRINCIPLES OF THE COLLABORATIVE PARTNERSHIP
BETWEEN SCHOOL DISTRICTS AND
THE FACULTY OF EDUCATION**

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Introduction

The principles of the collaborative partnership between school districts and the Faculty of Education were discussed. The following principles were reaffirmed:

- the partners share in the responsibility of the preparation of teachers through the internship program;
- the University serves in a number of functions, e.g., placement, liaison, research;
- the school district collaborates in placements and monitors the overall delivery of the internship in its district;
- the school district has responsibility for the selection of cooperating teachers and supervisors.

One of the goals of the two-day session was to focus on the cooperating teachers' role and provide direction for future professionalization of cooperating teachers in all provincial school districts relative to their work with interns. The following were advanced:

Attributes/Qualifications

- Has completed 3-5 years of successful teaching;
- Demonstrates excellence in teaching;
- Demonstrates interest in continuing education and professional development;
- Has indicated interest in the professional development of student interns;
- Is committed to the principles, roles and responsibilities of the internship.

Responsibilities

- Preparing students to accept the intern as a professional colleague and not as another student or an aide;
- Establishing good working relationships as early as possible, introducing the intern to other school personnel and clarifying their roles;
- Helping and encouraging the intern to explore school records, test materials, teacher resources, and special services, and to ask questions about the students, the school, and the community;
- Presenting to the intern an outline of the long-range goals and the organization of the grade or course;
- Demonstrating good teaching and helping the intern to analyze and understand why it is good teaching;

- Assisting the intern in the critical-reflective analysis of the relationship between theory and practice with the intent of improving practice;
- Facilitating the development of independence of the intern by taking an inconspicuous position in the room while the intern is in charge;
- Conferring with the supervisor regarding the intern's progress; and
- Preparing reports of the intern's progress and discussing these reports with the intern.

The supervisor, along with the cooperating teacher, is responsible for summative evaluation of the intern. Supervisors should ensure that interns are given the opportunity and time to reflect on their teaching practice. This can be done in collaboration with the University district liaison person.

Supervisory responsibilities are essential to the internship. The University and school districts will continue to dialogue on this critical aspect of the internship in the upcoming year.

REFLECTING ON WHAT WAS BEING REFLECTED

Cindy May-Follett

Looking back on what was reflected in the Internship Workshop in September of 1997, I can now see a different reflection than what came to me at the time. Sometimes we educate teachers to work in the ideal situation. The "What ifs..." are discussed to pieces but do not always become a reality for most teachers until they are on their own.

What type of work force are we preparing our interns for? Let's consider for a moment the number of graduates from the Faculty of Education. Based on that number let's answer three questions out of a possible hundred:

- How many of these graduates wish to move into the teaching profession?
- How many get permanent positions in their chosen field?
- How many become substitute teachers?

I fear that, out of those who wish to continue in their field, a large number become substitutes. Some have the success of moving into a permanent position immediately, but they are few.

In view of this situation, should we be preparing our interns to be substitute teachers first? I am not trying to be negative but to be realistic. Substituting and being in a permanent position are two different jobs. Permanent teachers know their classes. They know what happened yesterday, where they are today and what to expect for tomorrow. Substitutions would mean stepping into someone's domain for one day. Keeping in mind the importance of delivering the best education possible, in line with our philosophy of education, the substitute could be given an ideal prepared plan for the day or as little as a blank sheet. When a teacher walks into a class, whether it is someone else's or his/her own, a plan may not always work out. They must be prepared for setbacks and build on the positive experiences.

I recommend to the interns that, just as doctors on house calls are prepared with a doctor's bag, they, too, should have a teacher's bag. When packing, they should think of being a substitute first; then, if they later find themselves in a permanent position, they should use it to help themselves and their classes grow. They should never count on someone else to be prepared for them. They should prepare themselves to be their own particular kind of teacher and use the rest as a gift.

The following are a few ideas for a teaching bag:

- Letters from a scrabble game (language can be so much fun in large or small groups).
- A list of large words in which one can derive smaller words.
- A Knock...Knock book.
- Two packs of playing cards (lots of Math and Science already built in).
- A few hit CD's.
- "The Important Book" by Margaret Wise Brown (ideal for Health, Religion, Social Studies or Art at any grade level).

- Space for more things.

As Educators, we should reflect not only on teaching itself, but on the types of teaching we are preparing our interns for. In completing an internship program, substituting should be a major part of the course requirements.

REFLECTING ON TEACHING

Wayne Williams
Balbo Elementary School, Shoal Harbour

What am I doing? Why am I doing it?
Are there other ways of doing it?
Simple questions but where are the answers?
Will the art of reflection provide insights?

When a teacher engages in reflection...
She interrogates herself, questions her everyday practices;
She quarrels with her beliefs and her views;
She re-evaluates her instructional methodologies;
And boldly, courageously, redefines her philosophical paradigms!

She poses questions...she embarks on a quest for solutions.

Who creates the curriculum?

Curriculum committees, bureaucrats and educators?
Institutionalized knowledge experts? Textbook publishers?
Teachers, parents, all who search for truth?
Students seeking to construct personal knowledge?

Which statements are true? Which are false?

All teaching is intrinsically political?
Schooling is unnatural?
True learning evolves from motivation?
Educational labels become reality?

Who occupies my classroom?

Unmannerly children who need to learn the value of discipline?
Empty vessels who require knowledge?
Curious learners with their own opinions and perspectives?
Fellow learners seeking to build their version of the world?

Why can't Adam read?

Does he see the same print I see?
What transaction is taking place between Adam and the text?
How is he responding internally to the print?
Is the experience a meaningful one for Adam?

Writing - what is it?

A boring, onerous, communications task?
A time consuming, recording procedure?

A method of clarifying ones representation of the world?
Thinking on paper, a unique form of learning?

What is mathematics?

A set of numeracy skills essential to modern life?
Boring, repetitive exercises - the domain of the calculator?
A logical, reasoned approach to problem solving?
An exciting, creative way to explore and make sense of the world?

What is testing?

An evaluative procedure to assess student progress?
A public relations scam to congratulate the educational system?
An accountability tool to ensure teachers do their jobs?
A discipline tool to keep students in line?

Perplexing questions?

What are the different kinds of literacy?
What does it mean to be mathematically competent?
Science, technology and media - Where will they lead?
How do the arts enrich the lives of students?

Monday morning questions?

Will I use the prescribed text or the weekend sports stats to teach average?
Will my students participate in meaningful reading and writing activities today?
Will I bring the 'real world' into the classroom so my students can be "in the know"?
Will I engage individual students in conversation?

A teacher needs to reflect...
to think quietly, to question,
to write critically, to dialogue thoughtfully, to ask

What kind of teacher am I?

LINKING THREE CULTURES IN TEACHER INTERNSHIP

Amarjit Singh
Faculty of Education

The Context and Introduction

Several recent reports on educational reform in this province provide a discourse on school improvement. The reports suggest the need for developing a positive school culture, since such a culture is necessary to attain the following outcomes:

- educational excellence
- high retention rate
- high graduation rate
- high achievement
- high employability of graduates, and
- school accountability.

The reports also talk about transmitting to students a set of personal, spiritual, cultural and critical values for citizenship and democracy. They also suggest that the school improvement process should be student centered and should take the developmental needs of students into account. For an in-depth review of the reports one should read Katherine Dundas' Master's thesis in which she critically evaluates many other points in those reports.

Following the discourse presented in the educational reform reports, I suggest we can talk about the need to develop reflective and critical internship cultures to attain goals set in the reports. Not only should the focus be on developing reflective and critical internship cultures, but such cultures should be built on the real and anticipated needs of teacher interns. After all, the internship exists mainly, if not solely, for teacher interns.

The way I see it, there are many internship cultures, and therefore I suggest that we should not think or talk about the culture of internship or a culture of internship. I say this because it is obvious that teacher interns grapple with multiple contextual and situational realities which constitute the total internship process.

For the purpose of discussion in this paper, I would like to mention three predominant cultures which the teacher interns and those who work with them during the internship process need to fully understand and learn about. These three cultures are:

- the culture(s) of partnership
- the culture(s) of collaboration
- the culture(s) of reflective and critical internship in teacher education.

It should be noted that each culture identified above can itself be conceptualized as having many sub-cultures, and so on. This is so because the total

internship process and teacher education themselves are embedded in multiple and complex social, cultural, political, economic and organizational realities.

Before I discuss these three cultures, a few more general comments on the interns, the internship process, the school, and the society are in order.

Teacher Interns, the Internship Process, and School Improvement Initiatives

Both our own research and other research in these areas show that teacher interns will sooner or later inherit complex school and classroom cultures. In these contexts, as the reform reports points out, they at least would need to know the following:

1. How to translate provincial learning objectives with practical learning experiences in the classroom
2. How to prepare instructional plans
3. How to prepare lesson plans
4. How much time to spend on different tasks in classrooms
5. How to manage the classroom
6. Different teaching practices and strategies
7. The prescribed curriculum content
8. How to build a strong foundation in literacy and numeracy skills
9. How to persevere
10. The effort and time required for high achievement.

Preparation of programs for school is a very important task. Therefore, teacher interns should be able to prepare programs to be used in schools. The structure of these programs must provide their students a structure of intellectual skills which will include inquiry, inference, reflection, critical and creative decision working, analysis and evaluation. Moreover, these programs should enhance students' technological competence and prepare them as good citizens. Similarly, teacher interns also are expected to learn how to address and nurture students' physical, emotional, social, spiritual and moral needs.

In the final analysis, the school and the internship process are expected to produce educated persons in this province. The educated person, according to Learning for All: The Foundation Program Report (1996), is

. . .one who is equipped to respond appropriately to the intellectual, social, aesthetic, emotional, moral, spiritual, and physical dimensions of life, such that he or she is enabled and motivated.

The reports suggest several school improvement initiatives in order to produce educated populace. For example, the Challenge for Excellence Reports (1990) states:

A school improvement initiative should not focus solely on enhancing academic achievement but should also focus on a continual transmission of personal, spiritual, and cultural values, values which have enriched the lives of Newfoundlanders for many years.

A change process can be evolutionary or revolutionary. In democratic societies, an evolutionary change process is often more effective. This is accepted by the above report as it points out:

It must be recognized that change is a process which is carried out over a period of time. All initiatives cannot be effectively implemented at once.

And it should also be realized that

School improvement initiatives are not a top down, or bottom up exercise, but form a shared responsibility which requires a shared response.

The report recognizes important roles played by educational personnel and other partners in the change process. It states:

Educational personnel involved with the school improvement process must receive adequate time, personal and technical support, and the encouragement to undertake the tasks required to improve conditions for students.

The discussion presented above clearly leads us to conclude that it is obvious that teacher interns have to learn an integrated approach to curriculum which allows them to do all the things mentioned above in the context of the school. These expectations held for the teacher interns clearly put great responsibilities on the shoulders of cooperating teachers, internship supervisors and school personnel. All these people, as partners, are expected to enable teacher interns to learn a lot. To meet this immense responsibility, a great deal of thinking, talking and doing is required. For it is through conversations with each other that we are able to resolve our problems critically, creatively, imaginatively and reflectively.

The Three Cultures of the Internship

A. *The Partners and Their Cultures*

I return now to the discussion of three internship cultures: cultures of partnership, cultures of collaboration and cultures of reflective and critical internship in education.

As discussed above, our schools are expected to produce well-rounded educated persons to meet the challenges of the twenty-first century and beyond. Such educated persons can not be produced without the help of various partners involved in creating, managing, implementing and evaluating the curriculum in schools and the internship process. Who are these partners? These partners are (the list is not meant to be exhaustive or in order of importance):

- The Department of Education and Training
- Newfoundland and Labrador School Boards' Association
- The schools

- The school councils
- The school districts
- The Newfoundland and Labrador Teachers' Association and its various interest groups including SAC
- Memorial University
- The Faculty of Education
- Educational consultants from the Department of Education and Training
- Newfoundland and Labrador Home and School Federation
- Newfoundland Association of School Superintendents (SAC)
- School Administrators' Council
- Teachers and internship cooperating teachers
- Parents and their organizations (school councils)
- Program specialists.

All the partners have their own groups, organizations and cultures. There is a need to understand their cultures in a systematic way, if the goal is to improve our schools and educate the populace in a desired direction. This will require, among other things, creating new forms of institutions and communication networks so that we all can have pragmatic, open and endless conversations with each other. For it is through unending interactions with each other that we develop our self. The self in turn enables us to create new forms of knowledge. Based on new awareness we are able to imagine new societies and hope to create them through our actions.

B. *Cultures of Collaboration*

I have just identified many partners involved in the internship process in the previous section. Many of these partners regularly collaborate with each other to achieve certain educational outcomes in this province. For example, the school districts, the schools, the cooperating teachers, the internship supervisors, the teacher interns and the Faculty of Education collaborate in the delivery of the teacher internship program.

The point is that collaboration, as a form of interaction and conversation, creates its own culture. A great deal has been written in this area and the research is extensive. We have reviewed some of the research in this area and have produced "local knowledge" which shed light on what it means to be a cooperating teacher, internship supervisor and teacher intern in this province and what it means to collaborate with the Faculty of Education as the only institution of higher learning in this province. These meanings become part of the total internship culture, which in turn affect the degree to which the internship program in this province can be implemented successfully.

Therefore, we need to understand various elements of cultures of collaboration. We have, like many others, come to realize that any collaboration is based on trust, give and take (exchange), respect, care and continuous dialogue among all parties involved on an equal basis. It is based on a sense of humility among the participants, acceptance of differences and tolerance of many previously unheard voices. The "global village" built on the foundation of collaboration is not a village built on the unified voice of the people who live in it. This village defies any single true common canon. On the contrary, it is a village built on people's ability and

skills in recognizing and incorporating into their daily actions the contradictory voices and experiences of many people who live in it. Collaboration is based on reciprocal exchanges in which participants feel empowered, enabled and socially mobile. It is based on a set of attitudes which encourages inclusion of all partners rather than their exclusion. Collaborative practices and life styles thrive on democratic principles of participation, fairness, justice and equality.

C. *Cultures of Reflective and Critical Internship*

Similarly, much is written on reflection, reflective and critical education and internship. A rich and extensive literature also exists in this area which links reflective education and internship to larger issues of social policy and nation-building. We have reviewed some of this literature and how it impacts on the locally generated internship process in this province.

Briefly, cultures of reflective and critical internship thrive on conversations of hope and possibilities. These cultures are capable of transcending discourses of despair, gloom and doom. Doooms day talk characterizes many of the education reform reports produced in this province and elsewhere. The reports use piles of statistics to create a profile of the educational system in this province in which very little good is seen to be happening. The numbers are used to create images of crises in society, rather than positively portraying the life styles of people in this province. The reports are more interested in creating an image of Newfoundland society which corresponds to the self-images of those who have produced those reports. Instead of re-affirming the self-images of many people in this province, the reports just do the opposite. More often than not they have become instruments of social policy which undervalues the self-confidence and self-concepts of people in this province.

On the contrary, cultures of reflective and critical education and internship aspire to build a democratic society and to encourage democratic living. These cultures do not shy away from the radical meaning inherent in the idea of democracy by adopting a cynical set of attitudes which re-enforce the idea that issues related to inequalities - social, political, cultural, economic and gender - are unproblematic, and therefore, need not be taken too seriously in education policy formulation and implementation.

In addition, cultures of reflective and critical thinking in education encourage continued conversations among all members of society. They encourage unchecked (except for extreme hate speech) freedom of speech and communication in all forms, specifically they encourage previously nonheard and unrecognized voices to be heard and recognized through creating new safe spaces and rights.

Not only this, these cultures encourage all partners involved in the internship process to raise critical questions which challenge the existing status quo or one-dimensional thinking, e.g. schools should be changed to meet the demands of global economy and nothing else. Instead of seeing downsizing and school closure as the only solutions to problems created by a global economy and technological changes, reflective and critical cultures empower people to think in terms of the possibilities of creating new forms of communities, sets of relationships and desired goals.

The Need for Systemic Thinking

In order to understand these three cultures in a meaningful way, we need to resort to systemic thinking as a perspective. Through this perspective we can attempt to comprehend institutional and organizational contexts of the three cultures of the internship discussed above. A series of questions can be raised in achieving this goal. For example, we can start by asking the following questions:

- Are the organizations, where these culture are located, learning organizations?
- Do these organizations promote authentic dialogue?
- What kind of culture do these organizations, in fact, create, maintain, promote and perpetuate?
- What kind of cultures do they discourage?

As we all know, the internship process in this province has undergone a fundamental change. Dennis Treslan has presented the historical account of this transition in his article in an earlier issue of *The Morning Watch*.

The new model of the internship which has emerged in this province is called the Partnership Model of the internship. Andrea Rose discusses some of the characteristics of this model as they relate to reflective and to critical perspective in teacher internship.

My point is that we know very little of this new model. Therefore, we need to learn more about this partnership model through research and candid observations. We will be better served if we produce "local knowledge" about this model. In order to achieve this, cooperating teachers, internship supervisors and school personnel ought to make their observations of the internship process public. This they can do either through presenting their ideas at conferences, in-service programs or through writing in journals.

In addition, we should know the following:

- What kind of studies have been done by others about those three cultures, if any;
- What form of knowledge is available in linking those three cultures;
- Who has access to what form of knowledge, in relationship to various partners involved in the internship process?

For example, what do we publicly know:

- about cultures of the Department of Education in this province;
- about cultures of the school councils;
- about cultures of the NLTA;
- about cultures of program developers;
- about cultures of consultants;
- about cultures of school administrators;
- about cultures of teachers at various levels in this province;
- about cultures of the Education Faculty at Memorial University and other faculties at Memorial University;

- cultures of schools in rural/urban areas of the province.

Linking the Three Cultures: A Proposal

We can build an effective internship process in this province by linking various cultures - cultures of partnership, cultures of collaboration and cultures of reflective and critical internship. This can be done through team building. If done properly, a team building process will create "locally" produced "cultures of teacher internship." This internship culture will enable us to produce an educated person in our province, as articulated in many recent reports on education reform published in this province. Some points made in those reports were discussed in this paper for the purpose of making this proposal.

A huge amount of research exists in the area of building teams. We have reviewed selected studies relevant to constructing a reflective and critical internship through team building in our article which was published in a previous issue of *The Morning Watch*.

Basically, as we all know, you cannot make people work together by just putting them together in a group. Team building requires systemic thinking and doing. Team building should be based on the experience of people who have tried to build various types of teams in the process of their professional work, as well as on the research done in this area.

In the final analysis, I believe we desperately need to be talking with each other endlessly about whatever we desire to do in our province. Patience, tolerance and an evolutionary perspective on change should be the central focus when we converse with each other. And we must always remember that it is mostly through conversations that we learn how to live together, how to build democratic communities, positive self-concept and caring relationship.

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THE TEACHING INTERNSHIP AT MEMORIAL UNIVERSITY A UNIVERSITY - SCHOOL DISTRICT PARTNERSHIP

**Dennis L. Treslan
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For many years the Faculty of Education at Memorial University of Newfoundland has relied extensively on the teaching internship as a means of affording prospective teachers an opportunity to integrate theory and practice in an educational setting. More recently within the Reflective and Critical Internship Programme and resulting QUAD relationship of cooperating teacher, intern supervisor, intern and subject matter, efforts have been undertaken to enhance and facilitate valuable educational experiences through which interrelationships among components of the university program might be brought into focus through the teaching experience. This exercise of facilitation has assumed different formats over the past decade leading to development of the present internship delivery model.

Brief History

Notice from Government on July 1, 1988 concerning introduction of a compulsory internship as the prerequisite for teacher certification mandated that all student interns spend one semester (approximately thirteen weeks) in a school setting engaged in teaching activities. To meet this demand faculty members, normally as part of their teaching responsibility, were encouraged to assume supervisory roles -- undertaking the supervision of some five to ten students as the equivalent of one instructional course section within their workloads. The difficulty with this arrangement was that there were simply never enough faculty members available to supervise the large number of student interns. To overcome this situation efforts were undertaken to second practising teachers to the supervisory role on both a per school and regional basis with very positive results. However, two major problems emerged at this stage of evolutionary development -- minimal intern placement in rural Newfoundland and Labrador, and spiralling financial costs.

Under this supervisory arrangement a majority of interns were placed in schools within St. John's/Mount Pearl and surrounding areas resulting in too few students being located throughout rural Newfoundland and Labrador simply because intern supervision was difficult to arrange. As a result many schools and school districts were being denied an opportunity to participate in the professional development of future educators. Along with this logistics shortcoming the sheer cost associated with supervisory secondments exceeded the ability of the Faculty of Education to finance. As a result, attention was turned to exploring alternative delivery modes.

There is an old saying that necessity is the mother of invention! Certainly forces at work within the Faculty of Education served as a catalyst for the need to seriously pursue the issue of an alternative mode of internship supervision. To begin with the Faculty underwent a radical downsizing from 91 members in 1986-87 to 48 members in 1996-97. This sizeable decrease in staff complement dictated that with fewer bodies to cover existing programmes, insufficient faculty were available for supervising interns. Moreover, the total faculty budget was continuously being pared,

thereby eliminating any possibility of continuing with teacher secondments or realizing faculty expansion. And so the stage was set for some very serious decision making. Since the very existence of the Faculty of Education hinged on the preparation of teachers, and since the preparation of teachers necessitated undertaking a full semester of internship, a bold and innovative solution to the existing dilemma had to be created. The result has become what we now refer to as the University-School District Partnership.¹

The initial building blocks for the current model of internship delivery lay in the very essence of the internship QUAD. Clearly both the field and the Faculty of Education were active participants in the professional formation of student interns, with the former serving as cooperating teachers and the latter fulfilling a supervisory role. Why not consider the possibility of forging a partnership between school district and Faculty whereby the district would be paid to orient, place and supervise interns while the Faculty would fulfil an overall coordinative role? If the Faculty would supply each district with all necessary placement and evaluative material relative to the student interns, why couldn't the district in turn assign intern supervisory responsibilities to competent and capable educators -- principals, central office staff, teams of teachers, etc.? Thus the stage was set in the Fall of 1993 to launch this delivery mode in five Newfoundland and Labrador school districts. A legal contract duly signed by each participating party -- district and Faculty -- formalized the undertaking of responsibility for internship supervision by each district partner.

From the outset the University - School District partnership proved quite popular with those districts involved. Student interns who otherwise could not have been directly supervised by the Faculty in the more rural areas of this Province were now able to be placed in their home districts. Each district assigned a central office staff person to the task of placing, orienting and ensuring that each intern was supervised and evaluated according to the expectations of the Faculty of Education. Each school in turn assigned the intern to a cooperating teacher. For the most part school principals acted in the role of intern supervisor. While this input from principals has been appreciated it has proven to be a restrictive factor of the model which is only now being addressed. It was never the intention of this partnership to have principals assume supervisory responsibility unless that individual wished to do so. The reason for this was quite obvious -- role responsibilities of principals simply precluded the contribution of time required for effective intern supervision. Yet, despite concerns of principals of being overburdened and the best efforts of this Faculty to encourage teachers, vice-principals, department heads and/or central office coordinators to assume this supervisory role, many school principals still view their supervisory participation as essential to the success of this model and are therefore determined to remain so involved.

Throughout the first years of operation this partnership model both the Faculty of Education and districts were frustrated by a lack of procedural consistency regarding intern observation and evaluation. This was a fair criticism but interestingly the model itself was not the problem. Instead it was obvious that the plethora of forms used to observe and evaluate interns were in need of revision in accordance with the new delivery model. In fact these forms were so poorly received that some districts began to create their own instruments -- something that was not allowed under the terms and conditions of the contract entered into by the district and the Faculty. The

message was again loud and clear: districts were asking this Faculty to re-examine the evaluation and observation instruments with a view to developing new formats and create instructional guidelines for their use. These newly designed instruments and handbook are now being piloted during Fall 1997.

Achieving standardization in practice required the Faculty of Education to follow further advice from districts to improve the presence of the University in school districts over the duration of the semester long internship. To accomplish this two additional roles were created, namely, district liaison officer and internship professional development officer. Again, it can be seen that this partnership has thrived on the responsiveness of each participant's requests for refinements -- the Faculty to requests for improving standardization in practice and improvement of communication, and the districts to requests for improved communication between central office and schools along with improved clustering of interns throughout each district to facilitate district liaison. Through continuous monitoring by the Office of Undergraduate Student Services, this partnership model has expanded in usage throughout the Province, becoming more effective and user friendly in the process. Currently nine of the Province's ten school districts are involved in this partnering process². The large urban district of Avalon East with its close proximity to the University has not yet participated but is considering the possibility of doing so in the near future once a piloting process has been put in place.

Current Scene

The current University-School District Partnership is predicated on the underlying assumption that an extended practicum is necessary to the training of teachers. Delivery of the teaching internship through this model has greatly assisted the Faculty of Education in affording prospective teachers an opportunity to acquire already critical teaching skills while interning in various provincial school districts. Clearly this partnership has already exhibited a number of strengths, some of which include an opportunity for students to return to their home districts during the internship; an opportunity for students to be placed within districts so as to maximize their contact with district resources; and the opportunity for school districts to observe potential employees. Too, this partnership has enabled experienced teachers in rural Newfoundland and Labrador to pass on their expertise to interns.

This internship partnership operates across the semester in a manner similar to many other teaching internships throughout the country--the difference being the extent of school district involvement in the supervisory role. The district assigns each intern to a cooperating teacher and also identifies a supervisor to work with both the intern and cooperating teacher over the 13 week internship period. Formative and summative evaluation of intern performance is conducted through the use of university-approved evaluation instruments. As usual the cooperating teacher and supervisor prepare individual reports on each intern's progress.

University assistance is provided to each partner district throughout the semester. The district liaison officer has responsibilities for meeting with cooperating teachers, interns, supervisors and principals in individual school districts within the first three weeks of a semester; facilitating at a further point in the semester a reflective session for interns in each district to focus on topics of general concern

such as teacher welfare matters, reflective journal writing, evaluation, etc.; maintaining communication links with intern supervisors in the school districts to ensure procedural standardization; serving as a troubleshooter; and liaising with the coordinator of undergraduate programs. The internship professional development officer is a faculty member who is responsible for the development and delivery of professional in-service for cooperating teachers and supervisors as deemed necessary. A major initiative in this regard took place in the Fall of 1997.

Successful operation of this University - School District Partnership has required the Office of Undergraduate Student Services, as that arm of the Faculty of Education directly responsible for undergraduate programs, to assume an active role in the overall coordination of the internship experience.³ This Office answers questions pertaining to all aspects of the internship program; advises on matters of attendance, unprofessional conduct, intern performance, etc.; arranges for all required materials to be sent to the districts; trouble shoots; liaises with the district liaison officers; and updates the Associate Dean, Undergraduate Programs on all ongoing internship matters.

The very nature of this partnership model requires each district central office to assume critical role responsibilities. These include selecting cooperating teachers and supervisors; providing (and updating) the Faculty of Education with details of the placement and supervision arrangements for interns; briefing school personnel about the internship program and distributing material provided by the Faculty of Education; providing information to school personnel regarding the professional background of interns; working with cooperating teachers and interns in designing a program of activities; arranging an orientation session for interns at the beginning of the semester; whenever possible including interns in district professional development activities; holding discussions with cooperating teachers, supervisors, and interns; keeping the Faculty of Education informed of any problems in the intern's program; compiling and returning the district grade report (to contain grades for all interns in the district) to the Faculty of Education as soon as possible following the end date of the internship; and ensuring that the Faculty of Education receives a complete evaluation file for each intern.

Role responsibilities assigned to cooperating teachers, interns, and principals follow on those traditionally ascribed to these positions. However, in those instances where the principal is also the supervisor he/she assumes the following supervisory responsibilities: observing the intern teaching at least once every 6-10 school days; assisting the intern in the critical-reflective analysis of the relationship between theory and practice with the intent of improving practice; conferring with the cooperating teacher regarding the intern's progress; preparing reports of the intern's progress and discussing these reports with the intern; and monitoring the overall professional development of the intern.

The Faculty of Education at Memorial University of Newfoundland remains confident that the University-School District Partnership will continue to provide an effective avenue for encouraging increased school district involvement in the formation of prospective teachers. To this end the Faculty is committed to providing opportunity for professional in-service of cooperating teachers and supervisors. Whereas this has been a long held goal of the Faculty, the first such undertaking

occurred in October, 1997. During this time a two-day pilot seminar was held for representatives from four Newfoundland and Labrador school districts. Each participating district sent two experienced cooperating teachers (one primary/elementary and one secondary) along with the central office staff member responsible for district internship coordination to an intensive two-day session at Littledale Conference Centre in St. John's. Participants lived in residence during the two day seminar during which critical-reflective pedagogical presentations were made by members of the Faculty of Education. While attending this Professional In-Service and Strategic Planning Seminar, participants dialogued with members of the Faculty of Education to accomplish two major goals: a critical examination of the pedagogy underlying the role of the cooperating teacher in a critical-reflective internship experience, and collective development of a strategy for meeting the ongoing professional needs of cooperating teachers and supervisors in all districts currently participating in this partnership model. This two-day experience was designed to contribute to improved communication between the field and the Faculty as well as pave the way for district identified lead/master teachers to assume, in addition to their cooperating teacher role, greater prominence in the supervision of interns. Given that the Faculty of Education bears ultimate responsibility for the teaching internship, this session represented one of the few occasions when representatives from the faculty and the field were able to sit down together in a "think tank" environment to communicate and improve upon an already successful partnership venture.

Challenge

The future of the University-School District Partnership is promising. Born from a need to deliver an internship unique in its innovative outreach to provincial school districts, the partnership model is rooted in the strong belief that the pre-education of teachers is a jointly held responsibility of the Faculty of Education and the profession. This belief has not been based on any desire to shift or deny the responsibility of the Faculty of Education for initial teacher education but on the firm belief that the best teacher education programs in the country are those with active participation by practising teachers. The real benefit has been to interns who can now be totally supervised by current practising teachers. Under this approach, interns can become more fully integrated into the school and thus the profession at an earlier stage.

Considerable work remains to be done to hone the effectiveness of this model. Partnerships by their very definition require continuous attention to the needs satisfaction of participants. That there remains those who are somewhat skeptical regarding the long term viability of this venture is understandable. Change is a phenomenon affecting individuals, groups and organizations in a variety of ways. However, time, effective communication and increased opportunities to become involved in the operation of this partnership are essential to the garnering of individual/group support and ownership. While there are those who may feel that the Faculty has given up control of the internship, there is every opportunity to demonstrate that rather than losing control this Faculty has gained a partner in delivering a more effective internship experience and, in the process, has experienced a sharing of control. There never has been nor will there ever be any attempt to move the internship away from the Faculty of Education whose responsibility it is by legal mandate. Rather this model has provided a professional working partnership with the field which many say is long overdue. It remains for this

Faculty, through ventures such as the Professional In-Service and Strategic Planning Seminar this Fall, to provide ongoing guidance and direction to the field regarding internship delivery and, in return, be receptive to advice received. After all, is this not the very essence of an effective partnership?

Notes:

¹ For further information on the University-School District Partnership please consult the Internship Handbook (All Districts Excepting Avalon East). May, 1997.

² Participating Provincial school districts include:

- Labrador School District #1
- Northern Peninsula/Labrador South School District #2
- Corner Brook/Deer Lake/St. Barbe South School District #3
- Stephenville/Port aux Basques School District #4
- Baie Verte/Central/Connaigre School District #5
- Lewisporte/Gander School District #6
- Burin School District #7
- Clarenceville/Bonavista School District #8
- Avalon West School District #9

³ To date the University - School District Partnership has functioned effectively in the following school district locations outside of this Province: British Columbia; Alberta; Ontario; Quebec; New Brunswick; Nova Scotia; Harlow, England.

STRUCTURAL CHANGE COMBINED WITH TRAINING CAN DELIVER EFFECTIVE SITE-BASED MANAGEMENT

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Abstract

This article centers around a research project involving fifteen schools based both in Canada and in Europe. It brings awareness of the basic power shifts considered essential for effective site-based management. It conveys knowledge that training in site-based management theory when combined with exposure to site-based management in practice does make a difference to the success of this contemporary management system. This difference was especially evidenced in the area of leadership approach, which requires particular and immediate training focus prior to implementation of site-based management.

There appears to be a growing realization of the need for change in the educational system among researchers (Barth, 1990; Fullan, 1993; Sergiovanni, 1994). Numerous calls from society for increased school effectiveness and advanced student achievement implies that a cooperating management team within schools is a fundamental ingredient for school improvement. Site-based management, in which principal, teachers, parents, community members and students are given autonomy to effect educational change, is accentuated as a credible change mechanism that has the capacity to revitalize today's educational system (Herman & Herman, 1992; Hill, Bonan & Warner, 1992; Midgley & Wood, 1993). Site-based management requiring school-based decision making and increased stakeholder involvement presently engulfs schools in many regions of the western world. For example, Australia, New Zealand, more than forty states in the United States, as well as all European countries (with the exception of Portugal and some areas of Germany), have already placed their faith in this contemporary management system. In addition, Canadian provinces such as Nova Scotia and Newfoundland and Labrador have recently joined Alberta, Saskatchewan and Prince Edward Island in their quest for shared decision making in school management (Nova Scotia Department of Education, 1994). In their advocacy for school-based decision making, The Royal Commission of Inquiry into the Delivery of Programs and Services in Primary, Elementary, and Secondary Education (Royal Commission, 1992, p. 222) suggest that schools flourish when groups that collectively pursue a common goal are given the power to initiate change and face together the complex forces that are influential in teaching and learning. Currently in its formative years of site-based management, Newfoundland and Labrador's recent reduction in the number of school boards adds fuel to the necessity for increased school-based decision making in this province.

Deterrents to Site-Based Management

This mostly mandated structural change, however, presents educators and researchers with a major concern. As educational practitioners confront implementation of this blanket government policy, there is fear that not all site-based management participants may be sufficiently informed about consensus decision

making to ensure effective change in such a vital area for school improvement (Collins, 1995; Devereaux, 1995; Sheppard & Devereaux, 1997). It is a widely held belief that without sufficient training for school council participants, a move to site-based management may be superficial, simply changing the power base from one group setting to another (Conley & Bacharach, 1990; Fullan, 1993; Nova Scotia Department of Education, 1994; Sergiovanni, 1994). The Steering Committee for School Council Implementation (1994, p. 7-8) suggested that "resistance to sharing power is perhaps the greatest barrier to change," while Collins (1995) reiterated concerns expressed by The Royal Commission (1992) that it is quite possible that school councils may be dominated by principals.

Contemplating this anxiety, The Royal Commission (1992, p. 211) suggested that, "competent leadership is critical for any major restructuring to work, but it will need to be developed and nourished and steps will have to be taken to identify appropriate leadership models, skills and potential leaders." In Newfoundland and Labrador, The Schools Act 1996 clearly places responsibility for establishment of legislated school councils among the duties of each and every school principal in this province. Since the essential role of the school principal as change agent is widely recognized (Mahon, 1991; Hannay, 1992; Haughley and Rowley, 1991; Keedy and Finch, 1994), training and professional development are vitally needed for adoption of site-based management (Bailey, 1991; Bolman and Deal, 1991; Peeler, 1991; Thurston, Clift and Schact, 1993).

Many researchers recognize that the transformational leadership approach is steadily emerging as the preferred form of leadership for change (Bass, Waldman, Avolio and Bebb, 1987; Brown, 1994; Leithwood, 1992). Kouzes and Posner (1995) report similar sentiments as they recount findings based on a sample of more than 36,000 managers and their subordinates that stress challenging the process, inspiring a shared vision, enabling others to act, modeling the way, and encouraging the heart as effective leadership practices in a site-based management environment.

Purpose and Methodology of Study

This study was initiated specifically to identify the appropriate leadership approach required for the successful implementation of school councils. It was undertaken to ascertain approaches to leadership and power that were perceived to exist in schools and to determine if leadership and power positions varied with involvement in school councils.

To accomplish this objective, a two-phase research study was conducted. In phase one, a group of research participants in Newfoundland and Labrador, Canada, were selected and were invited to respond to two survey type questionnaires: the Leadership Practices Inventory (Kouzes and Posner, 1989) and The Relationship Between Principals and Members of School Councils (Chapman, 1982). The composition of the sample population for this quantitative non-experimental investigation included 207 principals, teachers, parents, community members and students from thirteen schools. From this sample, seven schools were involved in school councils, while involvement with site-based management in the remaining six schools was nil.

The second phase of the investigation was conducted in two site-based managed European schools. Claims that this environment has one of the most highly evolved types of site-based management, as well as accessibility to schools having several decades of involvement in self-management, attracted the researcher to this specific setting. Through this qualitative component of the study, data were gathered using taped interviews, journal keeping, principal shadowing, and analysis of school policy and other school-related documents. Opportunities for participant observation in various work situations, including both staff and school council meetings, were provided to the investigator spanning a period of one month. Approximately two weeks of data collection was conducted per school. During this time two interview schedules that were grounded in the questionnaires already used in Canada were administered.

Due to the composition of participants in the qualitative section of the study, extra caution was applied to ensure confidentiality in data presentation. There was one male and one female principal; therefore one principal was labeled as male gender and referred to as Principal One; the other principal was designated female gender and referred to as Principal Two (the gender may or may not be accurate). All teacher and school council member participants in this study were referred to as female (again, the gender may or may not be accurate).

Findings

The image of fifteen schools sprawled throughout sparsely populated rural areas and densely populated urban areas in parts of Canada and Europe conjures up diversity. Equally diverse is their exposure in varying degrees to site-based management. In Canada noninvolvement and involvement in the initial stages appeared to be the norm. In Europe, however, excitement mounts as the researcher discovered the possibility to study site-based management that spans decades and, further still, to investigate completely autonomous site-based management. In the totally site-based managed school, contact with school boards had been eliminated, thereby giving the school council complete control over how the funds they received directly from government were dispersed. An unveiling of these site-based management structures in the Spring of 1995 allowed rich insights into the site-based management world of principal, teachers and parents.

Findings from the European aspect of this study indicate that even though structural change has occurred and involvement in site-based management is afforded them, some school principals continue to practice a "top down" traditionalist approach to leadership, maintaining "power over" other school council members and thus capitalizing on their positional power. Genuine stakeholder involvement in shared decision making which accompanies effective site-based management appears non-existent. The primary site-based management goal of improved student learning becomes secondary to the struggle for power. The expertise of school council members remains dormant and their varying perspectives on school-related issues are not reflected upon; consequently there is maintenance of the status quo. This is evidenced in the following comments gathered from interviewed principals and their school council representatives. One school principal expressed the belief that leadership "should be enabling." However, in reference to a school council member's contribution the principal contended:

I find it irksome for the school council to be run through elementary ways of doing things. ...The school council members have recognized that I am prepared to take on the management role in the fullest extent. ...I recognize that it can be seen as a block, a stitch up, I recognize that, but it hasn't been challenged. My school council members seem to be happy with the way we operate. (Devereaux, 1995)

A council member at this same school suggested that the principal had almost the full balance of power on school council and that as a school council member, she believed she should be given a little more leeway, stating:

I feel restricted. ...Even if we have something to say we get knocked down... We all have our little pigeon holes. ...We just do what the principal tells us all the time. (Devereaux, 1995)

In reference to whether the principal of another school used her expertise to influence school council members, a school council representative declared:

The principal just has her say. She doesn't try to lay down any laws. (Devereaux, 1995)

The principal of this school expressed her leadership beliefs, contending, "it's got to be democratic." Conversely, when addressing the issue of the principal's influence on school council, she declared:

I think most school councils, and I'm speaking for my own, they do listen to the principal. I mean 99.9% of the time the principal has her way. (Devereaux, 1995)

Neither of these principals practiced the transformational leadership approach that is compatible with site-based management. Both principals either directly or indirectly used their influence on school council. The principal who opted for total self-management for his school used expertise and positional power to completely dominate school council members. The principal at the school board controlled site used manipulation, subtly maneuvering school council members into following her agenda. Thus, these principals left school council members powerless to effect change in the educational systems of these particular schools. Although no generalizations can be made from these two schools, these findings suggest that involvement in site-based management does not guarantee that principals' leadership approaches are in alignment with the site-based management philosophy. Legislated structural change does not ensure acceptance of the shared decision making necessary for effective school councils.

At the time when this study was undertaken, site-based management was a new educational concept in Newfoundland and Labrador. Because it was a pilot project, financial resources were provided to train involved principals and school council members in site-based management theory and practice. Quantitative data collected from this phase of the research study suggest that others perceived that a more transformational approach to leadership was exhibited by principals involved in piloting the school council project, while those who were not involved were perceived

to be less open to change and therefore not inclined to readily adapt to site-based management. An R-square of 0.124 was obtained when multiple regression analysis was applied to determine if there was a relationship between school council members' perceptions of the principals' leadership approach and the schools' involvement in the school council pilot project. Thus, 12% of variance in leadership approach is explained by involvement in school councils (DF=1, 190; F=26.88; P<0005). These findings may appear contradictory to those found in the European environment; however, the significant training and support pilot school council members were given must be taken into account. Also, it should be noted that these particular principals may have already been interested in working in a shared leadership setting, since school council involvement had not been legislated at that time and principals' involvement in school councils was totally voluntary.

Ramifications

Principals are entrusted with school council implementation and are expected to become advocates for shared decision making. Consequently, movement toward management at the local school setting heightens the level of principal involvement making the principal's role in a site-based managed school even more critically related to a school's success. This changing role also requires a change in leadership approach and use of power. The new leadership approach required for successful site-based management is not innate and can be learned (Kouzes & Posner, 1995); therefore professional development for principals and other school council members is imperative for the success of site-based management (Wood & Caldwell, 1991; Levin, 1992; Tucker-Ladd, Merchant & Thurston, 1992).

One Principal of a site-based managed school forewarns us of dangers associated with site-based management when there is lack of adequate funding for resource materials and professional development resources at the school level, stating,

If the government doesn't realize it can't expect primary education to lift itself to the standards required without more resources, we're all done for. ...We are at busting point and the big risk is that we've got all these plates spinning and we won't be able to keep them all going and, you know, the possible disaster is they'll all crash to the floor. ...Now, that's a cry from the hearts of principals and it's a cry from the heart of teachers, everybody, maybe school council members too, but I think those, in a sense, are not yet close enough to see what's happening. (Devereaux, 1995)

Through site-based management training, stakeholders are prepared for striving in unison toward the common goal of elevating student performance to the highest possible level in each particular school. Working together they develop school policies, formulate the essential skills and knowledge required by today's students, review and pursue personnel and curriculum resources needed for effective school operation, and draft an action plan on how to best offer students distinctive quality preparation in all growth areas. Then, site-based management participants share accountability and responsibility for decisions that are made. Equipped with a clear focus on the primary goal, while being supported and encouraged by the other school council members, teachers are empowered and challenged to promote higher

standards of achievement and to raise student outcomes. Hence, site-based management affects teaching and learning in the classroom in a positive way and provides a pathway to the delivery of the best possible schooling for our children. Emerging theories of The Learning Organization, in which school-based management is an integral component, have already been shown to make inroads in the educational change process, contributing to improvements in teaching, learning and student outcomes (Sheppard, 1995).

Provision of the necessary resources to properly train school council members will give site-based management a fair chance for success. Through professional training, those who are closest to schooling will be equipped with the knowledge of how to implement and maintain effective site-based management. Only then can the potential of school councils, as a means to bring about the changes in student achievement that society considers vital for the workforce of today and tomorrow, be truly realized.

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PROFESSIONAL DEVELOPMENT: WHAT DO WE KNOW AND WHERE ARE WE GOING?

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The Need for Staff Development?

It was Socrates who said, "I believe that we cannot live better than in seeking to become still better than we are". That sentiment has been echoed over the years by many theorists, philosophers and educators alike. It is the ideal guiding the numerous calls nationally and internationally for the reform of schools and school systems. For state administrators, doing better might be translated as being more efficient, with making better use of public dollars. However, for teachers, doing better means improved student achievement, better instruction, and enhanced learning environments for all students. For teachers and administrators, the challenge of becoming better emphasizes their own needs to learn and to grow professionally, or in other words, the need for staff development (as it is most commonly called in the United States), or professional development (as it is often referred to in Canada).

The need for professional development has been well documented. Research conducted in 58 schools in Newfoundland, with 1059 teachers in all districts, revealed that promotion of professional development was the most significant single leadership activity that was related to increased levels of teacher commitment (the degree to which teachers are supportive and committed to the school and their colleagues); professional involvement (the degree to which teachers are concerned about their work, are keen to learn from one another, and committed to professional development); and innovativeness (the degree to which variety, change, and new approaches are emphasized in the school) (Sheppard, 1996). These findings were confirmed in another provincial study of school improvement, in which data were gathered from 19 districts, 155 principals, 279 teachers, 223 parents, and 69 students. Responding to a mail-out survey, principals and teachers were consistent in their perception of the most important activities which motivated school improvement in their schools, indicating that the most influential were professional development activities sponsored by the district (Brown, Button, Noseworthy, & Button, 1997).

This is consistent with the recognition of the need for staff development across North America. Guskey (1994b) states that "never before in the history of education has there been a greater recognition of the importance of professional development. Every proposal to reform, restructure, or transform schools emphasizes professional development as the primary vehicle in efforts to bring needed change" (p. 42). A number of theorists, notably Fullan (1993) and Guskey (1994b, 1995) link teacher development with improvements in student learning. Guskey (1995) states that: "If we are going to have improvement in student learning then staff development is an essential prerequisite to that." Similarly, Fullan (1993) concluded: "To restructure is not to reculture", that "changing formal structures is not the same as changing norms, habits, skills and beliefs" (p.49). In other words, if teachers are to change teaching practice, or if the culture is to become a better one in the sense of improving student

learning, teachers and administrators must be provided opportunities to learn. Fullan (1995), reviewing the evidence on site-based management, concluded, "restructuring reforms that devolved decision making to schools may have altered governance procedures but did not affect the teaching-learning core of schools" (p.230). He also cited Sarason who made the point even more forcefully: "Yes, we expect teachers to give their all to the growth and development of students. *But a teacher cannot sustain such giving unless the conditions exist for the continued growth and development of the teacher* [italics in the original]" (Sarason, cited in Fullan, 1995, p.234).

It is because of the existence of such evidence and claims, that Brandt (1994), as editor of Educational Leadership, the journal of the Association for Supervision and Curriculum Development (ASCD), issued a challenge to North American educators "to make continuous learning an integral part of every educators' professional life" (p.2). As well, this appeal is recognized in the mission statement of the National Staff Development Council (NSDC) in the United States which broadens the role of professional development in respect to continuous learning as it is not only directed at professionals, but also students and the school. It emphasizes (1) ensuring success for all students, (2) improving schools, (3) advancing individual and organizational development (Sullivan, 1997).

In Newfoundland and Labrador, the central important of professional development is highlighted by the significant proportion of the total educational budget that is used to pay teachers' salaries. In 1995-96, of the total revenues, \$552.6 million, received by school boards, \$418.6 million was spent in teachers' salaries (Newfoundland and Labrador, 1996). If one accepts the assumption that the essence of successful instruction and good schools comes from the thoughts and actions of the professionals in the schools, the sensible place to look in order to improve the quality of education in a school is the continuous education of educators through professional development. Glickman, Gordon, and Ross-Gordon (1995) used an analogy to automobiles. When a customer purchases a new car costing upwards of \$20,000, he or she brings it in every 8,000 kilometres for routine servicing. In order to protect the investment, the customer is willing to put additional money into the car to prolong its life and performance. In this analogy, the authors identify the school board as the customer who purchases an educator. "Without resources for maintaining, fine-tuning, and reinvigorating the investment, the district will run teachers into the ground. This is far more consequential than a neglected car. The district will lose teachers, physically and/or mentally. The real losers will be the students of these teachers" (p. 334).

The above analogy becomes particularly salient when one considers the aging teacher workforce in Newfoundland and Labrador. A statistical report of Educational Indicators, Profile '96 (Newfoundland and Labrador, 1997), reveals that in the 1995-1996 school year half of the teachers and in-school administrators were over 42 years old with 18.5 or more years teaching experience. The report correctly indicates that "as the age of teachers increases, the importance of frequent and meaningful professional development opportunities will be increasingly important in order to keep teachers abreast of recent advances in theory and practice" (p.51).

The Changing Face of Staff Development

Sparks (1996) contends that while professional development is essential if teachers and administrators are to avail of the findings of research on teaching, learning, and leadership, it must be considerably different than past practice. He observes the typical practice in the past was:

Educators (usually teachers) sitting relatively passively while an 'expert' 'exposed' them to new ideas or 'trained' them in new practices. The success of this endeavour was typically judged by a 'happiness quotient' that measured participants' satisfaction with the experience and their assessment regarding its usefulness in their work" (Sparks, 1994, p. 26).

This "expert" model has been widely criticized, in business and in education. Ryan (1995) rejects it on the grounds that it assumed there were the "experts" -- "the people who "knew" the "right" answers to our questions", and then there were the "learners" -- "generally assumed to be ignorant, passive, empty vessels who can be effectively filled up by the expert expounding knowledge" (p.279). Similarly, Joyce and Calhoun (1994) note inadequacies of past practices: "Brief, slick workshops were constructed and ratings went up, but implementation did not" (p. 4). Dillon-Peterson (1994) depicts the perspectives of other researchers (Brandt, 1994; Fullan, 1994; Guskey, 1994a; Joyce & Calhoun, 1994; Louck-Horsley, 1994; Schmuck, 1994, Wood, 1994) in the field of professional development regarding past and current practices as she reflects on 25 years of professional development. She notes the following shifts:

- [1] *From Emphasis on Deficit to Emphasis on Growth/Change.* Originally, most 'inservice education' (as it was then labelled) was designed to *fix* teachers.... Most current staff development is driven by...the need to improve schools as total learning communities.
- [2] *From Emphasis on the Individual to Emphasis on the Group/Organization.* ...Such movements as restructuring, team teaching, and organizational development...emphasize both the importance of the individual and the essential contribution she or he can make within the group if both the individual and society are to prosper.
- [3] *From Random Selection of Focus to More Systematic Delivery of Instruction Incorporating Principles of Adult Learning and the Use of Technology.* The preferred format of staff development activities ...was the "smorgasbord". Several times a year, the ambitious staff developer would line up 50-100 "one-shot" activities an hour or two in length. Topics may or may not have been related to the curriculum or the employee's assigned responsibility. Today, there is evidence that staff development is coming of age in terms of clarification of mission, goals, and objectives. (p. 3)

Professional Development and Change

Hixton (1991) states that "Staff development must help schools move beyond simply improving what they have to developing new understandings of what they need, new visions of what is possible, and new strategies of how to 'get there from here'" (p. 4). If professional development is to serve the purpose identified by Hixton above, then professional development activities must be based on current change theory (Nowak, 1994; Shroyer, 1990). One of the most comprehensive summaries of what we know about change has been summarized by Fullan (1993)⁽¹⁾ as eight lessons of the new paradigm of change:

- LESSON 1: YOU CAN'T MANDATE WHAT MATTERS

"The more complex the change the less you can force it" (p.22). The only changes that can be mandated are things that do not require thinking or skill and that can be easily monitored.

- LESSON 2: CHANGE IS A JOURNEY NOT A BLUEPRINT

"Change is non-linear, loaded with uncertainty, and sometimes perverse" (p.24). A group with whom Fullan was working in the Maritimes, likened change "to a planned journey into uncharted waters in a leaky boat with a mutinous crew" (p.24). Given such uncertainty, a risk taking mentality and climate must be fostered.

- LESSON 3: PROBLEMS ARE OUR FRIENDS

"Problems are inevitable, but the good news is that you can't learn or be successful without them" (p.25). As we search for solutions we need to recognize that "conflict is essential to any successful change effort" (p.27), that "change is learning" (p.27) and that we need to value the process of finding a solution, not just the solution itself. "In short, problems are our friends; but only if you do something about them" (p.28).

- LESSON 4: VISION AND STRATEGIC PLANNING COME LATER

"Premature visions and planning can blind" (p.28). Visions should be worked on but should be open-ended and provisional. Bear, Eisenstat and Spector (as cited in Fullan, 1993) concluded from their study of 26 plants over a five year period that change efforts beginning by a corporate plan to alter the culture of the management of people are inherently flawed. Attempts to change people through the building of mission statements or training programs are based on false assumptions of how people change. Fullan does not support vision developed by leadership teams. Also, strategic planning is called into question in complex change. Louis and Miles (as cited in Fullan, 1993) contend that we should take an evolutionary perspective where strategy is viewed as a flexible tool.

- LESSON 5: INDIVIDUALISM AND COLLECTIVISM MUST HAVE EQUAL POWER

"There are no one-sided solutions to isolation and groupthink" (p.33). Collaboration is recognized as beneficial in bringing together the most intelligence possible to solve complex issues. However, we must be cautious of "group think" as we are all aware that one of life's greatest difficulties is to stand out against one's group. Solitude has a place in change. "Isolation is bad, group domination is worse. Honouring opposites simultaneously -- individualism and collegiality--is the critical message" (p. 36).

- LESSON 6: NEITHER CENTRALIZATION NOR DECENTRALIZATION WORKS

"Both top-down and bottom-up strategies are necessary Centralization errs on the side of over control, decentralization errs towards chaos" (p. 37). Needed is a two-way relationship of pressure, support and continuous negotiation. The "best way" will depend on the context. For example, if there is an accepted knowledge base that teachers should know it would be quite ineffective to have an "expert" do a presentation in 17 different schools. It would appear to be wiser to bring people together in one group. When we move to implementation; however, we know that it must be done at the building level.

- LESSON 7: CONNECTION WITH THE WIDER ENVIRONMENT IS CRITICAL FOR SUCCESS

"The best organizations learn externally as well as internally" (p.38). Individual moral purpose must be linked to the social good and teachers must seek opportunities to join forces with others while they focus on working with individual students. Also, the organization must contribute to and respond to the environment.

- LESSON 8: EVERY PERSON IS A CHANGE AGENT

"Change is too important to leave to the experts" (p.39). Individuals need to assume responsibility within their own environments if there is to be substantive change; they cannot leave this responsibility to others. Fullan's views are forcefully stated by Senge (1990): "All my life, I assumed that somebody, somewhere knew the answer to this problem. I thought politicians knew what had to be done, but refused to do it out of politics and greed. But now I know that nobody knows the answer. Not us, not them, not anybody" (p.281). In a learning organization, everyone must strive for personal mastery, be a team leader to develop shared vision, think systemically, challenge his or her own and others' mental models, and in so doing contribute to organizational learning.

Fullan notes that the pattern underlying the eight lessons is that each is a paradox unto itself:

simultaneously pushing for change while allowing self learning to unfold; being prepared for a journey of uncertainty; seeing problems as sources of creative resolution; having a vision, but not being blinded by it; valuing the individual and the group; incorporating centralizing and decentralizing forces; being internally cohesive, but externally oriented; and valuing personal change as the route to system change. (p. 40) **Professional Development Knowledge Base**

After having conducted an extensive review of studies and reports on staff development programs, Glickman et al. (1995) concluded that there exists a considerable knowledge base regarding successful professional development programs. They summarize the characteristics of this knowledge base in a staff development checklist:

- Participants involved in planning and implementing
- Long-range planning
- Integration of individual and school improvement goals
- Based on principles of adult development and learning
- Released time for participants
- Incentives, support, and rewards
- Small-group learning activities
- If skill development: concrete and specific
- If skill development: demonstration, trial, and feedback during workshop
- If skill development: classroom coaching following workshop
- Experimentation and risk taking encouraged
- Regular participant meetings for problem solving and program revisions
- Instructional and school leaders participating in activities
- Ongoing, part of school culture. (p. 338)

Guskey (1994, 1995) contends that the problem with attempts to identify elements of successful professional development programs is that the success of these practices is contingent upon the context. What works in one context may not work in another. In spite of this caveat, however, he proposes a list of guidelines for success that he states are derived from research on both the change process and staff development. Guskey's six major guidelines (1994)⁽²⁾ reveals the implications of the research on both change theory and staff development, and the discussion of each reveals how the conclusions are supported by Fullan (1993) and Stoll & Fink (1996).

1. Recognize that change is both an individual and organizational process.

Research has clearly shown that the culture of the organization limits the impact that excellent people can have on the organization. Many have interpreted this finding as the need to focus on the culture of the organization at the exclusion of the individual. In fact it is this direction that has created difficulties for school improvement processes that have been employed in schools throughout the world (Stoll & Fink, 1996). If professional development and change efforts are to bring about improvements in schools then all efforts must focus on the classroom, with the realization that the school culture must value experimentation, be supportive of risk-takers, and provide opportunities for collaboration.

2. Think big, but start small.

While it is essential that all professional development occur in the context of a grand vision, it is essential that specific initiatives are small enough that they can be accomplished in a reasonable period of time, that they are realistic and clear, and that changes are measurable. Guskey (1994) states that there is one truism related to this issue of attempting changes in manageable steps: "The magnitude of change you ask people to make is inversely related to the likelihood of making it" (p. 44). It is important that teacher see that what they are doing makes a difference since teachers will only change practices when they see that they work.

3. Work in teams to maintain support.

Professional development efforts will be most successful if they occur in a context of a learning organization where norms of continuous learning and teamwork are established.

4. Include procedures for feedback on results.

If new practices are to become institutionalized then teachers must be convinced that they contribute to making a difference in student learning. Therefore, it is important that monitoring and evaluation is a critical component of professional development. Action Research is one professional development format that provides for the required feedback as it allows practitioners to become involved in systematic inquiry.

5. Provide continued follow-up, support, and pressure.

n*2 Progress toward implementation of something new is not a smooth linear process. As individuals experience the learning curve which is inherent in doing something new, they want to revert back to the tried and true practices of the past. An excellent example of this can be found through observation of people attempting to keep pace with the rapid changes in computer software. Just when they have begun to master one version of a word processing program, another more advanced program is released. Many resist moving to the newer, improved version because they know that the learning curve will be painful and, in fact while they are learning, they will be less efficient. Many who do not perceive themselves as software pioneers need some pressure to move from one program to the next. They only move to the next program either when someone else can convince them that it is indeed an improvement or if they find that their program is no longer compatible with programs used by others and is beginning to cause them difficulty. Those that have easy access to support systems and are expected by peers or by organizational expectations progress to each new advancement much more readily.

6. Integrate programs

Fullan (1993) contends that "...the main problem in public education is not resistance to change, but the presence of too many innovations mandated or adopted uncritically and superficially on an ad hoc fragmented basis" (p. 23). To avoid a perception that each new initiative introduced is yet another passing fad, it is critical

that they are introduced as a component of an integrated school development plan. Improvement must be perceived as enhancement, rather than replacement. **Staff Development in a Restructured Environment**

There is little doubt that performance and accountability are watchwords of the nineties (Louis, 1994; Newfoundland and Labrador, 1997; Sheppard & Brown, 1996; Stoll & Fink, 1996). While governments throughout the world remain committed to performance indicators and a means of external assessment and accountability, to structural reform, and to improvements to efficiencies of their educational delivery, unfortunately, there is very little evidence to support that such changes result in substantial improvements in student learning (Cranston, 1994; Fullan, 1993; Murphy & Hallinger, 1993; Sarason, 1990; Sergiovanni, 1995).

In light of uncertainty created by reform efforts, the concept of the learning organization provides the basis of a promising theoretical framework for the development of improving schools. Louis, Kruse and Raywid (1996) contend that,

the current reform movement focuses on structural and curricular changes as the main ingredients of effective schools, but pays less attention to altering the day-to-day work of teachers. When schools are seen as learning organizations and professional communities, however, attention is focused on teachers' work as the key instrument of reform. By emphasizing needed changes in the culture of schools and the daily practice of professionals, the reform movement can concentrate on the heart of the school--the teaching and learning process. (p.7)

Fullan (1995) contends that if we are to succeed in bringing about meaningful improvement "schools must become learning organizations" (p.234). Handy (1995) argues that:

In an uncertain world, where all we know for sure is that nothing is sure, we are going to need organizations that are continually renewing themselves, reinventing themselves, reinvigorating themselves. These are the learning organizations, the ones with the learning habit. Without the habit of learning, they will not dream the dream, let alone have any hope of managing it. (p. 45)

The concept of the learning organization is grounded in the five" learning disciplines -- lifelong programs of study and practice" expounded by Senge (1990):

- Personal mastery -- learning to expand our personal capacity to create the results we most desire, and creating an organizational environment which encourages all its members to develop themselves toward the goals and purposes they choose.
- Mental models -- reflecting upon, continually clarifying, and improving our internal pictures of the world, and seeing how they shape our actions and decisions.
- Shared vision -- building a sense of commitment in a group, by developing shared images of the future we seek to create, and the principles and guiding practices by which we hope to get there.

- Team learning -- transforming conversational and collective thinking skills, so that groups of people can reliably develop intelligence and ability greater than the sum of individual members' talents.
- Systems thinking -- a way of thinking about, and a language for describing and understanding, the forces and interrelationships that shape the behaviour of systems. This discipline helps us to see how to change systems more effectively, and to act more in tune with the larger processes of the natural and economic world. (Senge, Roberts, Ross, Smith, & Kleiner, 1994, p.6)

Empirical research (Brown & Sheppard, in press; Leithwood, Dart, Jantzi, & Steinbach, 1993) has convinced us that in schools as learning organizations all educators must function both as members of teams engaged in organizational learning and also as leaders of leaders. The success of such a shift in the teachers' role (from an individualistic approach to active engagement in collaborative models of leadership which will require continued learning) is dependent upon teachers assuming a professional leadership role. In such a redefined role, teachers must have a critical professional knowledge such as knowledge of child development, and multiple teaching and assessment strategies; they must also develop norms of collaboration and continuous improvement. Stoll and Fink (1996) note that "Many teachers and others say they do not want to 'be developed'. In other words they are not looking for other people to be responsible for their learning" (p. 164). In a learning organization, "ultimately everyone, supported by colleagues, is responsible for their own learning" (p. 164). **Alternative Staff Development Formats**

While professional development is inherent within a learning organization, the shift in professional development formats that must occur in such an organization will represent a "paradigm shift" (Sparks, 1996). Such a shift requires that we move away from the era when professional development usually meant either a presentation by an outside consultant or a "one-shot" inservice day. Professional development will be based on "three powerful ideas that are currently altering the shape of [our] schools" (Sparks, 1994, p. 26): results-driven education, systems thinking, and constructivism. As a consequence of results-driven education, the goal of staff development must be directed at student outcomes. As educators begin to recognize the interconnectedness of all parts of the system, staff development must not be approached in a piecemeal manner. And if educators accept the constructivist assumption that knowledge is constructed in one's mind, rather than simply transmitted from one person to another, then:

Constructivist teaching will be best learned through constructivist staff development. Rather than receiving 'knowledge' from 'experts' in training sessions, teachers and administrators will collaborate with peers, researchers, and their own students to make sense of the teaching/learning process in their own contexts. (Sparks, 1994, p. 27)

Among the most important of the shifts that must occur are:
 an increased focus on both organizational and individual development;
 staff development efforts driven by clear and coherent strategic plans;
 a greater focus on student needs and learning outcomes;
 an inquiry approach to the study of the teaching/learning process by teachers; an

inclusion of both generic and content specific pedagogical skills; and greater recognition that staff development is an essential and indispensable part of the reform process. (Sparks, 1996, p.260)

In an extensive review of models of professional development, Sparks and Loucks-Horsley (1989) identified five models of professional development that revealed movement towards constructivist staff development:

- *Individually-guided.* Teachers plan for and pursue activities they believe will promote their own learning.
- *Observation/assessment.* Opportunities are provided for classroom observation by a peer or other observer. This provides teachers with objective data and feedback regarding their classroom performance.
- *Involvement in A Development/improvement Process.* Teachers engage in developing curriculum, designing programs, or engaging in a school improvement process to solve general or particular problems.
- *Training.* Teachers attend sessions to acquire knowledge or skills through appropriate individual or group instruction (May be synonymous with professional development in the minds of many educators)
- *Inquiry.* Teachers identify an area of instructional interest, collect data, and make changes in their instruction based on an interpretation of those data. An example is action research.

Although the potential is there to incorporate Sparks' (1995) ideas on results-driven education and systems thinking, they are implicit and not at all emphasized. More recently, Glickman et al. (1995) identify a variety of new formats for staff development which have emerged over the last several years. Some examples follow:

- *Mentoring programs:* An experienced teacher is assigned to a novice for the purpose of providing individualized, ongoing professional support.
- *Skill-development programs:* This consists of several workshops over a period of months, and classroom coaching between workshops to assist teachers to transfer new skills to their daily teaching.
- *Teacher centers:* Teachers can meet at a central location to engage in professional dialogue, develop skills, plan innovations, and gather or create instructional materials.
- *Teacher institutes:* Teachers participate in intensive learning experiences on single, complex topics over a period of consecutive days or weeks.
- *Collegial support groups:* Teachers within the same school engage in group inquiry, address common problems, jointly implement instructional innovations, and provide mutual support.
- *Networks:* Teachers from different schools share information, concerns, and accomplishments and engage in common learning through computer links, newsletters, fax machines, and occasional seminars and conferences.
- *Teacher leadership:* Teachers participate in leadership preparation programs and assist other teachers by assuming one or more leadership roles (workshop presenter, cooperating teacher, mentor, expert coach, instructional team leader, curriculum developer). The teacher-leader not

only assists other teachers but also experiences professional growth as a result of being involved in leadership activities.

- *Teacher as writer*: This increasingly popular format has teachers reflect on and write about their students, teaching, and professional growth. Such writing can be in the form of private journals, essays, or reaction papers to share with colleagues, or formal articles for publication in educational journals
- *Individually planned staff development*: Teachers set individual goals and objectives, plan and carry out activities, and assess results.
- *Partnerships*: Partnerships between schools and universities or businesses, in which both partners are considered equal, have mutual rights and responsibilities, make contributions, and receive benefits. Such partnerships could involve one or more of the previously described formats. (p. 340)

In these formats too, the emphasis is on teachers having opportunities to learn, but there is no mention of linking professional development and student outcomes. Again, as with the earlier five models identified by Sparks and Loucks-Horsley (1989), there is the potential for systems thinking, particularly through networks and partnerships, but the emphasis is on the use of these formats in order to provide opportunities for teachers to learn rather than on the need to integrate the parts into the whole, or to see the big picture. The concept of the school as a learning organization allows better integration of the various components of professional development and incorporates Sparks' three powerful ideas of results-driven education, systems thinking, and constructivism, noted above. The Learning Organization Project is an example of how it was developed in one school district.

One Example of Professional Development in Schools as Learning Organizations

Two researcher at the Faculty of Education, a school district, and several schools have developed a partnership in research and development and engaged in an Organizational Learning Project. The objective is to collaborate to develop the district and the schools as learning organizations and to thereby enhance the level of student learning (Sheppard & Brown, 1996a).

As part of this project, the university researchers play the role of "critical friends" and the school staffs assume a critical-reflective role which actively involves them in the research process (Lieberman, 1995, p.3). A "critical friend" is "a trusted person who asks provocative questions, provides data to be examined through another lens, and offers critique of a person's work as a friend. A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working toward. The friend is an advocate for the success of that work" (Costa & Kallick, 1993). The staff provides the closeness necessary for greater depth of understanding of practice, whereas, the university researchers are more able to distance themselves in interpreting what is happening. The district and schools get the support of two critical friends who help with data collection and analysis, collaborate in change initiatives, assist in specific professional development activities, and share current theory. The faculty researchers gain access to schools

and the district for research, access to data, and access to practitioners as action researchers.

In all participating schools, a leadership institute was provided for school leadership teams at the beginning of the project (Sheppard & Brown, 1996a). Following the institute, on-going support has been provided to leadership teams in each school through both a district support network and the faculty researchers. The Learning Organization Project is consistent with the conceptual framework of the learning organization. It accepts Sparks' (1996) contention that "to become learning organizations schools must engage in organizational development activities...based on continual data collection, analysis, and feedback, focusing on the development of groups and individuals to improve group functioning" (p. 262). Schools who are participating in the project must therefore engage in action research which requires ongoing research on student outcomes, school culture, leadership, professional learning, and classroom practices. In this action research process, they gather and use new information to assess, plan, implement, and evaluate in a continuous learning cycle. Additionally, to assist in the implementation and evaluation components of the cycle, all schools are provided with a problem-solving implementation tool, in the form of a district framework for implementation, based on current principles of change theory (Sheppard & Brown, 1996b).

How is this different than past efforts?

The Learning Organization Project builds on the strengths within the district, particularly the work begun in school improvement and the expertise in the district office. However, it is a different model for professional development in that it:

- recognizes that implementation is a process that occurs at the school level and requires ongoing support for teachers and administrators;
- engages professionals in both theory application and theory building at the same time -- teachers and administrators construct new meaning;
- focuses on classroom issues and challenges traditional approaches to teaching and learning;
- is driven by research and particularly student outcomes;
- recognizes that training is but one component of professional development;
- represents a global, comprehensive approach to professional development that requires new images of leadership and school organization -- team leadership and professional learning;
- provides a role for "insiders" and "outsiders" that is understood by all and which facilitates systems thinking;
- requires that teacher and principal supervision practices be tied to professional development in a meaningful way.

Results of the Learning Organization Project

After only one year in one school, a comprehensive analysis (teacher surveys, observations and interviews) of this approach to school growth and professional development revealed remarkable success relative to both teacher growth and changes in the classroom practices (Sheppard & Brown, 1996b). This rural Newfoundland high school had been engaged in school improvement initiatives for a number of years, but had witnessed a steady decline: Student attitudes toward school were generally poor, enrolment in advanced classes were quite low, mathematics scores were lower than the provincial average, student behavior was problematic, and classroom practices were primarily large-group and teacher-directed. The following comment by one teacher is indicative of the professional growth that occurred in the school after adopting the new approach:

It has led to the professional growth of the staff; it has created an air of excitement that did not previously exist ... it has brought about collaboration among staff members; it has ensured a more concrete connection between the school and district office; and has given a focus to professional development efforts. (p.5)

Another comment reveals the changes in classroom practices that are occurring within the context of this emerging model:

I find it quite difficult to put a percentage on the number of teachers using cooperative learning, but what I can tell you is that there is enough use to make me feel uncomfortable about my limited amount of use. It is forcing me to get serious about cooperative learning as a practice that can improve my teaching. (p.4)

Similar findings were revealed in another study (MacDonald, 1997) of an urban elementary school with a staff of 24 teachers, most of whom were mid-career and beyond . Like the school described above, this school had been engaged in school improvement within a learning organization framework for a period of one year. Results of this study revealed that it led to renewed staff emphasis on seeking a better education for all students through teacher leadership and collaborative decision-making. One teacher commented that the new approach contributed to readiness for innovation:

You have to always be looking for ways to improve yourself and be ready for any new programs, technologies, and ideas. This process readies the school by looking for new ideas, getting parent and student input to provide the best school environment. (p.68)

Another stated that efforts at the development of a learning organization in the school led to improved teacher efficacy:

I feel the leadership team has made a big difference. Being on the team made me feel that I was truly a part of hashing out what we were going to do and deciding if it was worthwhile to take back to everyone. I really felt that I was a big part of the staff this year, more so than before. Everything has become better this year, even our discipline. We are all

more in consensus than previously. We tried to let everyone in on everything before, but we have really made a conscious effort this year. (p. 69)

In respect to decision-making, a mid-career teacher that had spent most of her career in this school noted a dramatic change:

Our principal brought her personal experiences to her role but over the year this position, I think, has changed dramatically. Now there is less authoritarianism and less decision-making centred in the office.... (p. 71)

Findings from a district wide study conducted at the end of the second year of the learning organization project revealed that the new model of professional development provided the methods and tools that facilitated the exploration of new ideas (Sheppard & Brown, 1996a). These new ideas resulted in changes in the traditional structures, and over time began to change aspirations, skills and capabilities, attitudes, and beliefs. These changes illustrate the claim of Senge et al. (1994) that such "surface movements" lead to change that really matters.

Finally, in addition to the findings reported above that support this as a viable model of professional growth in schools and school districts, results reveal that the following must be considered if this model is to be most effective:

- School Team leadership appears to work best when the principal is recognized as a significant source of leadership as well.
- Leadership is often perceived as administration. If professional development is to occur from a constructivist perspective, it is essential that new images of leadership be developed throughout all levels of the system.
- A desire on the part of senior administrators to shift from an "expert" model to a "constructivist" model of professional development is not readily accepted and may be viewed with some suspicion by other educators throughout the system.
- Institutes directed at team leadership training must include the presentation of methods and tools that assist in the application of theory and must allow practice time in their use.
- On-going support and follow-up with high expectations for change in professional development approaches are essential.
- Administrative structures which limit teacher flexibility, and inhibit collaboration and team planning can be major obstacles to the development of newer models of professional development that are consistent with the continuous learning cycle of a learning organization.
- Student outcomes must drive the entire process.

Conclusion

If educators are to accept the lessons related to professional development presented herein, they must be committed to both individual and organizational learning. While it is clear that individuals can learn without any contribution from the

organization, it is also apparent that learning can be helped or hindered by the organization. Additionally, because schools are human endeavours, it makes intuitive sense that organizational learning will not occur unless individuals are learning. This interactive model of learning in which individuals and the organization are interdependent requires a new constructivist approach to professional development that has its foundation in research and theory. Also, it requires systems thinking and a focus on student outcomes. Our current mental images of professional development must be challenged, and new images must be constructed in order for our schools to become centres of continuous learning that will serve our students in the new millennium.

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NOTES

1. The headings are direct quotations from Fullan's "Eight Basic Lessons of the New Paradigm of Change" (pp.21-40). The descriptions are extracts from and summaries of the main ideas.
2. The headings are taken directly from Guskey, 1994, pp. 44-46, but the discussion summarizes the main ideas of Guskey, and integrates ideas from Fullan (1993) and Stoll & Fink (1996).

COLLABORATIVE RESEARCH AND THE VOICES OF SECONDED TEACHERS AS INTERNSHIP SUPERVISORS*

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Introduction

The purpose of this paper is to describe ongoing collaborative research concerning the internship program at the Faculty of Education, Memorial University. In particular, we wish to focus on one aspect of this research involving seconded teachers who supervise interns. This research is done within the context of educational reform in the province generally and of the development of various delivery models for the internship program within the Faculty of Education specifically.

An underlying premise of this paper is that the teacher internship experience, as one component of the teacher education program, can be examined within the framework of an interdisciplinary education team development process. We believe there are a myriad of issues related to this conceptual framework and process that can inform the development and implementation of an internship program. Teacher internship programs are constantly changing in response to new developments in educational methods and research, as well as to new instructional and developmental models. Therefore, the focus of this paper is on the emergent values of team interdependence and collaboration as they relate to our efforts in developing a Reflective and Critical Internship Program: The RCIP Model (See Figure 1). At this stage of our work, we are attempting to test the efficacy of this model in the field. Specifically, our aim is to explore more fully the potential of the RCIP Model to resocialize students, cooperative teachers, supervisors and school personnel into the norms of interdisciplinary team-work. Hence, we are interested in issues relevant to the formation and continuation of an interdisciplinary and collaborative service and/or research team.

This paper makes no attempt to classify the numerous issues related to the conceptual framework for interdisciplinary education, interdependence and collaboration. Instead, the paper is organized in the following way. First, we review selected literature on collaborative action research as well as selected conceptual, theoretical, and practical approaches to the development of interdisciplinary teams. This type of work is being done in health care fields to achieve comprehensive and coordinated geriatric care by bringing professionals in many disciplines to work collaboratively. As Toner, Miller and Gurland (1994) have pointed out, "the structure for this collaboration is often the interdisciplinary team, and the collaboration itself is called interdisciplinary team-work" (p. 53). Secondly, we briefly describe our own involvement in collaborative and interdisciplinary action research (Doyle, Kennedy, Ludlow, Rose and Singh, 1994). Thirdly, we highlight one aspect of this research as it relates to issues surrounding seconded teachers as university supervisors. The voices of these seconded teachers point to the complexity of the internship program

as well as to the need for the development of collaborative research models as part of ongoing development and delivery of the internship program.

Collaborative Action Research

Collaborative action research has been conceptualized and practiced in different forms (Sagor, 1992; Calhoun, 1994). This section reviews ideas from selected research which informs our view of collaborative action research in the field of education.

As Oja and Smulyan (1989) have pointed out, action research (a term first used in the 1940s by Kurt Lewin), has recently emerged as a method which addresses both researchers' needs for school-based study and teachers' desires to be involved in more effective staff development. Both university researchers and teachers were looking for an alternative to linear models of research and development in which theory and practice remained unrelated to, and therefore unaffected by, one another: "The participation of both teachers and researchers on an action research team was expected to lead to a connection between theory and practice through which theory would be enriched and practice improved" (pp. 203-204).

This research methodology suggests that participants who take part in the research process be involved from the very beginning in the planning, implementation and analysis of the research and that each participant should contribute his or her unique expertise and unique perspective to the research process. It suggests also that participants recognize that the purpose and value of collaborative research is to learn about those actions which would improve one's school or classroom. We relate to this particular approach because it encourages us to work with school-based educators and continue the development of a reflective and critical internship program. Further to this, such an approach may well improve communication and collaboration between various educational personnel and institutions. This in turn will allow all of us to be actively involved in ongoing educational and reform agendas.

According to Oja & Smulyan (1989), action researchers have realized that "it may be difficult to produce traditional educational theory and change classrooms or school practices all within the same project. However, the two goals are not mutually exclusive, but they may be difficult to achieve simultaneously. Perhaps some of the difficulty lies in our approach to educational theory" (p. 205-206). They suggest that a first step in addressing the theory/practice issue may be to redefine educational theory to include teachers' understanding of the problems and practices in their classrooms and schools (Cummings and Hustler, 1986; Street, 1986). At present, as Carr and Kemmis (1986) point out, much educational theory is produced by people outside the school community who use the "straightforward application of the scientific disciplines to educational problems" (p. 124). Elliot (1985) describes this as research for products rather than understanding; Carr and Kemmis (1986) claim that it produces a body of knowledge unrelated to practical situations. Action research, in particular, offers a different kind of educational theory, one which is "grounded in the problems and perspectives of educational practice" (Carr and Kemmis, 1986, p. 122) and made up of insights, and practical methods to address their concerns. Oja and Smulyan (1989) claim that if this theory is recognized as legitimate, then action

research will be closer to meeting its goals of both improved practice and educational theory.

It is interesting to note that besides generally recognizing the power of the action research methodology to connect theory and practice, many researchers in this area have sought alternative ways of evaluating the outcomes of collaborative research. For example, Kemmis (1980) points out one potential outcome regarding the development of critical communities of practitioners:

Preliminary analysis suggests that the theoretical prospects for action research are only moderate, if 'theoretical' payoff is measured in terms of the literature of educational researchers...If the theoretical payoff is defined in terms of the development of critical communities of practitioners, then the results are more encouraging. (p. 13)

In our own efforts to develop the RCIP model, we have sought to develop critical communities of practitioners through working collaboratively with cooperating teachers, teacher interns and university-based supervisors. We have attempted to incorporate their understanding of the problems and practices in their schools in our analysis of the educational practices in Newfoundland and Labrador. Our focus has been on encouraging teacher interns, cooperating teachers and university supervisors to participate in the reflective and critical process in order to build a more effective internship program in the Faculty of Education at Memorial University. For the purpose of this paper, we will highlight some of the reflective and critical processes involving seconded teachers as they work as university internship supervisors.

Collaborative Interdisciplinary Team Building

Researchers in the health care area (DePoy & Gallagher, 1990; Hagle et al., 1987; Sweeny, Gulino, Lora & Small, 1987; Whitney, 1990) have defined team work as an indepth cooperative effort in which experts from diverse disciplines, clinical experiences, or settings work together to contribute to the study of a problem. In effective collaborative teams, experts from the same or different disciplines are linked together in such a way that they build on each other's strengths, backgrounds, and experiences and together develop an integrative approach to resolve a research or educational problem. This integrative approach enhances the capabilities of members of the team to examine and understand issues from many perspectives and develop innovative solutions to the multiple and complex health issues of older persons (Kapp, 1987; Selikson & Guzik, 1986).

Many people have come to recognize the benefits of, and need for, collaboration. However, researchers show that the structure of many educational institutions may not facilitate cooperative approaches to research, education, and service. According to Gitlin, Lyons & Kolodner (1994), this is so because "traditional educational models tend to foster individualism and competitiveness and create a gap between knowledge and development" (p. 16). Their work is based on the major key constructs of this social exchange theory: exchange, negotiation, role differentiation, and an environment of trust. In regard to exchange, for example, the theory suggests that individuals join work groups because of the benefits available to them as a result

of membership. These benefits vary greatly and may include social support, help in solving a particular problem, or professional advancement (Blau, 1964; Homans, 1961; Jacobs, 1970; Thibault & Kelly, 1959).

Gitlin et al. (1994) suggest that an individual must assess his or her willingness and ability to work cooperatively with others. Flexibility in thinking and work style, the ability to relinquish or take control in a group process, and an openness to the ideas of others are "just some of the characteristics an individual must possess in order for an environment of trust and successful collaboration to emerge" (Bergstrom et al., 1984; Singleton, Edmunds, Rapson, & Steele, 1982).

They suggest as well that "through ongoing negotiation and role differentiation in shaping the research question or educational project, a culture should emerge that promotes and rewards collaboration" (p. 25). They call this a "culture of collaboration." According to them, such a culture is characterized by an environment that supports:

- flexibility and respect for differences of opinion;
- mutual trust, respect, and cooperation;
- open, relaxed communication;
- conflict and disagreement centred around ideas rather than personalities and people;
- decisions derived through consensus; and
- clearly defined and agreed upon tasks (McGregor, 1960, p. 26).

The collaborative learning approach to education focuses on the importance of community, not individualism. Consequently, many new collaborative learning models and methods have been developed and a variety of challenges have emerged. Frameworks such as role theory and role conflict (McKenna, 1981), cognitive maps (Petrie, 1976), models of professional functioning (Qualls, & Czirr, 1988), and small group dynamics (Kane, 1975) have been developed for understanding these challenges.

Toner et al., (1994) state that "self-education in the interdisciplinary team setting is best achieved in an environment that is informal, encourages face-to-face interaction among members, and uses a structure that is determined by consensus" (p. 57). Further "the purpose ... is to improve communication and facilitate more effective interdisciplinary team relations. Team members are most often not strangers to one another. They share a history as staff at their work site and bring to the team meetings their perceptions of that history. In fact, the team members' perceptions of their shared history are bound to influence their actions and interactions in the team. The team members also come in contact with one another outside the team meetings, and the team facilitators are most often totally unaware of these external interactions. Another fact to be understood is that team members are not accountable and responsible only to themselves; they are accountable to the larger group, the institution or organization. Consequently, some members arrive at team meetings with authority, power, and status. This can exert an overwhelming influence on the functioning of a team, depending on team types" (p. 58). They state also that

Although there are numerous types of teams, including unidisciplinary, intradisciplinary, multidisciplinary, interdisciplinary, and transdisciplinary (Takamura, 1983), the influence of history, power, and authority is less problematic for the well- functioning interdisciplinary team. (p. 58)

The RCIP Model: A Case in Collaborative Action Research

As mentioned earlier in this paper, collaborative action research assumes self-education and cooperative learning. The Reflective and Critical Internship (RCIP Model) also assumes that reflection is a social process and not purely an individual process. The reality is that prospective teachers, supervisors, cooperating teachers, seconded teachers and administrators are all active learners. Hence, in terms of the data we examine in this paper, we want to learn from the voices of the seconded teachers. We want to identify aspects of their particular interests, motivation and general ambitions at this stage of their professional development and careers. Our overall objective is to identify windows of opportunities and conditions that might enable us to collaborate with those in the field in building interdisciplinary teams for the development and delivery of a reflective and critical internship experience, as one aspect of the teacher education program.

As part of our effort to build interdisciplinary teams, we were required to develop an environment of trust and respect so that various participants involved could feel safe to voice their concerns. We knew that participants bring their own histories and specific concerns to the interactive settings, and that incentive to participate in team-work varies from participant to participant and is, of course, connected to their past experiences. Also the participants' willingness to participate in interdisciplinary team work is very much dependent upon the structure of the institutions in which they work, the stage of their career development , and their future plans as individuals and professionals. These and other factors influence participants ' willingness to relearn new roles in order to become team players.

In the long run, the RCIP Model aspires to engage in the development of critical communities of practitioners. Given the changing nature of the delivery of the internship program in the Faculty of Education, it is envisioned that such communities would be developed through the building of interdisciplinary teams in various school districts and regions. The role of collaborative interdisciplinary teams would be to reflect on, and deal critically with, current issues and dilemmas faced by teacher interns, and those who work with them, during the internship period. The overall goal is for all participants involved with the delivery of an effective, reflective and critical component of internship programs in teacher education in this province to be engaged in both individual and collective professional development. For example, interdisciplinary and collaborative team work may improve conditions in which teacher interns work by improving the teachers' work place in general. It is within this context that we now describe our efforts to build an interdisciplinary team in the Faculty of Education.

On the Nature of Doing Reflective Interdisciplinary Team-work in the Faculty of Education

As an interdisciplinary research team, we realized from the beginning that it would be unrealistic to think that our work could be carried out in any meaningful way without others, i.e., we needed external collaboration. We invited cooperating teachers, seconded teachers, interns, administrators and our colleagues in the faculty, whose responsibility it was to deliver the internship program, to participate in this project. We never underestimated the fact that each category of people brought its own cultural capital to the internship program and had much knowledge to offer about the culture of schools. Our own orientation was to establish reflective sites in which we could share, dialogue, listen to others, examine what they had to say, and ultimately learn from their experiences. We realized that respecting others' local theorizing, and genuinely trusting their insights about the complex nature of schooling, were the key factors in establishing good communication and working relationships.

One of our focus areas was to specifically work with seconded teachers. To this end, we contacted twelve seconded teachers and discussed our intention to build a Reflective and Critical Internship Program in the Faculty of Education. They cooperated with us by consenting to let us interview them in depth regarding their reflections and perceptions about the internship program based on their own perceptions about, and experience in, the Newfoundland school system. Each interview lasted approximately two hours. In the informal setting of our offices or theirs, we explored issues pertaining to their roles and experiences as internship supervisors. We recorded their responses and made extensive notes. Our purpose was to sensitize ourselves about how seconded teachers analyzed dominant practices and discourses concerning not only the internship program, but also the larger issues of teacher education. We learned how each of us, through the process of dialogue, questioning and reflection, was able to add a critical aspect to our respective involvements with the internship program.

Another way we attempted to make the internship critical was to function as cultural workers. We tried to insert in the ongoing conversations our own concerns about the difference between teacher education and teacher training. We saw the internship program as a site not only for learning classroom management techniques, although we fully realized the fact that these techniques formed the overriding concern of many teacher interns and seconded teachers. We asserted that pedagogy was a form of cultural and political production rather than simply a transmission of knowledge and skills. Part of our intention was to share with others our understanding of pedagogy. We wanted to share how pedagogy helped all of us to recognize our own relationships with each other and our environment. How else could we establish working, collaborative relationships with all those involved in teacher education in this province? How else could we understand the relationship between schooling, education, and the dynamics of social power? How else could we understand the consistencies or inconsistencies between what we say and do? How else could we understand what we agree to exclude or include? How else could we accept the authority of some experts and deny that of others? How else could we accept the privileging or legitimizing of one form of vision about the future of this province over another?

Yet another way we attempted to insert a critical aspect towards building the Reflective and Critical Internship Program was to encourage others at the interview sites to produce local knowledge and a language of possibility through the process of local theorizing. Our interviews with the seconded teachers, the cooperating teachers, and the teacher interns are filled with local theorizing on various aspects of the complex nature of schooling and classrooms. Learning to conceptualize one's own everyday life experiences in one's own voice is a step toward becoming a reflective and critical person. Recognizing that one has the ability, the linguistic resources, and above all, the courage and confidence to theorize, is another step in opening windows of possibility.

Our transcribed material revealed to us that, to an extent, we were successful in creating safe spaces for the participants who were then able to create a language of possibility for themselves and others. This form of practice enabled participants to create sites where they could imagine the possibility of achieving their desires and fulfilling their wishes. The seconded teachers, for example, saw the Reflective and Critical Internship Program as a site where they could genuinely contribute to the advancement of teacher education in this province. These experienced teachers could see their roles and visualize structural changes that could be brought about in the existing educational system so as to build bridges between teachers in schools and professors at the Faculty of Education... bridges that could lead to a stronger linking of theory and practice. Specifics of these ideas can be found through the voices of seconded teachers.

We also involved the cooperating teachers in these mini-reflective sites. Inviting the cooperating teachers to share extensive notes on teacher interns, we opened ourselves to the critique of the practising cooperating teachers. How else could we find out what the practising classroom teachers bring to the internship? In our orientation seminars, and in reading the literature in the area of teacher education, we heard repeatedly that university-based supervisors often have little knowledge of real classroom situations and that what they often have to offer as advice is too theoretical. We compared and contrasted our notes, recognizing and respecting each other's situational authority as experts at different levels of the schooling process. The teacher interns and their cooperating teachers also compared and contrasted their notes separately. Then at the mini-reflective sites, we entered into the reflection process. Our intention was to accord recognition to the different voices, privileging each of them in their own authentic ways.

Besides creating the mini-reflective sites in the school settings, we created other sites for reflection in the Faculty of Education, e.g., group sessions with interns and supervisors. We saw these reflective sessions as sites away from school routines. The main purpose for using the group setting was to create a site and opportunity where the teacher interns could voice their experiences of the internship, reflect together on those experiences, and also share their experiences with others at different levels of reflectiveness. We conceptualized the reflective sessions as being sites in which we would be enabled to practise reflection-in-action. These reflective sessions have since become a regular feature of the internship program in the faculty.

The Voices of the Seconded Teachers

In this section we describe the results of one of the areas from our research with the Internship Program. In our reflective sessions with seconded teachers as supervisors (ST's) and cooperating teachers (CT's), we focused primarily on listening to their assessment of the unfolding nature of teacher education generally and the teacher internship program in this province specifically. We now share some of their ideas and concerns about these areas.

It is clear from data collected that the supervising teachers and cooperating teachers perceive the internship experience to be a significant element in the professional and personal development of all parties involved in teacher education. Following is typical of the statements ST's and CT's have made in their interviews:

I think it's invaluable to any intern to get some practical experience before they launch off on their own careers on their own. Because they do develop some idea of what it takes to plan and I mean what it takes to deal with classroom management, what it takes to deliver a lesson, what it takes to evaluate homework and to evaluate exams and so on. This is all practical experience and the advantage of doing it through an internship is that if they make mistakes there's two or three people available to help bail them out...There's the cooperating teacher and there's the university supervisor. (D-35)

Generally, these teachers recognize their contribution to the continuing development of the internship program. For example, this seconded teacher said:

Well, I think the internship programme is definitely one of the most important things that students do in becoming teachers... I worked on this last year with six teachers and at that time, we did really put a lot of thought into how we felt the internship programme could be developed, you know, in the way that it would suit the schools and the teachers and the interns best. (M-1)

The seconded teachers' perception of their role in the internship process is a very positive one. They believe strongly that they have something very special to offer, i.e., the skills and competencies which the university-based professor/supervisors and the cooperative teachers, may not be able to offer. They believe they bring a unique perspectives from teaching experiences in the school system. The following quote from ST's typically represent this type of perception held by them:

I think the very nature of the two experiences [teacher vs. professor] makes the difference and I'm going to say that my view is that the active teacher who is seconded, to be a supervisor might have the edge over the university professor who hasn't been in the classroom situation for some time. I feel very strongly about that as a matter of fact. (D-4-5)

The ST's claim also they have a sense of classroom realities which the university professors and interns do not seem to have. Following are some typical

statements made by the ST's during the reflective interviews we conducted with them:

I think they [seconded teachers] have acquired a lot of insights through their experience. And the experience is not just contained, or limited to a school. Many of us have been on Department of Education meetings or committees and many NTA committees and special interest councils... I've given conferences, I've been involved in curriculum development. These are all the things that you do that are sort of high - level things, and yet at the same time you've got to learn how to deal with the menial tasks of everyday life within the school. (P-29)

These [seconded teachers] are the people who know where it is at. These are people who are not at arm's lengths from the education of children in whatever level you're talking about. They haven't been distanced from it and therefore they know exactly what you talk about when you talk about the stress of having somebody in your class who may be a behaviour problem, you know. (A-5-6)

The ST's also believe their relationship with school-based cooperating teachers can be more objective than the relationship between cooperating teacher, university professors and interns. They feel their ability to be objective enables them to reduce the tension that often exists between cooperating teachers and teacher interns. The belief of ST's is that, in many cases, both teacher interns and cooperating teachers prefer supervisory involvement by the ST's over that of university professors.

The ST's also attach some degree of status, prestige and pride to the position of seconded teacher as university supervisor. They seem to view this position located somewhere between the cooperating teachers who are still in the classroom and the university-based supervisors who are structurally located at in Faculty of Education, Memorial University. To summarize briefly, they seem to believe they were selected as internship supervisors because in the eyes of their school boards they were the most effective teachers, a "model" or "master teacher", in terms of personal and professional abilities and competencies. They were the best suited teachers to carry out the role of supervising interns at the University level. They also felt ethically responsible to correct what they perceive to be weakness in the pre-service programs offered to students in the Faculty of Education. Following are typical statements by ST's conveying this type of perception:

It's nice to be recognized for your contribution and they can say a2T they can look at you and say you're good, you're a very effective teacher. You've been involved in many aspects of with our board and we're, here's a little bonus for you... We're giving you four months in at the university. Again the staff looks at it ...as status to know that you're going in there, you've gotten this opportunity, you're working at the university. All these things mean a lot to other people on staff. (P-3 2)
It gave me some recognition... to the extent that other people asked my advice on different things that came up within the school and that sort of thing. Well right now the seconded teacher and the university supervisor are playing the same role basically. (C-4-5)

In this role of supervisor, you have more autonomy as compared to in the schools... You probably would not be looked up as closely and watched... You have been given this intern because you are perceived as being a good role model and so on. (J-18 -19)

The ST's envision a valuable role for experienced teachers in the internship program. They believe recent initiatives surrounding current educational reform in this province can provide new vistas or windows of opportunity for creating new roles for school-based experienced teachers. However, throughout the interviews, they have addressed a number of issues that underscore the complexity of their potential involvement in the internship program as supervisors. These include the selection process, teacher evaluation, defining a good or master teacher, and ongoing professional development.

Regarding the selection and acceptability of seconded teachers as university supervisors, the following claim was made:

I'm going to assume that when a teacher is seconded to become supervisor of interns that he has been selected very carefully and that he's reputable... when the seconded teacher comes to somebody else's school with an intern there's no question if he comes to them, with a poor reputation that precedes him, I don't think he's going to be well accepted. Well let's assume a good reputation precedes or no reputation at all and he's given the benefit of the doubt. My experience is then that he is accepted quite readily. They seem to like the idea that, "Oh, here's an active teacher, somebody who just got pulled out of the classroom to do this job, coming in now to watch this intern as he attempts to become an active teacher. (D-8-9)

So do I want my effectiveness...as a teacher evaluated? Who do I want to be evaluated by...who do I feel is suitable to evaluate me? I don't know. I've had real problems with that. (M-21)

In relation to defining a good or master teacher, these comments were made:

So what I perceive as being a good model for supervising internship programs is to have the school board identify so called master teachers, teachers who have shown effectiveness in the classroom, who have good classroom management skills and just seem to be able to deal effectively with the students and with the teachers in the school because it's all part of the whole dynamics of what goes on. And it's part I feel of being a master teacher, not only being able to get along with your students but , you know, to be an active part of the whole school system. So you have your school board identify your so called master teachers, teachers who are effective in many aspects. (C-1)

I would suggest that if you asked six people for a description of a good teacher you might get six different things. And then I might suggest that the good teacher might fit into all six categories. He might be all six of

these. I'm not sure if you know when you ask an individual what does a good teacher do, if they listed down all of the characteristics of the good teacher. If each of the staff members and let's suppose there were ten staff members involved, and if they listed all of the characteristics of good teacher then I believe you would have some common things but if you asked them for one or two, you might find that they'd all give you different ones. I think there is, there is some consensus. (D-11-14)

Some seconded teachers envisioned that their experience gained through the role of ST's would have an impact on their future practice and ongoing professional development. These comments reflect some of their ideas in this regard:

I'm going back to a classroom when I finish this job in April, and I'm going back with some good ideas. I'm going back with some new combinations of pieces of literature that I have never put together before, some new insights... I think I'm going back a little bit revived. I believe, too, when the school board selected me, or when my principal selected me, they may have had that in mind. It's not exactly been retraining, but I think it has been a source of revitalization and so it's been good for me, as I hope it's been good for my interns. (D-28-29).

Seconded teachers are aware of the dialectical relationships between university supervisors, cooperating teachers and interns. Such an awareness is an essential component of effective collaborative and team-work. This seconded teacher states:

Now, cooperating teachers are sometimes very hesitant because that they don't feel comfortable in telling the intern that they think what they were doing was really wrong or really shouldn't have been done... It's almost like a buddy relationship develops between them, between the cooperating teacher and the intern whereas I have no difficulty... So I think the supervisor has a different relationship with the intern in that it's not this buddy-colleague thing that's going on between the intern and the cooperating teacher. So I think that we, coming in from the university, I don't know if you could call it more of a detached relationship than they already have. (J-10-11)

We have a hands-off policy. It wouldn't be professionally ethical to approach you and say, excuse me, have you ever thought about... We very much respect the autonomy of teachers in their classrooms with their students, and I think sometimes that carries over in our relationships with teacher/interns. We find it easy to praise the strengths. We find it very difficult, somehow, to address the weaknesses and find ways of changing that behaviour. And sometimes that's what causes a lot of cooperating teachers stress, I think. Even as a teacher/supervisor, a teacher/intern, that's the one thing I find myself that I struggle more with. When I see a need that should be addressed, I really have to think about it a lot and try to determine what is the very best way of approaching that particular thing so that it is a positive experience. (M-10)

While the above quotations from seconded teachers are revealing, it is important to remember that these perspectives represent a limited portion of the complete data. This data are rich and, as indicated above, speak to the complexity of the internship program as well as to the challenges of working within collaborative research models.

Conclusion

In this paper we have described briefly the nature of collaborative research as it applies to our work with the internship program at the Faculty of Education. Specifically, we focussed on that part of our collaborative research efforts which involved seconded teachers as university supervisors. Data from this research informs us of some of the attitudes, perceptions, understandings, experiences, beliefs, and values that this sample of seconded teachers bring to the internship experience. This data also indicates a myriad of issues related to the nature of collaboration and team-work that can inform ongoing development of the internship program. Such data highlights the need for team interdependence and collaboration as a means to further developing a reflective and critical internship program.

As noted above, seconded teachers are fully aware of the contribution they can make to the continuing development of the internship program. Further to this, they perceive the internship experience to be a very significant aspect of their professional development. They see their involvement in a very positive light and believe they bring a unique perspective to internship supervision. These seconded teachers indicate that there is some degree of status and prestige given to the position of university internship supervisor. They see these positions as windows of opportunities for creating new roles for school-based teachers. This is very much in keeping with transformative aspects of collaborative action research as outlined by Oja and Smulyan (1989).

It is important to note that, in addition to feelings of pride generated from their involvement with internship supervision, there are also some concerns. These stem from insecurities as expressed through comments and questions about the selection process. Many seconded teachers were, in fact, unaware of how they themselves were selected to be supervisors. They note the potential for politics, as well as the realities and challenges surrounding teacher evaluation, in the selection process. However, these seconded teachers realized that the experience gained through supervising in the internship program would have a positive impact on their own teaching and professional growth.

Seconded teachers indicated to us that they are very aware of the delicate relationships between university supervisors, cooperating teachers and interns. Given the nature of these complex relationships and working arrangements, it is incumbent on those of us working in the Faculty of Education to take responsibility in building a "culture of collaboration" (Gitlin et. al, 1994) between all parties involved the development and delivery of the internship program. In this way, we can help develop critical communities of educational practitioners.

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ENDNOTES

* This paper is a shorter version of the paper we presented at the 5th Atlantic Educators' Conference, October 13-15, 1995, St. John's, Newfoundland. See, A. Singh, C. Doyle, A. Rose and W. Kennedy, Interdisciplinary Education Team Development, Collaboration and The Reflective Internship, pp. 1-76. Also, see Kennedy, W. (Bill) and Doyle, C. (1995).

TRAINING AND NETWORKS

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Introduction

The Internet is a vast yet relatively simple to use information system that has captured the attention of a growing number of training providers. Its capacity to deliver information in support of training services provides a number of advantages that benefit trainers and trainees alike. Generally users need only have a moderate level of literacy skill, access to computers with Internet capability and sufficient time to devote to the training tasks that would be presented to them. To use it effectively as a medium for planning instruction or for learning new content, a particular intuition for locating information and how to apply it to complement the content and methods typically found in training can make the experience more worthwhile. This article provides a perspective on the evolution of training and the Internet and further identifies a number of resources that are available to augment training in general.

Historical Patterns in Training

Fundamentally, all approaches to design of a training provision have included two important characteristics. Trainers have always attended to (1) required sets of specific knowledge and skill requirements and (2) basic philosophical approaches and relationship between individuals involved in the training processes. The former has largely been influenced by the many occupations from which the knowledge and skill are drawn, and which the trainee eventually hoped to enter, the latter not always as clearly recognized but most often left to instructors' discretion to fully exploit.

From evidence that formal structures existed to promote training in ancient cultures to more recent models that are typically based in the present day institutions, one can find unending support for training as mean of passing on critical levels of skill to succeeding generations of practitioners in countless occupations (Roberts, 1971 p. 22-45). Regardless of the culture or historical time period, technological capability has never been distant from a training provision and the economic and social well being of the culture. Indeed as any technological change is introduced, increased demands for advanced levels of technological capability follow as does renewed emphasis on some kind of training provision.

Historical evidence indicates as well that trainers have also long recognized that commercial interests in a region are a principal force that promotes and sustains good training. Trainers have typically embraced new technology and used dynamic relationships that exist between a trainer and a trainee to provide us with numerous training models, many of which have influenced our present training practices. Largely, these have been characterized as developed in situational contexts in response to needs as they arise and in the settings in which such needs have been

expressed. This has resulted in a myriad of procedural and philosophical patterns that almost always have had objectivism at the base of its approach (Jackson, 1992, p 76-83).

Trainers' roles have long been in guiding trainees through a specific amount of content, both theoretical and procedural. They focus on the degree to which trainees acquire the confidence, skill, and knowledge needed to be an effective practitioner in a workplace. Particular levels of skill attainment that trainees are subjected to have largely reflected the advice expressed from the field of practitioners, essentially those who would hire trainees. Evidence of quality in a training provision is drawn from observations of trainees' performance in work simulations, apprenticeships, mentoring strategies, laboratory activity, drill and practice sessions, paper tests and examinations, and surveys of employers who hire trainees. Hard-line trainers are characteristically guarded on the matter of training quality in training provisions, principally because of its implications for licensing and credential procedures that exist for occupations and the repercussions if their trainees cannot measure up to prevailing standards.

The sub-baccalaureate work force in Canada accesses training through private and public community colleges where the above pattern is characteristic. These institutions have obtained mandates to provide training and do so in response to ever-growing community needs for skillful workers. Not surprisingly training can be found available in varied and convenient locations that include college campus, industrial and business work settings, community halls, mall outlet, on the bridge of ships and in the cabins of aircraft. In more recent years advancements in technology have enabled trainers to develop provisions uniquely adapted to distance education and computer networks.

The Growing Influence of the Internet in Training

Offering network-based training appears on the surface to be a dramatic departure from previous training patterns. Yet on closer examination one can see that the recent introduction of internet based training has similarity to other patterns of training development. The provisions have appeared in response to perceived economic need; they acknowledge and exploit the latest technological advancements; they show positive potential to contribute to the general economy, and individuals who participate in the training do so with the expectation of future benefit, usually gainful employment. Needless to say, the dramatic technological change that has occurred in recent decades has stimulated optimism among trainers, principally because the advancements have catalyzed greater capability to access information and disseminate training material (Ross, 1995, p. 141-144).

It is not surprising that, to gain a foothold, many individuals turn to training that includes the use of computers (Grubb, 1996, p 229-254). From its onset the internet was recognized in the communications industry as a potent means of disseminating training material. Among trainers there were fears that an internet based program would pale in comparison to traditional methods. Initial concerns were the system would not provide sufficient evidence and guarantees that its contents and provisions would carry standards of quality comparable to traditional training practices (Negroponte, 1996, p.163-219).

These concerns have not totally subsided, and they are only partially resolved. More importantly they have been viewed as prematurely conceived and incompletely stated. For those who would design instruction for delivery on the Internet, the question of guarantees has been relatively more complex and the clear evidence that might be used to provide answers arguably inconclusive. We have come to see that asking questions more related to how to find information and present it on-line to augment proven training structures and practices is the more fruitful enterprise, one that is also more intriguing and challenging for trainers. It seeks solutions.

It is quite obvious that learners who commit themselves to on-line courses are required to have a fair degree of disciplined self-learning. For trainers this conjures up concerns over a need for quantified assurances that trainees have the requisite skills to commence the instruction and, later, that they have learned the content and are able to use it effectively in a future work role. Internet based training does not readily provide the assuring evidence in a fashion similar to what is typically available in traditional training practices. Yet the demand for assurances has been well established as the basis for obtaining a credential to practice in many occupations and this is unlikely to change.

Clearly expanding the prevailing views of what can be used as evidence that training has been received and has produced desirable outcomes is an area in which further development needs to occur. Those provisions that focus on individual responsibility with respect to acquiring technical knowledge and capability appear to have merit. Strategies that focus on individuals' responsibility to commence and consummate self-learning and then prepare and provide evidence that could be used to pass through credential barriers appear to be workable. Prior Learning Assessment (PLA) provides some of these features and there is evidence that such models can work.

Self-instructional capability is inherent in all Internet based training provisions and these can have positive effects on trainees. In an on-line article [McManus \(1995\)](#) reviewed such effects and the learner attributes associated with Internet based courses. Among these were that students were found to:

- be more interactive with each other than when engaged in other media based courses
- be using the provisions for greater open-ended intellectual pursuits
- have greater access to specialized visual and auditory capabilities
- access more diverse information sources often located at very remote locations
- engage in greater partnering, learning from other users, use of a broader range of colleagues
- be more attentive, with fascination, to interesting collections of resources and tools
- have greater access to training material at a time that is convenient and away from school or home and
- more research oriented and using a greater number of general query strategies.

These observations show that users of on-line training are not unlike the other learners who are placed in situations where acquiring power and authority over a subject matter is required. It would appear, however, that greater levels of individual confidence with on-line training lead one toward finding new ways of being together with other participants.

Notwithstanding the benefit of internet based training, there continue to be concerns. These are mainly related to whether training can be effectively deployed and used by sufficiently large numbers to warrant its costs. Typically, those accessing training on-line have concern regarding:

- their individual proficiency with using the Internet as a system
- pitfalls in getting started with the basics such as access to accounts
- inconsistencies such as slow speed and inconvenient access times
- the amount of personal skill to be intuitive and use information more aggressively when seeking solutions to problems
- relations that would be designated as assisting but more often appear to be indifferent and
- the recurring cost, a view not fully understood.

Information Sources in Support of Training

With advancements in technology new training perspectives have emerged to provide opportunity for those who would seek to use the Internet to access information in support of training. In particular, a growing number of agencies and interest groups have provided web-pages that offer useful information for trainers. They have provided information that details the nature of the training industry, expands its base of expertise, alerts trainers to available services, provides points of access regardless of geographical region, and expands access to a greater number of on-line training models for comparative viewing. The following is a selected sample of sites that have been collected to demonstrate the variety of provisions available to augment modern training or provide service to trainers. Among these are a growing number that are commercial in nature and only provide information for a fee:

- The Canadian Technology Network, [CTN](#)
- Canada [Human Resources Development](#) provides a searchable database for training who would deliver information in course detail
- The [Western Economic Diversion](#) site leads to examples of training provisions in Western Canada
- [Web Training Solutions](#) provides PCWeek review of on-line training
- [Evaluation Strategy](http://www8.zdnet.com/pcweek/reviews/ibt.html) (<http://www8.zdnet.com/pcweek/reviews/ibt.html>)
- [Inside Training Technology](#) a trainer's magazine that offers numerous tips
- [Newfoundland Council of Higher Education](#)
- [Human resource development programs](#) available from Human Development Canada
- The University of Chicago site that provides a large collection of [internet tools](#) (<http://www.uchicago.edu/inet/about.html>)
- [TCM Hotlinks](#), a human relations site that provides HR-related internet resources sorted alphabetically.

Access to Professional Literature and Research

Assess to vital information regarding what works for trainers has not been readily accessible to many training practitioners, particularly those who reside in remote locations. Today an increasing amount of professional literature that deals with training has become available on-line to assist trainers who plan for and develop training. Greater access to both quantitative and qualitative information regarding, not only the relative health of on-line training, but also the varied approaches and arguments constitute a body of content that had previously been available to a lesser number of trainers.

The following are a selected sample of characteristic on-line sources of professional literature that feature information for trainers. Among these and others are professional journals that provide a means to further expedite searching for information:

- [American Society for Training Development](#)
- [ASTD Conference](#)
- [Internet training](#) journal that reports on on-line course experience

As would be expected, the contents of on-line journals contain reviews of studies on any number of conditions, projects, views and philosophical perspectives characteristic of paper versions of education and training journals. The widening collection of on-line information sources include:

- general policy papers
- comparative examples of training provisions
- samples of student work
- views of colleagues from other nations
- means to exchange their individual perspectives
- evidence that training standards are under constant review
- access to standardized assessment procedures
- models that better describe how the internet can be used to augment traditional practices.

Research into post-secondary education is a growing area of concern for both its instructors and those who plan for human resource training. For training developers internet access to quick and easy retrieval of professional information is an expanding resource that had not previously been readily available.

Access to Assisting Information

Not unrelated to journal access and increasingly important to training planners are a number of on-line provisions that expand the amounts of assisting information trainers can use in both their conventional training programs and for those formatted for on-line users. They are among a growing number of on-line provisions that focus on individuals who have particular needs attributed to physical barriers but wish to enter, or re-enter, education and training. With an internalize perspective that all individuals can acquire and benefit from training, the sites provide information resources and point to assisting services that facilitate this cause. The group listed

below detail procedures to follow to access service in the immediate region. Other similar sites provide additional resources typically available in other Canadian provinces:

- Site provides Canadian Education Links [Nova Scotia](#)
- [Ontario](#) site for adults with physical disabilities
- [New Brunswick](#) training and support services for individuals with disabilities
- [Newfoundland and Labrador](#) Using technology to help individual with disabilities

International Perspectives

As trainers are becoming increasingly aware of competition in the training market they quickly recognize that practices and standards that exist in other locations provide a healthy basis for comparison of programs, ideas for improvement and arena for collegial exchanges. Notably, the growth in EEC (European Economic Commission) has heightened awareness of the necessity for unified training standards throughout all participating nations, but it also offers a source for information transfer. The development off [CEDEFOP](#) as a means of disseminating information about training models used by the partner nations is detailed in their link. Similarly, opportunities made available to trainers in a host of other developing nations are featured in a site made available by [UNESCO](#).

Conclusion

After a perusal of the above overview and links it becomes apparent that, in spite of its relative newness, the internet provides a means for accessing useful resources to support various training requirements. As well, it has brought to the training community an extraordinary opportunity to capture numerous example of how training continues to grow and add to our views of learning to deal with new technology. Being aware of the diverse sources of information and resources that are available to describe the relative merit of, and how to interlace, training that best responds to the many needs expressed by both employers and clients is the first step for those engaged in planning for training. If lacing present training provisions with content drawn from the vast array of resources is the present preference, critical selection of information has becomes a necessary skill for both to acquire. As trainers become skillful in developing well designed, intuitive, and user friendly Web pages in support their instructional delivery, they will invariably recognize that the process will also require constant vigilance to keep it all up-to-date and consistent with training objectives.

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RURAL EDUCATION

WHY RURAL EDUCATION?

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Imagine for a moment a developed nation which regarded its rural schools as its elite and as models to be envied and emulated by metropolitan schools. Imagine a system in which rural schools were the prime beneficiaries of educational research, the recipients of a steady stream of the nation's best educators, and the bastions of the education world's power prestige, and resources. - Jonathan Sher

Introduction

Over the past four years I have become increasingly involved in rural education studies. The rural nature of Newfoundland and Labrador presents a unique opportunity to do specialized work in this field. Sixty percent (60%) of all schools are officially classified as rural; fifty percent (50%) of the 472 schools in the province have fewer than 200 students. Sixty-five (65) of these schools have fewer than 50 students and only 14% of our schools have a student population of more than 400 (NF Department of Education Statistics, 1996). Given these numbers, perhaps, the context makes rural education studies an obligation.

In this essay I will describe how I came to be interested in rural education. I will also outline some the projects and activities that I have engaged in over the last four years as this interest has grown and developed. I will conclude the essay with some thoughts about the future direction I would like to see rural studies take in this province.

At the very beginning, I would like to say that rural communities and small schools were not obvious places of affinity for me. My personal and professional background were urban. My experiences as a student and as a high-school English teacher were in large city schools. After graduating from Memorial University with an Arts Degree (English) and an Education degree (Secondary), I began my teaching career in Corner Brook. It never occurred to me at that time to consider applying for a position in a small rural community. My places of choice were the larger centres with their larger schools. This earlier attitude of mine has served to sharpen my appreciation of one of the perennial concerns of rural district: teacher recruitment and retention.

After eleven years as a high-school English teacher, I returned to university to pursue graduate work (M.Ed.; Ph.D) in curriculum studies and drama education in Toronto. I cannot recall at any point during my undergraduate or graduate programs at Memorial or the University of Toronto (OISE) ever hearing anyone speak of small schools or rural education. To be fair, I have to say that I did not seek out such knowledge either. Why would I? Nevertheless, upon reflection, I think it is remarkable, given the rural nature of this province, the extensive rural areas in Ontario and the rest of Canada, that I completed three education degrees and never once encountered small schools or rural education as a significant topic.

I did not set out to become interested in rural education; nor was it ever suggested to me by anyone that it might be an interesting or useful area of study. I think I was a typical urbanite, or townie as we say in Newfoundland, whose knowledge of rural Newfoundland and Labrador was at best vague and at worst stereotypical. West of the "overpass" was the old fashioned, the quaint, and the past. Something I knew very little about and had even less interest in. The point I am trying to make is that nothing in my experience or education pointed me in the direction of matters rural. So I have to conclude that somehow rural education found me.

Idle Curiosity

The impulse that initiated my interest in rural education was primarily idle curiosity (not necessarily a bad reason to begin any inquiry). Somehow, I do not remember how or why, I happened on Frank Riggs' Report of the Small Schools Study Project (1987). This was in 1992. The report introduced me to a term I had never heard of before: multi-grade classrooms. As I read about these classrooms, I was both amazed and curious. I had spent all of my educational life as a teacher and a student in single grade classrooms. As a teacher for eleven years in a large city high-school, I was responsible for just one subject, English; I never had more than one grade level in my classroom. This report informed me that in small rural schools, teachers are not only responsible for many subjects but often have to teach more than one subject and grade at the same time in the one classroom. This seemed like a truly impossible teaching situation. How could one teacher be responsible for more than one grade level and have to teach as many as twenty, thirty or more subjects? How could anyone manage in such a situation?

Qualitative Inquiry

I decided I wanted to know more about these "multi-grade" classrooms. Specifically, I wanted to know how the teachers did it. From my urban, large school, single grade, I could not imagine how effective teaching and learning could possibly occur in such situations. To discover how they did it I started to plan a research study. At this point in time I was interested in multi-grading as a distinct phenomenon. I was not interested in small schools or the rural context. My intention was to conduct this study, find some straightforward answers to my methodological enquires, write a report detailing the strategies used by multi-grade teachers and move on to something else.

That was the plan. Four years later I find myself totally immersed in rural education studies and totally committed to sustaining and supporting community based small rural schools. How did this happen? How did I get from what was supposed to be a quick "how-do-you-do-it" study to where I am at today?

What happened was my intended straightforward inquiry starting to take a number of number of detours. The problem was I chose the "wrong" methodology for my intended purpose. I began my study by visiting some small schools. I spent some time in multi-grade classrooms, talking at some length to teachers about their approaches. This resulted in my original question developing into many questions. The participants in the study were quite willing to have me come to their schools and classrooms. They were quite eager to answer my questions. They were quite

delighted that someone was actually interested in what they doing. These teachers, however, were not just interested in answering my questions. They insisted in asking me a few of their own.

They wanted to know, for example, when the University was going to start preparing teachers for multi-grade classrooms. With so many small schools and multi-grade situations in the province, didn't I think that this was an issue the Faculty of Education should be addressing? Other questions they asked included: Why do the curriculum guides produced by the provincial Department of Education provide no advice or guidance as to how to implement the prescribed programs in multi-grade situations? Why is it that when we go to a professional development workshop and ask a question about how to do something in a multi-grade classroom, the presenting "expert" confesses he has no idea what we are talking about? Why were the needs of teachers and students in multi-grade classrooms and small rural schools almost totally ignored by all agencies responsible for education in the province? The teachers in the schools were willing to share with me the strategies and approaches they used in their multi-grade classrooms. I, the expert educational authority, was unable to answer their questions. More to the point, I had to confess that it never occurred to me even to ask these questions. My first rural school contacts also asked me one more question: What was I going to do with the information I was collecting? What they were really asking was: Was it my intention to use the data I was collecting to help improve their situation. They were assuming and hoping that my interest in their work was an indication of my commitment to help. I think there was an assumption on their part that somehow I cared about their situation and was interested in doing something about it. At that point in time their assumptions were mostly wrong; for the most part I was interested in my questions not their problems.

To communicate with people in person where they work and live can a dangerous thing to do. To spend an extended period of time in a school and a community with the teachers, the students and sometimes the parents is a very different research experience than gathering data at a distance. It provides people with an opportunity to elaborate on issues and to identify additional research questions. This is very different (not necessarily better) than the receiving in the mail several hundred (possibly anonymous) completed questionnaires with the appropriate boxes ticked to the predetermined set of questions.

These initial encounters with rural teachers in small schools changed the nature of my first research study and reset the course for my future work in rural education. Two things struck me very forcibly. One of these was the distinctive and inviting atmosphere of small schools. The human scale of the places, the relaxed informality, the family-like atmosphere, the style of interaction between teachers and students, were all very appealing to me. Secondly, as I talked with the teachers, and importantly the more they talked and the more I listened, increasingly, I became convinced that our system of education was not treating them in a fair or just manner. They appeared to have the most difficult of teaching situations yet they received the least help and consideration.

These initial encounters forced me to broaden the scope of the inquiry. I was still interested in the methodology issues (the how-do-you-do-it questions) but I decided to paint a more comprehensive portrait of multi-grading in the province. I

decided to document the number of multi-grade classrooms in the province and their great diversity in terms of the number of grades combined and the grade combinations that existed. Also, I was determined to provide the opportunity for multi-grade teachers to describe the challenging nature of their teaching situations. I provided them with a forum to express their frustrations and anger with the lack of attention small rural schools had generally received from the educational establishment and its leaders in the province.

The report of the study, *Learning and Teaching in Multi-grade Classrooms* was published by the Faculty of Education Publications Committee in 1993. One chapter of the report focused on methodology (my agenda); most of the contents of that report reflected the concerns that had been identified by rural teachers. The final chapter entitled "Future Directions" consisted almost entirely of their suggestions as to how the various educational agencies in the province could do a better job of preparing and supporting multi-grade teachers in our small rural schools.

From Multi-grading to Small Schools

My curiosity about multi-grade classrooms lead me necessarily to be interested in small schools. With very few exceptions, multi-grade classrooms are a feature of our smaller schools where the enrolment does not warrant the allocation of one teacher per grade as dictated by Department of Education Guidelines. It is difficult to study multi-grading without becoming aware of issues and questions related to small schools.

Interestingly, for some teachers and parents in rural communities the existence of multigrade classrooms is the least of their concerns. A more pressing issue for them is the way that existing Department of Education funding guidelines discriminate against small schools. Funding is primarily on a per pupil basis; this means the total amounts of money coming into a school depend on the number of students. Invariably, this results in small schools not having enough money for even the most basic of resources. The extra provision made by government for small schools is woefully inadequate to compensate for the built in inequality of the funding arrangements.

The nature of the workload of teachers in small schools is yet another serious issue. Teachers have responsibility for many more subjects and courses. At all levels they are required to teach often in areas in which they have little or no academic or professional background.

The first "small schools" issue that attracted my attention was school closure and consolidation. It was through my study of multi-grading that I became interested in this issue. I discovered that multi-grading has been used quite often as a weapon in school closure battles between school boards and rural communities. The existence of multi-grade classrooms or the threat of having to create them was used to convince people to agree to the elimination of schooling in their community. Parents were told that multi-grading was an inferior and outdated form of schooling. If they really cared about their children's education, they were told, they would agree to have their children bussed to another community where they could attend a larger school with single grade classrooms.

As I became more knowledgeable about multi-grading I came to the realization that these closure decisions were being made on false or misleading information. The fact is that multi-grading is a world wide phenomenon wherever there are small schools. Many people believe that having more than one age group and grade level in a classroom is a preferred approach to education. In addition, research studies generally suggest that children learn as well in a multi-grade classroom as in a single grade classroom. I began to wonder what other "facts" were being used to force people to give up something they felt so strongly about and wanted to maintain.

This "wondering" has led to the second major thrust of my research work in rural education: school closure and consolidation. I am particularly interested in community response and resistance to closure efforts on the part of school districts. I have been collecting case studies that describe how the drama of closure and consolidation has been played out in this province. In some instances, schools have been closed without protest; in others the people in rural communities have fought long and hard to save their small community schools. Sometimes the protests have been successful; most often they have failed. The beliefs and values that inform the bigger is better and the one best system ideologies are strong and deeply entrenched. Too often the views and values of rural communities are discounted and dismissed for being irrelevant. Too often their protests and appeals have been treated with contempt by those in positions of power and authority.

School closure and school consolidation are also the most current issues of concern for rural parents and teachers. I am writing this article on November 13, 1996. In two weeks time the government will release a revised Schools Act. One section of this Act will detail a revised version of school viability regulations.

These regulations will set the criteria that will be used to decide the future of small schools in this province. Earlier this year (January, 1996) the government set minimum standards for school viability in terms of grade enrolment. A k-6 school, for example, had to have at least 20 students per grade to be considered viable. Any school not meeting this standard would be labelled non-viable and targeted for closure. Under these regulations 150 rural schools became non-viable. These guidelines were successfully challenged by rural parents and educators and the government was forced to withdraw them. During September and October of this year the minister of education has toured the province conducting "public consultations hearings." People have been provided with an opportunity to provide the government with input on the issue of school viability and the related issue of school busing. Everyone now is anxiously awaiting to see what the new version of school viability will look like.

From Small Schools to Rural Education

When someone asks me now what my primary research interest is I tell them rural education. That's not to say I am no longer interested in multi-grading and small schools and the pedagogical and organizational issues associated with these topics. However, I find that Rural Education is a more inclusive term for the range and scope of issues and questions I am interested in pursuing. More importantly it situates and identifies my work within a very specific context - rural communities. I have made this change for several reasons.

The first reason is rather obvious. As I indicated at the very beginning of this paper Newfoundland and Labrador is primarily a rural province and a province of small rural schools. Thus, to be interested in small schools in Newfoundland and Labrador is to be interested in small rural schools. It is important to note that, while all but a few of our small schools are rural, not all rural schools are small. Because of many successful attempts at closure and consolidation we have a fair number of larger schools (by our standards) located in rural communities. Small schools in urban areas are not the same as small schools in rural areas. The small private school in St. John's has little in common with a school the same size located in an isolated fishing community on the south coast of the island.

A second reason for emphasizing "rural" was not so obvious to me when I began this journey. However, I am becoming convinced that it is the unique features and characteristics of the rural context that give primary definition and direction to my work. I do not think I can make a contribution to improving education in rural communities if I do not understand and appreciate the strengths and challenges associated with living in rural areas. Coming to this realization has both complicated and enriched the nature of my work. It would be simpler to ignore the context but to do so would make anything I do less valid.

I am still struggling to understand the rural context and its implications for education and schooling in Newfoundland and Labrador. Part of the challenge here is the sheer diversity of that context. In Canada rural communities are defined by default. Statistics Canada gives an urban designation to all communities with a population of 5,000 or more. All others by default are classified as rural. Newfoundland and Labrador follows this model as well. Thus, included in this general category are communities that differ quite substantially, and for research and development purposes, quite significantly, in population. Such a crude indicator gives no information about the degree of isolation or remoteness; not does it tell us anything about the infrastructure of the community or the services that might be available in the community or nearby. In terms of infrastructure one of the most important considerations is basic tele-communications connectivity.

Existing and emerging technologies are increasingly making the size and location of rural schools irrelevant to their capability of providing a broad range of course offerings. It is no longer valid to close a rural school because it cannot offer the kinds of courses available in larger schools. Hence one of the traditional perceived "problems" in rural schools now has a possible solution. However, many rural communities in this province do not have the necessary telephone lines to enable students and teachers to access the various services that are now available. Internet access is still problematic in many schools often the very ones which need it the most. There is little point in suggesting technological solutions for small rural schools if the technology assumes an infrastructure that does not exist.

I am becoming increasingly aware that the socioeconomic characteristics of rural Newfoundland and Labrador have to play a very prominent role in any investigation or discussion about educational provision and achievement. Our province is well known as the most economically depressed area of Canada. In many of our rural areas the depth of that economic depression is truly startling. Levels of unemployment exceed 70% in some instances. There are a significant number of

families who are dependent on welfare and many, many others who fit the category of the working poor. In addition the educational levels of the rural adult population is significantly lower than the national average. When we consider what we know about the relationship of factors such as these and student achievement and participation in school, the rural context of education in Newfoundland and Labrador is truly unique. To plan a curriculum and to evaluate student and school performance without taking these and other rural factors into consideration (which is what is done all the time!) is to distort terribly the educational achievement of our rural educators. In terms of educational progress and human development many of our small rural schools emerge as some of the best in the country when measured using a fair test.

Small schools may also benefit greatly from being situated in rural communities. Traditionally, rural parents and other members of the community have taken a great interest in their schools. There is much written about the special relationship that often exists between school and community in rural places. Unfortunately, this special bond between school and community is constantly under siege as government attempts to force more and more communities to give up their schools.

There is an emergent body of research data purporting to show that small schools have a positive effect on "at risk" children. The at risk factors focused on in these studies are those associated with socioeconomic factors. The conclusion of these studies is that with student populations in economically depressed regions, a small school may provide these students with their best chance of success. Given the current economic conditions in rural Newfoundland and Labrador, closing our small rural schools may be the single worst thing we could do in the name of reform. Instead of improving matters for rural students we may in fact be condemning them to failure.

The umbrella term, Rural Education, also allows me to include in my areas of interest Native Education. The Micmac, Innu, Inuit and Metis populations of this province go to school and receive their education in the rural areas of this province. These unique culture groups add to the diversity that defines and enriches the rural context.

I feel that I have only scratched the surface in my attempt to understand the contextual realities of rural schooling in Newfoundland and Labrador. Mythology, nostalgia, sentimentality, stereotypes, outdated notions, misinformation, lack of information, and urban indifference create barriers that impede the search for knowledge. One thing is crystal clear: to speak of rural Newfoundland and Labrador in generalities is to speak falsely. I have become very wary of anyone who attempts to make any general statement about rural Newfoundland or rural schools. A typical rural community simply doesn't exist.

The international field of rural education studies makes problematic all our traditional, i.e. urban, notions about education and schooling in rural communities. It suggests we need to re-think and re-evaluate whose interests are being served when centralized governments set out to improve rural schools. Historically, rural education reform has always assumed that improving rural schools meant making them more like urban schools. This has resulted in the closure and consolidation of small

community schools and various attempts to find ways of delivering an urban curriculum to rural students. Today, however, there is growing realization that rural education reform must proceed from a very different paradigm. The uniqueness of the context, the particular cultural and economic aspirations of rural citizens and the views of rural people must be the starting point for change. Perhaps, most important is the view that rural education change and improvement must, in the first interest, serve the needs of rural communities and rural children. It is rural citizens who must be the prime decision makers as to what is best for their communities and their children. The role of the rural education studies should be to provide rural communities with the knowledge they need to make their own informed decisions about education and schooling.

Ultimately, we have to come back some fundamental questions: What is the purpose of education and schooling in rural communities? Whose interests are being served by current practices and provision? Should not the primary aim be the sustaining and developing of rural communities? Some would argue that the success of rural education is measured too often in terms of how many young people choose to leave their home communities and move to the cities and towns. Intended or not the outcome of education in rural areas has seen in many instances their depopulation and eventual demise.

In the first part of this essay I have tried to trace the progress of my journey so far in becoming interested in rural education. I have tried to show that what started as idle curiosity has been transformed into a commitment to understanding and improving the provision of education for children in the rural areas of our province. In the second part I will suggest some future directions that might consider in terms of further developing rural education studies in the faculty. I will also suggest some resources and connections that that I have discovered over the past four years that may prove useful to others.

II

Centre for Studies in Rural Education

I think the time is right for the Faculty to establish a Centre for Studies in Rural Education. There are several such centres in the US and a few in Australia. There are none in Canada. Such a centre would be an important step forward for Newfoundland and Labrador. It would send a clear signal to the people of the province that the university recognizes the significant number of rural schools in the province and is committed to working on their behalf. Such a centre would provide a focus and meeting place for all those with an interest in pursuing research and development work in rural education studies. One very important role for such a centre could be to develop a data base of information about rural schools in this province which would be available to any faculty member or graduate student who wished to develop a research project in rural studies. Another function of such a centre would be the compilation of both local, national and international resources specifically related to rural education. Such sources would include both published materials and electronic links and resources. Establishing connections with rural education scholars and other rural research and development centres world wide would also be part of the proposed centre's agenda.

Newfoundland and Labrador is not unique in having a large percentage of rural schools. Other Canadian provinces and territories, many US states, many parts of the UK, especially Northern Scotland and Wales, as well as other places have similar challenges as we do. One role for the proposed centre would be to establish and maintain contacts with individual scholars and organizations in other places who have a special interest in rural education.

One such organization in North America is The National Rural Education Association (NREA). The NREA is the national organization in the United States for people interested and involved in rural education. Membership includes university teachers and researchers, rural teachers and administrators, and school board personnel and parents. This group has an annual conference and features a wide variety of presentations and forums dealing with a wide range of rural education issues. Although most of the participants are from the US, others come from Canada, Australia, and the UK. It is often claimed that small rural schools have more in common with similar schools in other contexts than they do with larger schools in their own province, state, or county. The presentations and discussions at the NREA conferences certainly confirm this. The NREA publishes one of the two main journals in rural education studies, *The Rural Educator*. (The *Journal of Research in Rural Education*, published by the University of Maine is the other.)

Last year the First National Rural Education Congress was held in Saskatoon, Saskatchewan. Organized by the SELU, College of Education, University of Saskatchewan, this was the first time that a national conference on rural education had been organized in Canada. Plans were made at this conference to create a national organization for those interested in rural education. Following the American model this organization will be open to everyone: university researchers, k-12 educators, school board personnel and parent groups and organizations. The second annual conference is scheduled again for Saskatoon in February 1997. At that time final plans will be made for organizing a national organization. Starting in 1998 the conference to be held in different parts of the country. I think it would be a good idea for that third conference to be held here in Newfoundland and Labrador. Having a Rural Education Centre in place would certainly facilitate the planning of such a conference. I have had preliminary discussions with the Minister of Education, Roger Grimes, the NLTA president Art Baggs, and Dean Piper of the Faculty of Education, MUN, about the possibility of Newfoundland and Labrador hosting this Rural Education Congress in 1998. All have expressed support for this idea.

A third group that a connection could be established with is the Small Schools Network. This is a national organization for "all those interested in small schools" and is run by John Davis of The Ontario Institute for Studies in Education (OISE) in Toronto. This group publishes a regular newsletter (the current editor is Wynanne Downer of Corner Brook) and holds an annual conference. Their next conference is being held in June 1997 here in St. John's.

The Centre for Studies in Rural Education could function as a link and connector for rural educators in this province and organizations and groups such as these and others world wide. It could facilitate contacts, promote exchanges between teachers, administrators and researchers in Newfoundland and those in other parts of the world.

Curriculum Development

I would like the Faculty to consider establishing at the graduate level a program focus or specialism in Rural Education Studies. We have the potential in this province to develop a world class program in rural education. Many of our graduate students come to us with years of experience in small and rural schools. The context provides us with a ready made laboratory for extensive field work in all discipline areas from a small and rural school perspective. There is an opportunity here that many others in similar contexts have developed to the advantage of the institution and the rural communities it serves. The most recent example I have come across is Northern College in Scotland. (Memorial University and Northern College recently signed a memorandum of agreement). Iain Maclean, the college's Director of Development, recently visited this province. One of the reasons he was here was to recruit teachers from Newfoundland and Labrador for the graduate program in rural studies offered by Northern College. Mr. Maclean informed me that Northern Scotland is very similar to Newfoundland in the number of small rural schools. Northern College has developed their rural program with these schools in mind but also with a view to marketing these programs to rural educators world wide.

The very least we should do is to continue to develop new courses that address rural issues and to include these in existing graduate and undergraduate programs. We should also continue to address the special circumstances created by small and rural schools in all existing courses at both graduate and undergraduate levels. We need to be preparing our teachers and educational leaders for the actual context in which many of them will work.

Our undergraduates will, in many instances, have their first teaching experience in a small rural school. In such situations they will have to teach a large number of courses, frequently in learning areas that were not part of their degree programs. Invariably they will have to teach more than one grade level in the same classroom at the same time. In small rural schools, the principal is also a full time teacher. This places very challenging demands on such an individual who must find the time to do two full time jobs in the time allotted for one. Distance learning is an integral part of many rural high-schools and provides access to programming that would be otherwise unavailable to students. However, the presence of distance learning in a school often changes everything from bus schedules to teaching assignments. This creates special organizational and planning demands for principals. The recruitment and especially the retention of teachers in rural areas is another topic that has to be approached somewhat differently if we are preparing educational leaders for rural districts. We need to focus more attention at both the graduate and undergraduate levels on the unique characteristics and demands of the rural context per se. For many students going to a small rural community is a definite cultural shock.

Distance Learning

At the present time the Faculty offers a number of courses through a variety of distance learning formats. This enables individuals who live in rural areas of the province to take courses without having to come to St. John's. I think we should

continue to develop and offer programs and courses through distance learning. However, I have a number of reservations about this approach to education.

In my view, distance learning is, as the telephone commercial says, the "next best thing to being there." For me, teaching at a distance will never take the place of working with students in person on campus. I have been a teacher for twenty-seven years. For twenty-six of those years my students and I shared an actual space. We could see and hear each other in real time. Teaching at a distance doesn't allow for that. I miss meeting with the students as a group once or twice a week in a classroom setting. I find it very strange interacting with people whom I may never see in person. I miss not being able to see the students' reactions to what I am saying in their eyes, their smiles, their frowns, their looks of puzzlement or interest. There can be no silent or subtle sharing of an understanding, no non verbal indications of agreement. Perhaps my preferred teaching style does not lend itself very well to distance teaching. At the beginning of the term I like to establish a sense of community in the class by having people interact together and share their experiences. I like joining my students for a cup of coffee at break time. I especially like having them drop by for an in-person chat about their research papers or points of interest raised in the class lectures or discussions. And I remain unconvinced that accessing a library on-line is equal to visiting a library in person and browsing around the periodical shelves and book stacks. Many of the most interesting items I have found in libraries over the years I have discovered when something other than what I was looking for caught my eye. And a key board and a terminal will never take the place of a live librarian.

In the view rural students, being able to take courses at a distance is crucial. Before distance learning, students had to travel to St. John's to take a course. For rural residents this mean a much greater investment in time and money compared to students who lived in town or close enough to drive to commute. They were clearly discriminated against because of where they lived. Students who learn at a distance are aware of the differences I described above. However, in their view, what they lose is more than compensated for in what they gain.

Given the point of view of the students, I think we should continue to develop and offer distance courses. Also, I think we should be constantly monitoring and evaluating our delivery formats to ensure that we are offering the highest quality distance learning experiences to our students.

One of the key issues for me is to ensure that distance learning not become a form of "learning in isolation" for the student with little or no direct human contact. A very important element in the distance course I teach is the biweekly teleconferences that I requested be one of the delivery modes I would be using. Although my students and I are all in our separate places at various points around the island and Labrador, we do manage to create a living verbal community that provides some sense of human contact. At least we can hear each other's voice and this helps us to imagine the rest. Although we also communicate by E-mail and have a list server, we all agree that the live teleconference is a very important dimension to our course.

Scheduling some in-person gatherings for students and instructors is another way of humanizing distance learning for the participants. There is a distance graduate program in education currently being offered by another university in the Atlantic

Region taking this approach. Teachers from around the province, enrolled in this program meet at regular intervals in Gander with their instructors. These meetings are a very important component of this program for the participants.

A second important issue is the creation of barriers that exclude people in rural communities from taking distance courses. There is little point, it seems to me, to create distance programs and courses and then erect technical barriers that exclude people who may not have access to the hardware, soft ware, or infrastructure, or do not have the expertise required to participate. Distance learning eliminates the barrier of physical location in terms of access to education. It should not create a whole new set of barriers in terms of technical demands. This is where knowledge of context is important. Knowing whom you are attempting to help, where they are located and what their capabilities are must be the basis of distance programs if we are to meet the needs of our rural teachers. Otherwise we may end up excluding those who are in most need of our help.

Distance learning should be available through our faculty in a variety of formats providing access to those with the most up to date machines and technical skills and to those seeking to learn in more traditional distance formats. Distance learning should supplement and complement our campus based programs, but it should not in any way replace them.

A Research Tradition

Research and scholarly writing on rural education in Newfoundland and Labrador has been a tradition with the Faculty and other educators in the province. Earlier I have referred to the work of Dr. Frank Riggs. Previous to this important work was done by Ishmael Baksh and Amarjit Singh in 1977 (*Society, Culture and Schooling*), 1979 (*The Teacher in the Newfoundland Community*) and 1980 (*Teachers' Perceptions of Teaching*). A record of some of the other significant work that contributes to our understanding of rural education in Newfoundland can be found in back issues of the *Morning Watch* (see especially Vol.1, no.3) and *Society and Education in Newfoundland Volume I & II* (edited by A. Singh & I. Baksh). The former NTA Journal and the current NLTA Prism also contain important contributions to our research base. "Dealing with individual differences in reading in a one-room school" by Lary Sipe and published in the Summer edition of NTA Journal in 1974 is a good example of rural educators in the field attempting to share their experiences with colleagues.

A number of teachers in the province have completed Masters' Theses which focused on rural issues. Among those are: E. Smith, who described a whole language approach to literacy in a four/five multi-grade classroom; L. Barr-Baillet, who examined the provision for science education in small rural schools, C. Vincent who focused on the effects on rural students when they make the transition from attending a small school in their community to being bused to a larger school in a distant community. J. Howard investigated a sample of small schools which went against the norm and performed on standardized tests at or above the provincial average. P. Ryan inquired into the capabilities of teachers in small rural primary schools to deliver a new French program that assumes a high level of oral competency on the part of the teacher.

In addition there other graduate students who have also chosen rural and small schools issues as their focus and are at different stages in their work on thesis, projects and paper portfolios. Most recently Dr. Jean Brown has published an article entitled "Grandy's River Collegiate: Can a Rural School Survive in an Urban Landscape?" in the Alberta Journal of Education. The newest member of the Faculty, Dr. Ken Stevens, the new Chair of Tele-Learning, brings with him a wealth of experience in rural education research and development.

There are strong traditions and current expertise here for us to build on. There is a steady stream of graduate students coming into the faculty who bring with them an interest and expertise in, and a commitment to, rural and small schools. By combining our efforts and interests we could create within this Faculty a centre of excellence in rural education studies.

Conclusion

The title of this essay is "Why Rural Education?" I have attempted to provide a very personal answer to this question. First I described how I became involved in rural schools and how that initial inquiry has been transformed into a much broader set of interests and a deep commitment to improving educational provision in rural areas. In the second part I shared some ideas for the future development of rural education studies in the Faculty.

To be involved in rural education is very challenging, rewarding and frustrating. This is a particularly difficult time for the rural areas of the province. The rural areas have always endured tough economic conditions and have somehow survived. The current period, however, is one of extreme crisis. The cod moratorium has threatened the continued existence of many rural communities. Even in those areas not directly affected by the moratorium unemployment is at all time high. Many people have left their home communities. The decline in population and school enrolment is dramatic in many areas. This coupled with an ongoing erosion of rural services through an endless round of cutbacks and layoffs have created grave concerns and doubts among the people about their futures. There is a sense of unease as people wait and wonder what is to happen next. There is also a conviction among many that the government's hidden (perhaps not so hidden) agenda is another round of resettlement. To have the task of providing education to the children of rural Newfoundland at such a time in such a state is very challenging. I have been following this developing situation closely with a particular interest in how this general condition is affecting the schools. I continue to admire and be impressed with our rural educators who struggle on a daily basis to provide quality learning experiences in communities under siege. One thing is very clear. We ignore this situation and its impact on education and schooling in this province at our peril.

CRITICAL PERSPECTIVES ON RURAL EDUCATION REFORM

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Introduction

On September 10, 1996 the government of Newfoundland and Labrador announced that the promised(i) public consultation on educational reform would begin on September 16. Just prior to the first scheduled meeting, which was to be held in Port Aux Basques, the government circulated a document entitled *Structuring the Education System: A Public Consultation Paper for Educational Change in Newfoundland and Labrador*(ii). On the first page of this document, the [then] Minister of Education, the Hon. Roger Grimes, stated the purpose of the consultation process:

The education of our children is something we value greatly. That's why the Government is asking for your advice before making decisions that affect you, your children and your school community. The purpose of this consultation process is to determine how we can best work together to organize our schools and our student transportation system for the future.

Following (iii) this statement the *Consultation Paper* then proceeded to outline the "structural" changes the government felt were needed to improve the education system. Of primary concern for rural citizens was the government's long standing view that small community schools should be closed and the children bussed to larger consolidated schools. In effect the government viewed the consultation process as an opportunity for the people of the province to express their views as to what criteria would be used in determining school closure as well as which schools would actually be closed. There seemed to be the assumption, on government's part, that everyone accepted the logic and necessity of closing a certain number of small schools as part of educational reform. As I shall attempt to illustrate in this paper this was not exactly how rural communities viewed this consultative opportunity. The government also used this document to present selected data regarding declining enrolments and what it referred to as the "economic realities of the nineties." Parents were invited to review this information as it "sets an appropriate context," in the government's view, "for this (consultation) process and provides the key indicators that we need to discuss structural matters."

In the first part of this paper, entitled *The Official View*, I will review, briefly, the government's position regarding its proposed "structural reforms" as stated in the *Consultation Paper*. I will describe the changes the government believes must be made so that the students in the province will be ready to compete on the "world stage" with the best students from other provinces and countries(iv)." I will examine the rationale used to justify and support these changes. In the second part of the paper, *The Grass Roots Perspective*, I will provide an overview of what occurred during the series of 19 public meetings that were held in various parts of the province. Approximately 5,000 people attended these meetings and 250 presentations were made to the minister. In addition many informal questions were asked and comments

made during the sessions, some of which lasted as long as 5 hours(v). I will attempt to summarize some of the views expressed and the questions raised by rural parents and educators participating in these public meetings.

The Official View

School Closure and Consolidation

From the very beginning of the current round of educational reform(vi) one of the primary objectives of the provincial government has been the closure and consolidation of small community schools. Such action has been advocated as a structural change needed to make the system of education more effective and more efficient. *Our Children Our Future*(vii) introduced the term "school viability" into reform discussions and recommended that "non-viable" small schools be "targeted" for closure(viii). To a large extent the *Consultation Paper* being discussed here simply reiterated the government's fundamental position since 1992. In the name of educational reform, non-viable schools should be closed and consolidated. This restructuring will improve the educational opportunities for the children of the province and allow the government to make the best use of dwindling economic resources. The only outstanding issue as far as the government was concerned was settling on the criteria for determining viability.

A previous attempt by the government to define viability criteria had failed badly. The "School Viability Regulations" publicized in December of 1995(ix) had defined viability simply in terms of class size. For example, at the k-6 level, a minimum enrolment of 20 students was required for a school to be considered viable. This meant that a k-6 school with less than 140 students was considered non-viable and could be, in the Royal Commission's words, "targeted for closure." These regulations placed in immediate jeopardy as many as 180 rural community schools. The public outcry and protest over this simplistic, quantitative approach to determining viability forced the government to withdraw these regulations(x).

The tack taken by the government in the *Consultation Paper*, in terms of defining school viability, was at once a more vague and general yet in some ways a more powerful argument, and one definitely more difficult to criticize directly. This time around the government did not fall into the trap of putting a specific enrolment figure as a minimum size for a viable school. The government's position, simply stated, was that in order to be considered viable a school has to be capable of providing a quality program:

Regardless of where they live or where their children attend school, parents in the Province should be confident that the school is able to offer a quality program(xi).

This position of course begs several questions: what constitutes a quality program? From what or more importantly whose perspective will quality be defined or determined? The government's position paper leaves these questions unanswered. There is no indication what it has in mind in regards to a "quality program." There is a suggestion, however, that a quality program means more than being able to provide core or minimum requirements. Furthermore, the government asserted, it is difficult

for small schools to provide the kind of quality programming that is needed or desirable:

In many cases, small schools can offer only the core program, while other larger schools are able to offer a broader, more varied program of studies to the students.

No indication is given by the document as to what size of school is to be considered a "small school." Declining enrolments over the last few years, however, have created a situation where:

...schools that were once viable are left with so few students that it is unreasonable to operate them. This means that the human and physical resources necessary to offer our students the best possible education are being spread out over more schools than can be sustained. For example, additional building maintenance costs take away from money that could be channeled to educate students in the classroom. We have to do something about this. The issue is a financial one yes, but more importantly it is an issue of educational quality(xii).

From the government's point of view the "something" that must be done is very clear, given the "economic realities of the nineties" and the fact that we have to prepare our children to "take their place on the world stage."

Government believes it is inappropriate to provide additional resources (to maintain a small school in a community) when a *better learning opportunity* for students is available nearby(xiii)(xiv) with more than one school, "we have to examine busing options to bring students in small schools to larger ones which will offer them *greater opportunities*." In the final analysis, parents will have to make a choice. Insist on maintaining their small community school with its limited program options or agree to close their community school and bus their children to "a *larger school that is able to offer a wider range of program options which would provide better opportunities for students*(xv)."

Isolated Schools

The *Consultation Paper* acknowledged that no matter how many small schools communities agree to close there will continue to exist certain isolated schools that will have to be maintained because it would not be possible or feasible to close them. Such schools may be located on offshore coastal islands or be too distant for bussing to another community. These schools - and only these schools - will be provided with additional resources so that they can provide at least a "core program(xvi)."

A significant change is being proposed here. Previous government policy provided for additional resources, human and material, to be allocated to all small schools. The new policy being proposed would see only those schools that could claim isolation status qualifying for supplemental provision. Location and degree of isolation, not size, will now determine allocation. New policy guidelines will see all schools regardless of their size receiving the same allocation based on a per pupil

basis. To gain any extra provision a school will have to prove its status as a necessarily existent school.

The policy increases the pressure on a community to agree to close its small school if it cannot prove its isolation status. If, in the government's or school board's view the bus ride to another community and a larger school is a "reasonable distance" the school will be targeted for closure. If the parents do not agree to close the school, then the government will not provide that school with any extra funding regardless of how small it is.

Student Transportation

In order to "rationalize the system" the *Consultation Paper* proposed a number of changes to the student transportation system. School closures and consolidations will necessitate two changes: 1. Students who currently attend a community school will have to be bussed to a another community; 2. There will be an increase in time and distance for some students who are already being bussed. Parents, according to the *Consultation Paper*, should accept having their children spending a "reasonable time" on the bus since this will enable them to avail of increased educational opportunities. A "reasonable time" is not defined but the alternatives are made clear to parents: accept the need for an increase in bussing or condemn your children to an inferior form of education.

In addition to wanting to increase and extend bussing as an necessary consequence of closing and consolidating schools, the government also proposed a number of other changes in the name of economy:

- Enforcing strictly the current regulation of the bus only making four stops within the 1.6 km.
- Adopting a system of staggered opening and closing of schools, where practical, in areas where several schools exist. That is, schedule the times schools open and close to permit the same bus to make double runs. This may require some schools to open earlier or close later. For example, one school might open at 8:45 and another at 9:15. This would reduce the number of buses required to transport students.
- Bussing would be provided only to the closest school. (At the time of the consultation process, bussing was provided to the closest denominational school of the parent's choosing).

In addition to these proposed changes the *Consultation Paper* asked people to consider the following:

- whether it is reasonable to increase the distance for school bus eligibility beyond 1.6 kilometers;
- whether the distance for school bus eligibility should be increased for high school students in favor of keeping the distance at 1.6 kilometers for primary and elementary students;
- whether it is reasonable for the taxpayers of the Province to continue to pay the full cost of school bussing or whether users of the system should pay some portion of the total cost;

- what should be considered a reasonable bussing time (with declining enrolments and the larger geographical areas to be covered, bussing times may increase and some students may have to be on a school bus for over 60 minutes); and
- whether parents would choose a longer period of time on the school bus for students to attend a larger, well resourced school or a shorter bus ride for students to attend a smaller school with fewer teachers and resources.

School Designation(xvii)

At the time of this consultation process Newfoundland and Labrador had a rather unique educational system in North America. The system was a publicly funded totally denominational school system. There were no public non-denominational schools in the province. All schools in the province were officially designated as either Roman Catholic, Seventh Day Adventist, Pentecostal, or Integrated (a combination of Salvation Army, United Church, Anglican, and Presbyterian). Although it rarely happened, students could have been denied access to a school because they did not adhere to the particular designated Christian denomination of that school. Students were in fact entitled to bussing to the nearest denominational school of their part faith.

As part of its restructuring plans, the government proposed that all schools in the province would be re-designated, in the first instance, as inter-denominational. All children, regardless of their denominational affiliation would be entitled and in fact forced to attend the school closest to where they live. This proposal would in fact eliminate the need for bussing for some children. It would also end the duplication of schooling in a number of communities. Historically, each denomination had a right to establish a school if a sufficient number of adherents lived in a particular community.

However, there would also be a provision for the creation of uni-denominational schools. A uni-denominational school would be a school that had a specific denominational designation. (Such schools would in fact be the same as they were before the proposed changes). The issue for discussion was how to decide which schools would be designated uni-denominational. What criteria and mechanism would be used to make this decision?

The public consultation process was the opportunity for people to give their views as to how uni-denominational schools would be created (or more accurately, re-created). The government offered their view as follows:

Parents of children who will attend school in the 1997/98 school year and who wish to have their children attend uni-denominational schools will be given the opportunity to advise the School Board of that preference. If the parents of a sufficient number of students indicate that they wish their children to attend a uni-denominational school, the School Board will be required to establish such a school, provided the following conditions are met:

- the uni-denominational school meets the criteria for a viable school, and

- the creation of the uni-denominational school does not cause another school to become non-viable.

To summarize the "official view," the government came to the consultation process with a simple agenda. Education reform dictates the closure and consolidation of small community schools. Small schools are educationally deficient and a drain on the general resources of the province and the education budget in particular. Students will have to be bussed to larger schools in other communities where they will be able to avail of "better educational opportunities." Parents should accept these changes because they are in the best interests of their children.

The Grass Roots Perspective(xviii)

It was clear from the very first public meeting held in Port Aux Basques that rural communities across the province were not going to buy into the government's reform agenda. The public consultation process was going to be their opportunity to continue the fight to save their community schools. Although the government had attempted with its consultation paper to set the agenda and define the parameters for discussion, rural citizens came to this first and all subsequent meetings with their own agendas. They asked questions and raised issues that were important and significant to them, their children and their communities.

As far as rural citizens were concerned this was simply one more battle in the ongoing struggle to save their schools and possibly their very communities and way of life. The successful protest effort earlier in the year (January and February 1996) had been a valuable rehearsal for this public consultation process. Consequently, they were more prepared and ready to express their views that they might otherwise have been given the shortness of the notice given for the meetings(xix).

Participants were generally critical of the government's reform agenda and their actions thus far. There was a strongly felt and articulated view that closing small schools, increasing student bussing, and rescinding long-standing policies that provided special allocation for small schools could not in any way be characterized as improvements. Many were convinced that what the government was primarily interested in was saving money and cutting costs. Improving the quality of education was decidedly secondary. Many people at the public meetings reminded the Minister that the government had already renegeed on a commitment to keep any money saved through restructuring in education.

Fighting to save their small schools was nothing new to the people of rural Newfoundland and Labrador. The history of rural education tells many stories of emotionally charged meetings where people expressed their feelings about losing their school. However, one very noticeable difference this time around was that feeling and emotion were supplemented with research data, critical questions, and well-argued and articulated positions. The rural schools the government was attempting to close had produced a generation of parents very different from the previous one. There may have been less shouting and tears but there was a lot more facts, figures and informed opinion(xx). They felt strongly about the issues as they have always had, but this time around their feelings were informed by research.

School Closure and Consolidation

Community Schools

Preserving their community schools was the most important and central issue for rural participants in the public consultation process. The government entered the process with the assumption that the way to improve rural education and cut costs was to close and consolidate small schools. Rural parents and educators came to the process to convince the government that small schools were not only viable but also valuable and that the foundation of reform should be the preservation and enhancement of community based education and schooling.

When it came to school closure and consolidation issues the official approach had always been to focus exclusively and narrowly on school viability. The decision to close or keep open a school was always made with reference only to the school. No other issues were judged to be either legitimate or relevant. The *Consultation Paper* followed the same line of argument. Rural communities, however, have always insisted that a more comprehensive, a more ecological perspective is required. Closing a school has far-reaching social and economic implications, not just educational ones.

The people of rural Newfoundland and Labrador did not come to the consultation meetings to do as the Minister asked them: agree with him to close their small community schools so that their children could have a "better educational opportunity" a "reasonable distance" down the road in another community. They came to convince him that he was wrong. They attempted to do this by arguing the importance of the school to the community and the community to the school. The relationship is reciprocal, interdependent and mutually beneficial. Therefore decisions about closing a school cannot be made with reference only to the school or schooling issues. The impact of the closure on the community must be considered and the costs to be paid by the children and their parents who would have to travel by bus out of their home community.

Many rural citizens tried once again to convince the Minister of Education how important a school was to a rural community(xxi). As one presenter explained:

Taking a school out of a small community is like taking the heart right out of it. If you have no school, you have no children, no town. Government must realize that in rural Newfoundland, the school is a central institution, and as such, should be developed to impact our communities in a positive way towards the future of Newfoundland. The operation of a school provides a focal point for the community, a source of pride.

The anguish that is felt and the outrage that is expressed by rural citizens at the possible loss of their community schools has little to do with nostalgia or sentimentality, as some would prefer to believe. Presenters made clear that their concerns were grounded in a number of very significant social and economic realities. In a rural community a school is not just a place of instruction, meaningful only to the students and their parents. In small rural communities schools continue to function as

social and cultural centers for the whole community. School concerts at Christmas time and on other occasions, are eagerly anticipated and attended. This may seem like a small matter in the larger scheme of things, but in a small community it matters a great deal to everyone(xxii).

Communities, the Minister was told, take pride in their schools; many were built by volunteer labor. In rural Newfoundland and Labrador the whole community supports and assists the school in myriad ways. The school helps define the community and give it an identity. It is a connection to the past and represents a hope for the future. Most importantly, a school is a sign of the community's viability as a place to live, a place to stay, and a place to move to. The presence of children and the sounds of their play throughout the day are signs of life and vitality sorely needed by our rural communities. When community leaders claim that the loss of the school will lead to the death of the community they know what they are talking about. If they have a choice, families with school age children will not move to a community that doesn't have a school.

For rural presenters the issue was simple: we can choose to sustain and develop rural education and rural communities by building on the intrinsic strengths and advantages of small scale, community based schooling or we can choose not to. The choice we make reflects our commitment to rural Newfoundland and Labrador. Many community leaders expressed the view that the current attack on small community schools is just another aspect of the general erosion of services reflecting the government's attempt to force another round of resettlement(xxiii).

Presenters claimed that rural communities make many valuable contributions to their schools. Because the school is a source of pride to the community, there is a vested interest in its success and upkeep. There is a sense of ownership and responsibility on the part of the whole community, not just those with children in school. Consequently, many communities support their schools in concrete ways in terms of upkeep and repairs and material resources.

In addition, the people of the community are often used as resource persons for special projects and school activities. This moral and financial support from the community is a significant factor in the success of rural schooling. If the school is removed from the community, the school will lose this support to a significant degree. This will be to the school and the students' detriment. Parents do not and will not support a school located in another community to the same degree or in the same way even though their children attend that school.

Having the school in the community greatly facilitates contact and interaction between parents and teachers, in both formal and informal ways. Contact is easier, and often occurs in the daily routine of community life. When the school is not in the community and parents have to travel some distance this contact is diminished. Given the demonstrated importance of this kind of interaction to student achievement, closing a community school is not a good idea. A principal speaking on behalf of her small community school addressed this issue:

St. George's Primary School is a proud school, which enjoys the support of the community. We may not have all the resources, programs or

teachers, as larger centers have, but we do have teacher-pupil contact because we are small and we are a community school. Education is built on a community of human beings. It seems like a simple concept but I think we've forgotten it along the way.

Several parents pointed to the apparent contradiction in government's policies. On the one hand they were advocating a more active role for parents in the school through the creation of schools councils. On the other hand, they seemed determined to make parental participation, at least in rural areas, more difficult.

Pre-school literacy and orientation programs were used as examples by a number of presenters to make the case for community based education. These early intervention programs have been developed to combat the traditional problems with literacy. The most successful programs in terms of attendance, it was claimed, were those that operated in a single community. It was further claimed that those schools serving a number of communities found that the further away a family lived from the school the less likely they were to participate in the program. One reason for this was that not all parents in rural areas have access to two cars. So, if one parent is working away from the community the other cannot attend. Rural parents do not have bussing and taxi options as do urban parents(xxiv).

Small Schools Are Viable And Valuable

The "official view" of small schools was primarily a re-play of the traditional "conventional wisdom"(Sher, 1997) regarding solving the "rural school problem" Nachtigal (1982): small schools are neither academically nor economically viable. They weren't academically viable because they could not deliver quality programs; they were not economically viable because the per pupil operating costs were much higher than in larger schools. In the interest of improving educational opportunities, not to mention cutting costs, rural education reform dictated but one course of action: closure and consolidation.

The grass roots perspective on the viability of small schools was fundamentally different from this official view. First of all, people in rural communities questioned the notion that small schools cannot be viable. Their position was that not only can they be viable but they are in fact quite valuable, especially so for particular student populations. Many people seized on the government's suggestion that small schools cannot provide a quality education program. They noted that "quality" is a very relative term and can mean different things to different people. Individual communities pointed with pride to the achievements of their small community schools to demonstrate that small schools can be quality schools. Examples were offered of small schools in the province whose academic achievement record, degree of retention and post secondary participation demonstrated their worth. They equaled or surpassed provincial standards. These were offered as proof that small schools are capable of quality education.

The government's claim that small schools were not economically viable was also questioned and criticized. People were very critical of the government's notion that closing small schools would save significant amounts of money. They pointed to the increased costs of bussing and the costs of repairs and renovations for the

receiving schools. There were suggestions that the economic viability of a school be determined on an individual basis and be carried out by an independent assessor(xxv). There was also strong criticism of the government's emphasis on economic viability. As one presenter protested:

Schools are not corporations, they are built on people, values, and morals. When looking at schools in terms of closures or reductions, don't look at them in terms of dollars and cents, because I'm still waiting to see a document that says school closures will save money.

The case was also made for the intrinsic value of small-scale schooling(xxvi). Small schools were not just viable but were in fact very valuable in terms of their capability in providing a certain kind of education. The smaller number of students in the school and the generally smaller pupil teacher ratio were very positive things. Small schools have or represent a particular set of educational values that should be cherished and built upon. Small schools, because of their size, create a unique, nurturing, and supportive learning environment that enhances children's learning. Small schools provide an opportunity for child and student centered education and schooling. Small classes and smaller overall student population allows teachers to get to know the students and their parents in a way that does not happen in larger schools. It is rather ironic, noted several presenters, that at a time when in other parts of North America people are starting to realize that small schools rather than big ones are to be preferred we seem determined in this province to close as many of our small schools as we can.

The emergent research which indicates that for socio-economically "at risk" students smaller schools offered them their best chance of academic success was also cited as a reason for keeping small schools. Small schools are particularly valuable in rural areas with a significant number of "at risk" students. A number of presenters made reference to the emergent body of research that indicates that small schools represent the best chance that "at risk" students have(xxvii).

In addition to rejecting the notion that small schools are not viable and asserting the notion that small schools are in fact to be valued and preserved for their own sake, rural participants maintained that the question of school viability cannot be addressed without reference to community schooling. If we are committed to sustaining and developing rural Newfoundland and if we subscribe to community based schooling, then we have to accept the fact that this will mean the necessary existence of small schools. But the necessity of their existence isn't because they are so remote and isolated they cannot be closed. They are necessary because in rural areas of the province small scale schooling makes the most sense. Larger schools might make economic sense in urban areas with high levels of population concentration; but in rural areas with a dispersed and distant population, particularly in areas with large numbers of "at risk" students, small schools are required.

From this perspective questions about the viability of a particular school are asked and answered very differently. If a small community school is determined to be non-viable because it lacks the capability of providing quality education, the response should not be to close it but to provide it with whatever resources it needs to become viable. Reform efforts should set out to make small schools viable, not to close them.

We make them viable because we value them as necessary for the education of rural children and the future of rural communities. By taking this tack, rural citizens turned the government's argument on its head: the government wanted to target for closure any school classified as non-viable; the people suggested that non-viable schools be targeted for extra funding and provision.

Distance Education

Distance education and other forms of information technology were suggested as ways of making small community schools viable by making up for any real or alleged programming deficiencies. As far as participants were concerned, "The distance education program currently operating in a number of small schools has been a good example of how we can use technology to help schools offer a broader spectrum of courses. This type of program should be expanded." Other participants pointed out that the information technologies that now exist make the size and location of a school irrelevant to its program capability. Many people found it curious that there was no mention of distance education in the government's *Consultation Paper*. Some took this absence as an indication of a lack of interest in sustaining community schools(xxviii).

Student Transportation

As noted above the government's *Consultation Paper* contained two general proposals regarding student transportation: 1. More students will have to be bussed longer distances in the name of improved educational opportunities; 2. Existing bussing services for some students will be reduced in order to cut costs.

The "grass roots" perspective on student transportation was once again very different from government's. The primary concerns of rural parents and educators focused on issues to do with safety and the negative impact of the current degree of bussing on children and their families. Their basic position was that too many students were now being bussed too far, and often on dangerous roads. They rejected the notion that increased bussing was necessarily the appropriate or the only way to improve educational opportunities for their children. They were critical of the proposed cuts to bussing services describing these as government's way of trying to save money by imposing hardships on rural children and their parents. The issues and concerns raised by parents related to government's plans to increase bussing included:

- A number of safety concerns were raised, including the lack of adult supervision on school buses and the need for seat belts and two-way radios. Many parents were concerned by the reduction in road maintenance and snow clearing they were noticing. The Department of Education should work closely with the Department of Works, Services and Transportation to ensure that bus routes are cleared of snow in the winter and that these routes are assigned priority for maintenance. Several presenters related examples of bus routes not being cleared in time for buses to reach schools before morning classes begin.

- In several areas of the province, over the last several years, school boards had promised to provide lunchtime bussing in order to get people to agree to close their community schools. This offer was made in the face of parental opposition based in part on the fact that the receiving school did not have proper lunch room facilities. Recent cuts in bussing provision had forced boards to renege on lunchtime bussing. Several parents expressed their concerns about the safety and health of children eating at their desks. Many people felt that lunchrooms should be provided or lunch hour bussing be continued or re-established.
- There was concern expressed about younger children being so far from home. If they became ill, it might be difficult for parents to go and get them. Parents of children with special needs were especially concerned about the possibility of their children being bussed to distant communities. Several parents expressed the concern that mixed busloads of older and younger students had a negative impact on younger children. Older students often exposed younger children to ideas and language that their parents did not feel they were ready for.
- Bussed children do not have the option to linger after school to chat with a teacher or play with a friend. They do not have the opportunity to seek help from their teacher with something they are having difficulty with in one of their classes. Bussing negatively affects the quality of a child's life and the nature of his/her participation in the school. Because they are bussed, they may not be able to take part in the extra-curricular life of their new school. Sports teams, clubs and organizations, drama groups, and school choirs provide valuable educational experiences for our children. It is little wonder they lack a sense of belonging and ownership for the school.
- It was felt that longer bus rides would have a negative affect on student learning and, therefore, guidelines should be developed with the goal of keeping bus rides as short as possible. Many presenters noted that bussed students had reduced access to teachers and the fatigue factor from longer rides often inhibits their learning(xxix).

Rural citizens were generally critical of all government's proposed changes to the student transportation system. They saw them all for the most part as being primarily concerned with saving money for government at the cost of imposing hardship on students and their parents. With specific reference to proposals put forward by government in their *Consultation Paper*, rural citizens proposed:

- In general we should work towards reducing bussing not increasing it.
- Late busses should be available to all students who are forced to attend consolidated schools outside their home communities, so as to enable them to fully participate in the academic and co-curricular programs of the school.
- Staggered openings, according to some presenters, wreak havoc on the lives of families with more than one school age child. Parents, for example, with children in different levels (i.e., primary, elementary and high school) could have children starting school, leaving school and having lunches at different times.

- User fees for busses were rejected by rural participants. The government had closed community schools and created the need for school bussing. Therefore they should pay for it.
- Rural parents pointed out that it is inappropriate to have a single set of guidelines or regulations for the province. Road and weather conditions have to be taken into consideration when considering student bussing(xxx).
- Parents were very critical of government's earlier proposals for bussing times which would have seen primary children spending 90 minutes a day on the bus and high school students 2 hours.
- Maximum bussing distances/times should vary depending on the age/grade level of the students. While opinions varied, most presenters suggested a 45-60 minute maximum duration for a bus run carrying high school students. Younger elementary children should be bussed for no more than 30 minutes and Kindergarten/primary students should be bussed for a maximum of 15 minutes.
- Several presenters suggested that the length of the overall school day be considered when examining maximum travel times. They suggested that waiting periods due to staggered openings and closings, be factored into the total school day.
- Local school boards should have the power and flexibility to set maximum bussing times so that conditions and circumstances can be taken in to consideration.

Finally, several participants linked their concerns about bussing directly to their argument for maintaining small community schools. The more community schools we have and maintain the less need there is to bus children. Community schools enable children, especially younger children, to be educated close to home and not have to endure long, tiresome and sometimes dangerous bus rides. Spend money on resources for community schools not busses to take children away from the community.

School Designation

For rural residents school designation was generally a secondary issue to the primary one of maintaining their small community school and keeping bussing times and distances as short as possible. Quite a few communities had in previous years demonstrated their willingness to give up their individual small denominational school in favor of a single inter-denominational or "joint services" school which would serve the educational needs of all children in the community. It was clear from the consultation meetings that as long as the community could keep its school and/or keep bussing times and distances at a minimum for their younger children, the majority of rural residents would accept the re-designation of their denominational schools. They would accept an inter-denominational school for the community to which all children could go.

Some Pentecostal and Roman Catholic parents in selected areas(xxxi) of the province, however, were very concerned about the school designation issue. Nevertheless, there was no consensus evident from the consultation meetings as to how to decide on school designation. A wide variety of opinions were expressed on

issues such as who in a community or an area should be allowed to have a say, what the process should be like, what percentage of persons expressing a view would be needed to have a school designated as uni-denominational.

Conclusion

The public consultation process in Newfoundland and Labrador clearly revealed a wide chasm between the official and the grass roots views as to how to improve education and schooling in rural communities. The official view insisted that the progress of rural educational reform dictated the closure and consolidation of small community schools. Such a structural change was needed, the government claimed, in order to improve educational opportunities for rural children. Small schools cannot provide the kinds of quality programming that rural children and students need to "take their place on the world stage" and "successfully compete in the 21st century." Parents should accept the need for more and longer bussing as a small price to pay for a higher quality of education for their children. A restructured system would also be a more efficient system enabling the government to realize substantial savings from closures and reductions to some bussing services. To some extent this position, claimed the government, was a necessary response to the tough "economic realities of the nineties;" however, the primary goal, insisted the *Consultation Paper*, is to improve the quality of education.

The "grass roots" insisted that the foundation of rural educational reform should be a commitment to sustaining and strengthening community-based education. Rural citizens suggested that an ecological perspective needs to inform any proposed changes or intended improvements. The focus cannot be just on the school or the children. The interdependent, mutually beneficial, and reciprocal relationship that exists between a rural communities and their schools must be considered. The closure of a school has social, economic and cultural implications for the community and all its residents. A community school provides a connection to the past, a sense of continuity, and a sign of community vitality and viability.

Community schools facilitate the important relationships and interactions between parents and teachers. Community schools enable children to be educated close to home, thus avoiding long, tiresome, and sometimes dangerous bus rides. Students develop a connection with the school and a sense of ownership; they have a greater opportunity to fully participate in the academic and co-curricular life of the school.

The grass roots view insisted that small schools are not only viable but also valuable as places of quality education. The official view as to what constitutes "quality education" was questioned and criticized; examples of high quality small schools were offered to make the point. Rural citizens rejected the government's notion that significant economic savings may be realized from closing and consolidating small schools. Such savings, such as they are, have to be measured against the impact of such closures on children, families and communities.

From a rural perspective, if some small community schools are found to be lacking in resources, the appropriate response in the name of improvement is to provide them with the needed resources to make them academically viable, not to

close them. Distance education and emerging information technologies were viewed as potential ways of maintaining and increasing viability of small community schools.

Finally, the grass roots perspective questioned government's motivation and ultimate agenda. Rural citizens felt that the proposed changes by government had two goals. The first was to cut spending on education regardless of the effects on the quality of education or the quality of students' lives. The second was to reduce the provision of services such as education to rural areas as a way of forcing people to abandon their small rural communities and move to larger "growth centers."

Post Script

The consultation process proved to be a disappointing exercise as far as rural parents and educators were concerned. They (and I share this view) continue to be disappointed in the way that educational reform is being played out in this province. Increasing numbers of people, especially rural educators and parents, are feeling either bewildered or betrayed (sometimes both) by what is happening in many places. Educational reform should be the impulse for improving the quality of education for our children who, we are constantly reminded, are our future. In too many instances, unfortunately, reform has become little more than a mean spirited exercise in reducing educational spending regardless of the costs to be paid by rural children and rural communities.

Two years after the consultation process it is increasingly difficult to find thinking persons - parents or educators - who feel positive about the general progress of educational reform. If anything, the number of disenchanting educators and parents is growing. I think people are starting to realize that the changes being made are looking less and less like improvements. Many small community schools have been closed. Promises made to convince communities to close their schools are not being kept. More students are being bussed and many are being bussed longer distances. Schools are becoming more distant from children's communities. Larger schools, parents are discovering, also mean larger and often overcrowded classrooms, lunch rooms and schools. Individual communities (Harbor Grace, Belleoram, St. Albans, Grand Bank, Seal Cove, White Bay, Isle aux Morts) around the province continue the struggle to keep their schools. A number of school Board trustees have resigned as a result of the tensions generated by reform, three from Avalon West alone. District personnel continuously have to point out to government how yet another policy or directive is not workable. Finally, classroom teachers and school principals are experiencing increasing levels of frustration, stress and tension. It is they who have to make this new "improved" system work with fewer resources, more demanding teaching conditions, and ever increasing expectations. The educational system cannot take too many more "improvements" of this kind.

Endnotes

- I. In January 1996, the Government of Newfoundland and Labrador committed to consulting the public on educational reform. This promise was communicated through the Liberal Party's election "Red Book" entitled Ready for a Better Tomorrow: Platform of the Liberal Party of Newfoundland and Labrador. This document stated that "The new Liberal government is committed to dialogue

and discussion on all elements of implementing education reform before decisions are made," and went on to say that "There will be extensive public consultation before any new school viability rules are adopted."

- ii. In addition to circulating this document through community newspapers and the post, the government made it available on the internet. It may be viewed at: <http://www.gov.nf.ca/publicat/educate/educate.htm> For the sake of brevity I shall shorten the title of this document in the rest of my paper to the Consultation Paper.
- iii. Structuring the Education System: A Public Consultation Paper for Educational Change in Newfoundland and Labrador (1996) [Government Document].
- iv. Ibid.
- v. The original schedule called for 16 meetings but 3 extra ones were added because of demand. The public sessions were generally conducted in a fairly informal manner with plenty of opportunity for questions and comments. The Minister of Education has to be given credit for taking the time to tour the province in this way and being willing to stay and listen until everyone who wished to had had his/her say.
- vi. The current round of educational reform in Newfoundland and Labrador began in 1991 with the establishment of a Royal Commission of Inquiry.
- vii. Our Children Our Future (1992) was the official published report of the government's Royal Commission of Inquiry.
- viii. Our Children Our Future (1992) Recommendation 8 (p.229)
- ix. In December of 1995, the government released a draft version of a new schools act, Schools ct, 1996. Included in this act were these "school viability regulations."
- x. The rural protest against these viability regulations was greatly assisted by the coincidence of a provincial election. School closures became a critical election issue and when the incumbent Liberal government realized that these viability regulations could cost them many rural seats, they quickly rescinded them and promised the consultation process which is the subject of this paper.
- xi. Structuring the Education System: A Public Consultation Paper for Educational Change in Newfoundland and Labrador (1996) [Government Document]
- xii. Ibid.
- xiii. Ibid.
- xiv. "...communities or areas" There is a considerable difference, unacknowledged or not understood by the author(s) of this Consultation Paper, between closing one of two or more schools in a community and closing one of two or more

schools in an area. Most rural communities would accept the former suggestion since it would leave the community still with a school. The later suggestion, however, is much more problematic since at the very least it means leaving at least one community with no school. Also depending on what is to constitute an "area" there are important implications regarding bussing.

- xv. Structuring the Education System: A Public Consultation Paper for Educational Change in Newfoundland and Labrador (1996) [Government Document]
- xvi. Does this mean they are not prepared to provide a "quality program" for these isolated schools?
- xvii. The issues surrounding the designation of schools are very complex and making sense of them is beyond the scope of this paper and the interest of its author. I am providing only the briefest overview here because the designation of schools was part of the consultation process. As I indicate elsewhere in my paper, this issue was not of primary importance for the majority of rural residents.
- xviii. In this section I am presenting a synthesis of the views and arguments presented at the 19 public consultation meetings that were held around the province. In developing this section I have drawn on a number of sources: a number of individuals and groups have made available copies of their formal presentations; community newspapers reported on each of the public sessions and these were supplemented in a number of cases with editorials and "letters to the editor;" I have also drawn on the extensive network of rural educators from around the province whom I know and who attended the public sessions; I have also made use of the government's own post process publication on the proceedings; finally, my research assistant and I attended several of the public sessions. I cannot claim that this section reports on everything that was said; for the sake of brevity I have had to be selective. However, I can claim that this section is an accurate representation of the views of rural parents and educators regarding the most important issues. For the sake of continuity I will use the same headings in this section that I use in the earlier section, The Official View.
- xix. The first public meeting took place less than a week after the consultation process was announced. People at the first meeting did not in fact see the Consultation Paper until the meeting where it was distributed just before the meeting began.
- xx. The activities of a parents group, as reported in a local paper, from the Baie Verte community of Ricketts to save their school illustrates the point. Parents wrote letters to government and put together an information package that pointed out research showing the benefits of keeping small, community schools open. "We don't think it will save any money," Karen Blake, head of the parent-teacher's association was quoted as saying. " It costs \$12,700 annually for the schools heat, light, water and sewer bills," Blake said, "but it will cost \$35,500 to add another bus. The school has only four and a half teaching units," she added, "which would likely have to be added to a Baie

Verte school if the students moved there." The parents had also done some investigation of multigrading, which traditionally has been used as weapon to convince rural communities to close their small schools. "We couldn't find any convincing evidence that sharing grades is a bad thing," she said. "We know from our personal experience that it can be good." (Feb. 18, 1996 E.T.)

- xxi. Perhaps the best expression of this view came from Maurice Tarrant of Lawn, a small rural town on the Burin Peninsula. In the school wars of January and February, 1996, he wrote:

In rural areas our schools are the very heart of our community. What happens if the provincial government rips that heart out? As with any living entity, it will most assuredly die. Those who think that this is simply an education issue should consider what will happen if families decide to start moving out of a community to be closer to a school that their children attend.

Houses will be left vacant. Who will rent when the trend is to move from the community? Property values will drop. Businesses will most definitely feel the negative impact as whole families move away... We are systematically being forced out of our communities to satisfy a government agenda to resettle rural Newfoundland.

Our very way of life and culture is now being threatened like no other period in our history. If we neglect to make our voices heard, our silence will spell certain death for our communities. It's time that our government saw the human face of our people, not just the statistical value.

- xxii. It has always been difficult for some to understand and respect what the loss of its school means to a rural community. Rarely will an educational authority legitimate this issue as being relevant to the discussion about a school closure. This uniquely rural perspective is either ignored, dismissed as irrelevant or mere sentimentality, or treated with contempt by our educational leaders. This lack of understanding is most clearly seen when the community as a whole is not permitted to take part in school closure meetings or to vote on the fate of their school. In many situations only those parents with children in school get to participate. The assumption being that other members of the community have nothing at stake and therefore have no right to express their views in the closure discussions. Forgotten is the notion that it takes a whole community to educate a child. Ignored is the fact that everyone in a rural community experiences a sense of loss when a school is closed.
- xxiii. In the 1960's the government of the day coerced many small rural communities to "re-settle" in designated growth centres. There is a wide spread view in the province, among rural people, that the government would like to see the same thing happen again, but lacks the temerity to say so overtly. Instead, there has been gradual erosion in the services provided to rural communities such as: highway maintenance, ferry services, postal services, and policing.
- xxiv. Although not appreciated by many urban based educators, many rural families have no car at all.

- xxv. Charisma Collegiate Principal George Chaulk, speaking on behalf of the local school committee pointed out to the minister that the operation of schools should be based on more than a balance sheet. "Efficiency is fine if you're talking about TVs or stereos," he said. "In this case of viability, there should be some sort of external assessment to give a facility a chance to prove its worth." (The Nor'Wester (Springdale), Wed., Oct. 2, 1996.)
- xxvi. Many presenters criticised the general belief of the government that bigger was necessarily better: Sheldon Kirby of Norris Arm told the Minister: "Bigger is not always better, Mr. Minister, sometimes it's just bigger." (The Lewisporte Pilot : Sept. 25, 1996).
- xxvii. This was one of the issues I spoke to when I made a presentation to the Minister of Education, at the public meeting held in Mount Pearl on December 15, 1996.
- xxviii. Current government policy is that funding for distance education will only be provided for small schools that are "necessarily existent": schools on islands, with no road connection to another community; and those existing too far from another school to make bussing feasible.
- xxix. Given the numbers of rural children everywhere in North America who ride the bus to school, many for up to two hours, it is astonishing how little research has been done to investigate the relationship between time and distance and academic achievement.
- xxx. Time and again during this consultation process the wide chasm between the official and the grass roots perspective was demonstrated. The official view seemed always to be grounded in either an ignorance or indifference to the complex reality of the issues. The government wanted simple straightforward answers to what rural folks kept indicating were complex questions. The diversity of rural contexts was seemingly lost on government officials. The government has always wanted to set a single set of regulations for bussing, ignoring totally local conditions. Rural people have always insisted that local conditions have to be considered. A 30 km ride on a straight stretch of paved highway in a built up area is not the same as a 30 km ride on a winding narrow dirt mountain road.
- xxxi. To some degree this issue reflected a number of divisions within the province. For example school designation generated considerable heat and interest in the capital city of St. John's. This reflected a urban/rural split on this issue. With a few notable exceptions rural areas were less interested in the denominational issues. They had "bigger fish to fry." There were also many suggestions that this was an issue more important to church leaders and officials, situated in St. John's than it was to ordinary parents and educators.

IS IT JUST ME? SELF-DOUBT AND DELUSION IN MOVING TO SHARED DECISION-MAKING: THE CASE OF RED RIVER ELEMENTARY

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Introduction

Leadership studies have a long tradition. O'Toole (1995), in reviewing and comparing ideas about basic philosophies of leadership, begins with the ideas of Plato and Confucius. He draws the conclusion that one model of leadership, that of the "strong leader", has dominated the thinking of society and that model has become part of our cultural conditioning. He affirms:

The idea that leadership is a solo act - that it is a privilege, in Plato's words, reserved for "one, two, or at any rate, a few" - has been part of both Western and Eastern philosophy for two and a half millennia. (p.88)

He argues that although society has tolerated and endorsed other forms of leadership, "when push comes to shove, the two-thousand-year-old attitude about the superiority of strongmen emerges from the collective unconscious" (p. 90). If that assessment is accurate, then it is little wonder that schools intent on implementing team leadership and moving to shared decision-making and collaborative work cultures are experiencing difficulty.

This paper is a description of one school's attempt to move away from the model of the principal as "the solo act" and "the strong leader" to one in which shared decision-making is emphasized, where teachers are expected to assume the role of leader, and formal leaders therefore to act as leaders of leaders. The findings of this study support O'Toole's conclusion that such a movement is difficult, forcing participants to challenge their old mental models of what leadership is and how it is practised. This is understandable for it challenges the cultural norms that determine the role and function of both administrators and teachers.

As Brown (1993) discovered in her study of ten secondary schools, there is a major division in schools between administrators and teachers. Classroom teachers, departments heads, guidance counsellors, special education teachers, other curriculum resource teachers, and teacher-librarians, all see themselves as teachers, not administrators. The use of the terms "leader" or "leadership" is problematic in educational research, in that teachers also tend to associate these terms with formal leaders (administrators) and administration (Brown, 1993). Therefore, teachers, regardless of their role, do not tend to identify or to describe themselves as leaders. In this paper, an attempt is being made to close the gap between these two major divisions, to examine and discuss the roles of both formal (administrators) and informal (teachers) leaders.

The Case Study

The Context and An Overview of Red River Elementary

Red River Elementary School¹ is a kindergarten to grade six school with 450 students and a staff of 28 teachers, with one full time administrative unit which is shared between the principal and the vice principal. It is next door to Red River Junior High School, a modern building which draws approximately 470 students for grades 7 to 9 from various schools. The school is served by a district office that is responsible for a large geographical area based in the town of Red River. Recently Red River Elementary has experienced a large turnover in staffing with 60% of the staff having taught there less than three years. Students range in socio economic background from upper middle class to poor. The school is located in a town that is also the local area service center.

Red River Elementary² has made substantial gains in moving towards a collaborative work environment. The principal, Mrs. Senior, described how, ten years earlier, there were two distinct staffs, primary and elementary, who did not even talk to one another:

No one talked to each other, there was no staff room, teachers stayed in their own room, and the primaries got together in one room. It was primarily a bitching session.

Mrs. Senior, who was the vice-principal for most of these ten years, worked hard with the principal at the time and several other staff members, to bring teachers together. It began with social events, such as brunches, cross-country skiing outings, and supper parties. Staff meetings became opportunities to share coffee and muffins. As soon as space became available, a classroom was renovated to make a large staff room, big enough to accommodate the whole staff. Mrs. Senior reflects:

We worked hard at doing something special together every month to bring everyone together. The principal was very people-centered and made it easy for people to work together. We learned a lot from him. I would say that was the beginning of it but it has evolved over time.

In the previous two years, the school had been involved with multiple initiatives. The main ones were:

A new student evaluation program. This was mandated by the district and involved a great deal of work by teachers since it involved testing (Pre & Post), conferencing, and individualized objectives.

Reading recovery program. This program was initiated by the school in response to test scores which revealed that some Grade Three students were as much as 18 months behind their appropriate reading level. Through teacher cooperation in class al locations, primary teachers provided extra help in remedial reading by adding an extra period for the end of their day and instituted a Home Reading Program.

Global Education. The school was selected as one of a number of provincial global schools. Out of five possible global education themes, the school selected Peace Education and Recycling for special emphasis. Peace Education was seen as tying into the school's focus on school discipline, specifically on conflict resolution. Recycling was aimed at recycling paper collected in the school. Global Education was seen as part of enrichment, integrated across the curriculum, rather than an add-on.

Computers. The school identified the need to update computer resources for students, and within the previous two year had raised \$44 000 through external funding and community fund raising. A teacher was hired who could work with the school's half-time teacher-librarian to support classroom teachers attempting to integrate computers into their curriculum. In the first year, the emphasis was on teacher training, in the second year it moved to students. The school had a modern computer lab, entirely networked.

Enrichment. The school was concerned about challenging gifted children and teachers were trying a variety of approaches: an accelerated mathematics program was tried in grade five, contracts were available for independent work, some students were pulled out for special attention by a resource teacher. As well, enrichment clusters (using teacher and community volunteers) allowed students to pursue special interests in a variety of areas (for example, ceramics).

Multi-age groupings. This type of class was offered as an alternative approach for students and teachers. One class already operated in the school, another was being planned.

Discipline. After consultation with the school community, the staff had adopted a school-wide discipline policy and enforced standard rules for lunch supervision.

Mathematics. Due to declining test scores, Mathematics Achievement was placed at top of a list of initiatives. Meetings were held with the district program coordinator for mathematics and action plans developed.

Stage One: New Beginnings for Leadership

The school had already experienced a failed first attempt at a formal School Improvement process a few years earlier. One teacher commented that it never really got off the ground, so a new approach was begun after a four-member Leadership Team (vice-principal and three teachers) attended a district sponsored Leadership Institute in the last week of August, just prior to school re-opening. When school began in September, an invitation was extended to other teachers to join the Team, and two volunteered. With the addition of the principal, a seven-member Leadership Team was formed in the school.

The staff decided to become part of the Team Leadership project, a continuation from the August Institute. In a staff leadership survey administered at that time, 92% of the respondents strongly agreed with the statement: "Teachers work in teams with colleagues across grade levels in our school" and 100% described their school as participatory, democratic, and collaborative. Eighty-four percent of the respondents attributed "a lot" of leadership coming from a committee composed of administrators and teachers. With such results, it was felt that the school was a likely site for successful team leadership. There was considerable evidence of the existence of a culture that would support such leadership, illustrated by this remark by one teacher immediately following the Leadership Institute:

Just attending the week long institute made me feel more of a part of a school team. I learned more about my teaching peers over this week than I did over the past three years. I'll always feel a closeness to them that wasn't there before.

Therefore, at the beginning of the new school year in Stage One, Red River Elementary appeared to be positioned to move towards a decentralized leadership approach and shared decision-making. The principal, who described herself as a collaborative leader, demonstrated a commitment to shared decision-making and an enlarged role for the Leadership Team. Although she had missed attending the Leadership Institute due to a prior family commitment, she was briefed by her vice-principal and independently read all the reading material from the Institute. She was willing to try new forms of leadership, including the use of a Leadership Team, and had agreed to the idea that the chair for Leadership Team meetings would rotate (a suggestion made in one of the Institute readings). The principal, vice-principal, and two of the teachers on the Team, kept journals for the first four months after the Leadership Institute. An examination of entries made by all four in the first two months reveals contrasting views between administrators and teachers, a significant finding which will be explored more deeply in this paper.

Although the principal had endorsed the Leadership Team, she was sceptical about the idea of a rotating chair. She was willing to give it a try, but she was doubtful about its potential -- in her journal she noted that it may "possibly" work, but "I think we will find that 'the Principal' will have to act as the chairperson continually out of necessity. But we'll see." Six weeks later, in her journal, she was sceptical about the whole concept of a Leadership Team and questioned its applicability to a school:

The leadership team concept appears to be built upon an industrialized concept. But unless I take a different approach than what we are doing, this is not going to work. I cannot call a board meeting at 10 o'clock in the morning. The only time for us to meet is after 3 o'clock -- not exactly the best time for decision-making. We seem to be working in isolation, not even discussing our journals. **Time** is the reality we are working under. Should I refocus team?

To add to her problems, the members of the Leadership Team had made a decision that their only committee work would be that of being a member of the Team. Mrs. Senior was forced to soon question the wisdom of that decision.

We decided one committee only in this case, the leadership team, but I don't know if this is best scenario. This is ineffective, another layer. I seem to be doing more, but going nowhere. Let's examine what we are about. How to make this work? WHEN??

The problem was that there were numerous other school committees but all her best leaders were on the Leadership Team. She began to be plagued by self-doubt, seeing herself as less effective as a leader. She began to question the whole Team Leadership initiative:

Feeling really constrained -- my decision making and action time have really slowed down it seems. Whether or not its true, I perceive myself to be less effective in "time taken to getting things done" -- Is it just me? Every time I talk to another principal, they seem to have moved on. Are they involved in this "Leadership Team Initiative"? How will this team fit in with school councils?

Nor was she alone in her concerns. The vice-principal, also a member of the Leadership Team, had similar concerns:

In looking at the agenda for our meeting tomorrow "Examining our roles", I am questioning the whole idea of what is the role of the leadership team & of its individual members. Are we the facilitators for getting things actioned? Is it our responsibility to carry the brunt of the workload? We are full-time teachers. In primary/ elementary schools we do not get time like department heads at the high school level. Often the staff will come up with novel ideas, but few take the initiative to act upon them. Once a "leader" steps onto a committee, it seems that the "leader" also ends up doing the work.

She was also feeling overwhelmed:

As far as the leadership team is concerned, with my other three hats (Kindergarten - half time, but because Kindergarten day is a half day, I'm still responsible for a full program; remedial teacher and vice-principal). I'm feeling pressure to take even more responsibility and I haven't yet found a way to make 25 hours out of a day!!

However, the teachers were seeing things differently. A teacher on the Leadership Team was much more positive: "Our principal also said we will all take turns chairing our committee meetings. I really feel a sense of being an active participant in decision making." At the end of two months, when the two administrators are questioning the whole process, the same teacher observed: "Our voice truly counts in these meetings and all sides are weighed. Our principal really does sit back, listen and value our input." Another teacher on the Team who kept a journal was also positive about the whole process and had begun to assume responsibility outside her own classroom. After having attended a conference on global education on behalf of the school, she commented that school-wide leadership for this initiative would work, that leadership "will filter down from the leadership team."

Stage Two : Leadership Roles Stabilize

By Spring, the Leadership team had worked out their roles and Team members were assuming a major leadership role in the school. The idea of a rotating chair for the Team had been dropped by the previous Christmas. There was agreement for this move. One teacher member of the Leadership Team recorded in her journal that much of the work of the Committee was driven by "directives" from outside the school, and therefore it made sense to have the principal assume the chair permanently:

It was decided by the team that in the interest of time (of which there is precious little) the chair will not rotate. The principal will chair Leadership meetings because so much of what we do/ discuss comes out of Board/Department directives or initiatives. The principal is first in line to hear these things. She would have to meet with the chair each time prior to a meeting to explain the agenda. Neither party has the time to expend at this.

Time was indeed a concern, for the school was a busy place, with a complicated committee structure coordinated through the Leadership Team. The way to have ongoing consultation with teachers and involve them in the decision-making process was seen as through committees. Separate committees were already in existence from previous years for: Primary, Elementary, Global Education, Enrichment, Extra Curricular, Student Evaluation, Public Relations/Yearbook, Social, Learning Resources/Technology, Mathematics, Science, Health, and Spelling. Each of the seven members of the Leadership Team were chairing one or more of the school's major committees. The Principal expressed satisfaction with the coordination through the Leadership Team, because she felt it provided good communication between the Team and all the Committees. However, scheduling in order to accommodate the members and also to allow the principal to attend as many different meetings as possible, became complicated. The first Monday of each month was for staff meetings, the second week was used for committee meetings, with different committees meeting on different days, allowing the principal to attend them all. The third Monday of the month was used for an extra staff meeting if needed, and the fourth Monday was for grade level meetings (as needed). The principal and vice-principal devised a committee reporting form designed to record the actions undertaken and decisions made for every committee meeting. These forms were to be passed in to the principal, who would read them all (to keep herself informed) and then file them in a section of the School Profile binder.

The Principal, aware that the members of the Team were full time teachers and received no release time to undertake extra responsibilities, thought it ought to be her role to undertake actions that were necessary but would be extra work for teachers. The result for the principal, and many of the teachers, was that almost every afternoon was blocked with after school meetings. To catch up on administrative work, the principal admitted that she was back in her office most nights: Monday to Thursday evenings until 10 or 11 p.m., except for two Tuesday nights a month which she and the vice-principal took off to attend a Women's Group, and she usually also worked a half-day on Saturday and/or Sunday, depending on

the amount of work piled up. The work was such that seldom, she explained, was she the only one back after hours; often the vice-principal was, and some other teachers.

Some teachers felt that there was a change in the leadership approach in the school. One teacher commented: "There has been a move away from top-down leadership to consensual decision-making where all staff are involved." Although teachers generally felt that their voices were being heard and they were included more in the decision-making process, this was especially true for those teachers who were on the leadership team. One such teacher, when asked if she saw herself as a leader, commented:

That depends on the definition of "leader". But I certainly feel that I am participating in decision-making, contributing ideas, am listened to, have opportunities to be involved. I think that I affect the decisions that are made. If that's being a leader, then I'm a leader. But I don't ever pretend to be on the scale of the principal or VP or other very competent teachers who are breaking new ground. I don't see myself as a leader in that way.

The role of the principal was seen by a staff member as changing with the introduction of a Leadership Team:

Over the year this position, I think, has changed dramatically. Now there is less authoritarianism and less decision-making centered in the office... Very solid direction, great deal more consultation, openness, a notion of principal as leader. [There's a] notion of collaboration and co-workers but this does not diminish the recognition that this person is the chief manager in the school.

A veteran teacher in the school commented, "There is not as much one-sided information sharing. It has been more collaborative and getting concerns from the staff."

Stage Three: Coopted Team Leadership or Shared Decision Making?

A year later, an interview with the principal revealed that committees were still functioning and the Leadership Team, meeting twice a month, coordinated the committee activities. The principal still tried to attend all meetings, for as she explained: "I do go, I like to keep my finger on things, that's my option though. They go and take care of it. I don't feel obligated to go to all of them. I do try, but they know it's their responsibility." No new initiatives had been introduced, although the principal had undertaken to work closely with parents, attempting to establish a school council. Parents and students were involved with the school council steering committee, the discipline committee, and the global education committee. The principal explained that the Leadership Team had been trying to decide where to focus their energies. The members of the Team had developed a democratic way to choose "which initiatives to keep an eye on" (through chairing the appropriate committee).

There was no doubt but that the principal was proud of Red River Elementary. She took pride in the fact that the school tried "a lot of things because we're

interested in breaking with tradition". One such example was the global education initiative which was wanted by all the staff, Mrs. Senior felt, because "We are constantly looking at such things." She concluded, "I would say we are probably the most nontraditional school" in the district.

The question of concern in this study, however, was whether or not the leadership initiative had made a difference in leadership approach and in shared decision making in the school. To obtain an answer to that question, the principal and one teacher were asked, during separate interviews, to sketch a diagram to show how leadership looked in the school. The principal's sketch revealed that collaboration and shared decision making existed, but only within the parameters of the traditional hierarchy. Although her illustration was that of an interactive web which included parents, students, teachers, and administrators, the principal's role was shown as traditional, for as she said: "I'm the ultimate decision maker, I have to be. I'm part of the team, but eventually I'm the one who has to make the decisions. The buck stops with me." She placed herself in the center of the Leadership Team's circle. She noted that the vice-principal's role was important in making decisions but it is interesting to observe how the vice-principal's role supported the traditional role of the principal:

When it comes down to making that final decision, she's my sounding board and she shares with me her thoughts and we take into consideration what the total Team is saying to us.

The vice-principal had no problem with this role, for as she explained, while discussing the use of consensus in staff meetings, "Regardless of the procedure, the Principal is ultimately accountable and has final say."

Within this traditional role, Mrs. Senior explained that she consulted with the Leadership Team, that when items came across her desk, "Then I'll go to the Team and ask what they think." This, she explained, was a change in her way of consulting with teachers: "Now I bounce it off the Leadership Team but before I would bounce it off the entire staff." The new process, then, was seen by the principal as one in which there has been an extra step created between her and the staff. That extra step, she felt, caused her to be frustrated during the previous fall, when she was trying to understand and introduce the concept of a Leadership Team in the school. Prior to this, her leadership approach was to first discuss things with the vice-principal, then take it directly to the full staff. Now she consulted with both the vice-principal and the Leadership Team prior to taking matters to the full staff. Therefore, she concluded that a Leadership Team was probably not necessary nor needed. She felt she could "live with" such a Team since, as she explained, "I think they've helped me do what I normally would have done." Although she recognized a slight shift in leadership approach, she did not see that it contributed to better decision making: "I felt we were there before we ever went to a Leadership Team Approach. I really did."

Teachers, however, did not see it this way. In sharp contrast to the principal's perception, another member of the leadership team, a teacher leader, interviewed at the same time as the principal, saw leadership as more equalitarian. In his discussion of school wide leadership, he limited his discussion to leadership for curriculum delivery. In his sketch of leadership in the school, curriculum was placed in the

centre, surrounded by a group of co-workers (principal, teacher-librarian, classroom teachers, special services teacher), all of whom delivered the curriculum to the students who were placed in an outer circle. The co-workers within the circle were closely connected, although some individuals were more closely connected to some colleagues than to others. He saw leadership being provided by "a group of equals working to deliver the curriculum" with the emphasis on the student:

We all have little roles to fulfil that are a little different but it is an equivalent role. We come into significant play at certain times, just as the special services teacher, the classroom teacher, and the principal do at certain times. That's how I see most of my day-to-day role as we work to address the needs of this larger student body.

Analysis and Interpretation

Incompatibility in Perception of Shared Decision-Making

This close examination of implementation at Red River Elementary reveals that team leadership is much more complicated than it first appears. One of the most serious problems for educational researchers seeking to understand the process of implementation of such a concept is that of incompatibility in the perceptions of the degree of shared decision-making actually taking place. There is no doubt but that the principal was a key player in introducing the concept, and that she has struggled and worked hard at trying to understand it and to implement it. What is noteworthy, however, is that she was never convinced of a need to change the leadership structure in the school, nor did she seem to question her own conception of her role as principal. Describing herself as a collaborative and consultative leader from the very beginning, she did not appear to see a contradiction between that image and the other image she later paints of herself as "the ultimate decision maker". In fact, she has never really challenged the old ways of making decisions in the school. Why then did she participate in the Team Leadership Initiative? In her interviews, she provides two reasons: first, she wanted to cooperate and be involved with what is a district endorsed initiative, for she wanted her school, Red River Elementary, to be on the leading edge of innovation in the district; and second, as a professional, she wanted to be the best principal she could be, and was willing to try new leadership approaches. Although she was doubtful about its use and potential, she did put a Leadership Team in place, but as she herself admitted, it was initially a source of frustration. At the end of the first year, a Leadership Team was in place and its role mainly revolved around the coordination of committees within the school. In the principal's view, it had strengthened and reinforced the old way of doing business, which was making the committees work better. However, the principal felt that nothing had really changed except that, before going to the whole staff, the Leadership Team advised her rather than her having to rely solely on the advice of the vice-principal. Mrs. Senior remains, at least in her own view and that of her vice-principal, the ultimate decision-maker.

Yet, many of the teachers see things differently. Throughout this process, in their survey responses, their journals, and their interviews, they revealed that they perceive the teachers' role in decision-making as having been enlarged. Eight of the ten teachers interviewed reiterated the same message, that they were consulted, that they did have "a great deal to say over those matters which our school controls". Of

the two who expressed negative views, one teacher responded, "In some areas, all teachers are given a chance to voice their opinion; other areas not, it seems that administrators decide what gets opened up for discussion." The other, when asked if decisions are reached in a collaborative matter, simply answered, "No, top down."

What can we make of the differences in the perceptions of the administrators and teachers? Are teachers influencing the decision making process as much as they think? Is the principal really the ultimate decision maker in the school? Is she collaborative and consultative? Can she be both? What, if anything, has anything really changed in decision making in the school? There was increased teacher involvement through membership on the Leadership Team, but most teachers' input continued to be through committees, the same as it had been before the Leadership Team was formed. The teachers on the Leadership Team, because they were better informed and met with the Principal regularly, felt that they were influencing decision making in the school. Whose perceptions are accurate?

Two Different Interpretations

At least two different interpretations can be offered. It can be argued that rather than a decision-making role, the teachers on the Leadership Team have been coopted by the administration to assume a monitoring and administrative role, as they monitor committee activities, report back on it to the principal, and generally facilitate the committee work as chairpersons. Although everyone is working extremely hard and feeling the time pressures from all the committee and Leadership Team meetings, this would suggest that the power relationship between the administrators and the teachers have remained basically unchanged. Now, instead of one vice-principal acting as a "sounding board" between the principal and the whole staff, the Principal can use the six people on the Leadership Team for that purpose. The difference between being a "sounding board" and a genuine participant in shared decision-making is immense. The result is that the principal remains the "ultimate decision maker." But this interpretation does not appear to be consistent with the survey data, in which 100% of the respondents described this school as "participatory, democratic, and collaborative."

But maybe there is another interpretation that could explain this difference in perception. Maybe Mrs. Senior believes that as "the principal", the formal leader, she ought to be "the ultimate decision maker", and is uncomfortable admitting even to herself, and certainly to outsiders (in this instance, university researchers) that she depends on others to help her make the best decisions. Maybe Mrs. Senior is, in practice, actually "collaborative and consultative" (as she claims to be) and maybe she does, in fact, rely on shared decision making with the Leadership Team and the rest of the staff to a greater degree than her responses in this study would suggest. Mrs. Senior, like many other formal leaders, may very well hold, buried deep in her unconscious mind, an unexamined, tacit view of leadership such as the model described by O'Toole and quoted in the introduction of this paper: the model of leadership as "a solo act" by the "strong leader." Perhaps Mrs. Senior's own self-doubts about leadership are being revealed in her responses in this study. Can it be that, wanting to give the appearance of being a strong leader to outsiders, she feels compelled to draw on the notion of being the strong, solo leader, the ultimate decision maker? If this is the case, then the teachers' perceptions may indeed be more

accurate, and shared decision making may indeed be stronger in the school than the first interpretation would suggest. The inconsistency between administrators' and teachers' perceptions might therefore be explained as the difference between the principal's explicit theory (in which the principal describes herself as collaborative and actually acts that way in practice) and her tacit theory (in which she sees herself as the ideal principal: the ultimate decision maker; the strong, solo leader). This explanation is more consistent with the responses in the staff survey.

There is insufficient evidence to strongly support either interpretation. What is clear is that understanding such a process requires intimate knowledge of the context: the people, the process, the culture. It reveals that implementation and change of leadership approach is a complex process, not transparent even to those involved. This single case study raises interesting questions that can guide future work. Such questions include:

- " Are teachers who normally do not see themselves as leaders easily coopted into a facilitative rather than a decision-making role? Or is the facilitative role a valid form of leadership and instrumental in shared decision making? How do teachers define genuine decision-making? Do teachers have low expectations for their role in school-wide decision-making, willing to settle for less than full participation, since they do not see themselves as leaders? What does full participation in school wide decision making look like in practice? What images do teachers have of teacher leaders engaged in shared decision making?
- What images do principals have of shared decision making? Are principals bounded by traditional, tacit models of leadership, of leadership as a "solo act" of the "strong" leader? If so, what support do they need to challenge their traditional, tacit view of being the ultimate decision maker? Are there differences between principals' tacit and explicit theories of leadership?
- How do school practitioners (administrators and teachers) find the time to engage in genuine shared decision-making?

Conclusion

It is clear from the case study of Red River Elementary that moving towards team leadership and shared decision making is complex and extremely personal. If Red River Elementary is to engage in genuine shared decision-making, Mrs. Senior and the teachers on staff must re-examine the role of committees in decision-making, and discuss frankly the expectations of administrations and teachers surrounding leadership roles. It appears that there is a strong interest in collaboration and shared decision-making in Red River Elementary, but an uncertainty of what this looks like in practice. This case reveals that we cannot assume that those who are willing to explore the potential of team leadership will be able to make such shifts in leadership approach without effort or difficulty. It illustrates that such a leadership model will require participants to challenge their old mental models of what leadership is and how it is practised. Understandably, successful implementation of shared decision

making and team leadership is difficult for it challenges the cultural norms that have determined models of leadership in schools for the past century.

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NOTES

1. Red River is a fictitious name. To protect confidentiality, names have been changed.
2. This case study was conducted over a two year period, with site visits, institute interventions, interviews, observations, and document analysis (including journal analysis).

CHANGE AND THE STRUCTURE OF SCHOOLS

RETHINKING GLOBALIZATION AS A GUIDING PARADIGM FOR EDUCATIONAL CHANGE

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Globalization, as it is expressed by business, espoused by economic theorists, and enunciated in the popular press, is fundamentally about social and cultural change: change to the strength of our national identities, habits of consumption, modes of communication, patterns of investing, access to information, management of institutions, delivery of health care, and even the waging of war. Bound within the notion of globalization is an assumption that a rapidly changing world requires systemic educational change. Curricula changes are envisioned that will allow high school graduates to better make their way in a globalized knowledge economy that is anchored within a digitized and interconnected world. Recent Canadian curriculum documents (Atlantic Provinces Educational Foundation, 1996; Governments of Alberta, British Columbia, Northwest Territories, Manitoba, Saskatchewan, and Yukon Territory, 1998) are insisting that citizens experience learning opportunities that will equip them with the appropriate skills, knowledge, and attributes to compete in global environments. These documents take their lead from the publication in the US of *A Nation at Risk* (1983), in which the guiding philosophy was that the success of international commerce and the nation's future prosperity are dramatically linked to particular skills sets found in, and required by, transnational corporations. A cornerstone of the educational mandate is the integration of information and communication technologies (ICT) directly into core subject areas.

It is postulated that an increase in the demand for knowledge workers is building a critical mass strong enough to begin destabilizing the staid Canadian educational status quo. It can also be postulated that globalization, with its heavy reliance on the Internet and ICT, is influential enough to cause increasing numbers of school teachers and administrators to take a second look at the underlying tenets of public schooling and begin experimenting with alternative teaching methodologies and curriculum arrangements that center on the embedding of ICT and the Internet directly within praxis. But specifically, what are the meta changes to Canadian public educational policy that globalization, with its interdependence on ICT, requires and how might teachers respond to growing pressures to alter what brought them into teaching in the first place?

This article evaluates and ultimately questions globalization as a warranted reason for bringing about systemic changes in classroom practices. It examines the philosophical soundness of educational reform based on an economic construction of human interconnectedness and arrives at a more considered understanding of required change. Critical theory is used to flesh out some of the underpinnings of globalization and to problematize the use of a globalized world-view as offering sufficient reasons for undertaking sweeping educational change. It also relies on Joseph Gusfield's (1981) framework for addressing the delineation of public problems to arrive at a more historical understanding of globalization that expands beyond the narrow lines set out by special interest groups. Globalization is viewed as an artefact with embedded strengths but also weaknesses. With the Roman Empire in mind and an understanding that globalization is not necessarily a new phenomena, it is used

here as a concept that sees the increase in the speed of communications, the shrinking of distances, the reliance on international finance, the urbanization of peoples, the homogenising of consumptive desires and the weakening of independent national states as elements within the concept.

Globalization's Critical Mass

To think theoretically about appropriate curriculum change based on the influence of globalization requires an examination of what is fundamental and what is not in schooling. Transnational corporations have an insatiable need for flexible knowledge workers, workers who come armed with the new basics: an understanding of team work, an ability to communicate through a variety of new media, an ability to use digital technologies to solve a variety of complex industrial problems, and a command of multiple literacies. All transnational corporations with global information and communication networks are re-engineering their networked structures, research and development procedures, delivery routines, and manufacturing and services systems. The Web has dramatically changed corporate organization and communications structures. Indeed, Intel's Andy Grove has driven this point home when he bluntly stated in a June 1999 interview on CNBC's Morning Call that "all businesses will be Internet businesses' or they won't have a business."

Information and communication technologies and their accompanying applications are now invaluable tools to most university, civic, and business endeavours. From nanotechnology to biotechnology, from robotics to computer-aided designs, from the use of synthesizers in music production to animated film-making, and from census databases to voting tabulations, information and communication technologies are essential for the completion of both routine and complex calculations, predictions, procedures, and diagnoses.

This business reality has been picked up and used as a guiding paradigm in recent regional Canadian curriculum reform documents (Atlantic Provinces Education Foundation, 1998 and the Western Canadian Protocol for Collaboration in Basic Education, 1998). A central motif of these documents is that old educational practices are no longer sufficient for students to participate fully in post-industrial society (see Lankshear 1998; Barrell, 2000; Castells (2000). These documents acknowledge that businesses no long require great numbers of workers trained in assembly line, factory style models of education. Typical of this discourse is the Atlantic Canada English Language Arts Curriculum Guide: Grades English 10-12, (1997) which states:

Pervasive ongoing changes in society-- for example, rapidly expanding use of technology-- require a corresponding shift in the learning opportunities for students to develop relevant knowledge, skills, strategies, processes, and attitudes that will enable them to function well as individuals, citizens, workers, and learners. To function productively and participate fully in our increasingly sophisticated technological, information-based society, citizens will need broad literacy abilities, and they will need to use these abilities flexibly. (p. 1)

Like other reform documents in the United Kingdom, the United States, and Australia (see Lankshear, 1998, p. 352; DEE, 1997), Canadian curriculum documents

now push an economically competitive discourse. The Australian term for functional workplace skills is "effective literacies" (Gorman, 1999). Surrounding these literacies is an economic imperative that envisions human capital competing in the international marketplace to gain dominance over other competitors. At stake is the ability to keep jobs at home and not see transnational companies go elsewhere in the global economy to find workers who meet their particular needs and corporate requirements.

Canadian curriculum documents note that economic and social change now require increasing numbers of people to engage in what Peter Drucker (1969) called in the 1950's and 60's knowledge work. The documents reflect society's need for what Richard Reich (1992) identified in *The Work of Nations* as knowledge manipulation workers (p. 171). This demand is based on an understanding that corporations have downloaded greater production and service responsibilities to their frontline workforce while placing a greater emphasis on teamwork and group collaboration to solve complex problems within physically interconnected or networked environments. It also acknowledges the access frontline workers now have to global information and resources.

Widespread worker flexibility is already a mainstay of many institutions where teams of teams are assembled to solve particular client problems or to devise new products and services. Once solutions are found or particular products designed, the institutions dissolve the conglomeration of workers only to reassemble them into new teams of different players ready to take on projects that demand different skill sets and worker attributes. Whatever the civic bureaucracies, corporate structures, or business enterprises, one common requirement of skilled workers stands out: an ability to cooperate in interdisciplinary teams, using various information and communications technologies to solve complex problems.

Guiding this work is a just-in-time mentality where solutions and products are brought immediately to market. In these environments there is an understanding that solutions to problems come from the fluidity of blending information from multiple sources and experiences. The problem-solving knowledge that moves about and within the teams' process is a value-added by-product in and of itself. The ability to juggle information and cascade multiple solutions through corporate or civic structures becomes a key attribute of new players or workers. These environments do not rely on people working individually around discrete, crystallized, discipline knowledge where memorization and routine problem-solving skills play a large role. It has become common practice within Canadian policy directives to say that the majority of schools, as they are currently constituted, are not efficient suppliers of workers capable of meeting the skill sets needed by knowledge workers in globally networked environments because, in general, schools are not mimicking these working structures and environments.

Barrell (2002) has explained that public schools have been efficient suppliers of routine workers. However, there is a glut of routine workers who more and more are being pushed into temporary or part-time, contractual, non-union jobs with limited pensions and benefits. Examples of this work are the lower ranks of the military, retail sales, childcare, healthcare (aides and orderlies), fast food services, or janitorial work. Adding to the plight of routine workers is the fact that globalization allows any and all routine office work, data entry, component assembly, and 1-800 call-centre

work to be drained from particular high salary regions and exported to countries with the lowest overheads or with the ability to give corporate tax breaks and incentives. Conceptualising globalization within a framework that sees the aim of schooling as an investment in particular skill acquisitions, policymakers begin to feel the nation's very economic survival is at stake and that educators had better start doing a more credible job of supplying workers capable of matching the technological skills and attributes required by the nation's corporations.

Adopting globalization as a guiding paradigm has required a heavy investment in technology. Caught by a construction of globalization that links a new world economic order, the digital age, the information age, mass media and notions of world interconnectivity, Canadian communities have responded by rushing to find additional funding for school technologies. Parents have sought out various ways to raise more and more money for new equipment and software. Superintendents and principals push for the forging of partnerships with local businesses in order to gain access to various technologies. Lost in the rush, solutions become technologized and simple notions of access subsume the fundamental reasons for intellectual engagement with technological applications in the first place.

The very critical point here is that a chosen course of action becomes fixed within the problem itself. For example, computer literacy has become analogized to basic literacy and visions of future success for students (Larcey, 2000). Thus connectivity, software upgrades, computing skills, and issues of access to ICT becomes paramount in the minds of policymakers and educational communities. By shifting the focus of attention away from the underlying structures that may have caused a literacy problem or a digital divide in society in the first place, a technological solution is promulgated. By focussing attention on a "technological fix" (Light, 2001, p. 711) as the solution to issues of literacy, the underlying purposes for engaging with ICT or the social issues surrounding literacy or the disciplines get lost.

Writing about a technological solution redefining a problem, Light (2001) states that access to technology has not guaranteed much in the past. There is "the shaky causal inference that closing one gap would close another" (p. 715). It is still not clear that the existence of ICT in schools advances student performance. The social and cultural dynamics of the class, the personalities of teachers, differences in academic subjects, and the organization of the school, all combine to make it difficult to expect or find a uniform effect (Fischer, 1992; Cuban, 1986). This is not to say we should avoid the use of technology in schools. Indeed, the thoughtful use of technology and the intelligent integration of ICT can greatly enhance student learning (see Clifford & Friesen, 2001; Papert, 1993).

Investing heavily in the concept of globalization as a governing paradigm might be all well and good if globalization were a stable concept and accompanying technological tools had some permanency. Opportunities to learn today's ICT skills do not necessarily correlate to success in using future technologies. Technology has a way of advancing that can render equipment and previously gained skills and knowledge irrelevant (IBM key punching machines, Telex machines, eight track tapes and players, five and half inch floppies, zip drives, Logo, spirit duplicators). Light (2001), as an historian of technology, comments, "the digital divide discourse, banks on the assumption that computers, the Internet, and other emerging technologies will

persist in a form and with content relevant to educators" broad goals. Historical studies of technological change indicate this is not a safe assumption" (p. 719).

Often there is no slow evolutionary or linear build up of skills with new technologies. New applications appear and can very quickly render some worker skills and abilities relatively obsolete. For educators this lends support for insisting on placing greater emphasis on classroom inquiries and the actions of students and teachers rather than investing too much in particular kinds of technology. It also means positioning various new technologies as interchangeable tools whose functionality will be displaced over time.

A rule of modern globalization is that basic computer skills are available in most cultures and societies. Insights into how the knowledge economy functions has allowed many third world countries to leapfrog over particular national educational deficits and train people in the specific computer skills transnational companies require. Contracting for data entry, for instance, is a highly competitive business. Because of overhead costs, third world countries have a distinct cost advantage over first world nations in gaining such contracts. The time to learn new applications in the knowledge economy is often very short; skill acquisition can now be measured in terms of hours and weeks not months or years. When Canadian jobs that have the attributes of being routine, concrete, and sequential can be easily exported to cheaper labor markets and/or done by computers themselves, economic privilege based simply on the circumstances of location is lost. Since a minor amount of infrastructure is required to tap into the Internet, the geography of cyberspace breaks down the advantage of location. When cyberspace breaks down national boundaries and borders then the particulars of the digital engagements we have Canadian students engage in become paramount. They need to be unique, and I believe, imbedded within the natural requirements of the living, evolving, adapting disciplines.

New Working Environments Pressure Educational Reform

Staying with the economic mission/strand of public education, it can be said that in the past both rich and poor have agreed that school has been the gateway through which the young must pass to fully participate in the benefits of society. There has been a general consensus around this point and history shows that various groups have fought long and hard for equal access to the opportunities afforded by compulsory education. Also in the past, high school graduates have had an opportunity to access universities or to take up good-paying, union jobs with high levels of security and pension benefits. However, there is now growing apprehension from both the New Right and the working poor that schools, as they are currently constituted, are not able to provide the skills and attributes necessary to guarantee their children access to dignified work and a reasonable standard of living in the digital age. One result of this apprehension has been the rise of testing practices and parental involvement in schooling through vouchers and privatized education.

In the past, secondary school diplomas have, among other things, signified that the bearer could complete a set curriculum, arrive on time, sit for long periods, move about independently within a highly structured environment, pass standardized tests, and do what was required to satisfy the rules and regulations of a large institution (an image of schooling some parents hold dear). However, these are not

necessarily the attributes needed of workers in a vibrant economy. Public education is now pressured by the dominance of a competitive national economic imperative to become more in tune with the need of transnational corporations for highly competent knowledge workers. Widespread dissatisfactions with the skills high school graduates have acquired has caused a number of companies to move directly into secondary schools and set up shop in a belief they can train the workers they need (Waks, 2000). In the United States corporate influence has at times moved beyond trying to influence the nature and structure of classroom intercourse to direct control.

For example, driven by a global need for IT workers, Cisco Systems sponsors system engineering certificate programs in over a thousand secondary schools in the United States. States Waks (2000),

"The four semesters, 280 'network' academies are in all fifty states and many countries overseas. ...In cooperation with the World Bank and such transnationals as Time-Warner and Kellogg, Cisco provides the entire curriculum and teacher training to participating schools, and sells them the internet [sic] routers and other necessary equipment at a nominal cost" (p. 12 and 22).

Instructional space for art, music, industrial arts, or other publicly funded curricula can be pushed aside to make room for these stand-alone, corporate programs. Adding to the mix of corporate in-house training is the practice of some recruiters to lure tech-savvy kids directly into industry before they graduate from high school thus diminishing the worth of a public, high school diploma in the eyes of many students. The fact that Bill Gates, Steve Jobs, and others do not have university degrees, somewhat erodes the credentialing powers of public schools and universities. What a high school diploma means in terms of a credential has been weakened over the past decades. This has led trans-global companies to continue to set up their own, so called, universities for the training of future and present employees and not to necessarily accept university degrees and high school certificates "as proxies for the ability to handle complexity or diversity" (Waks, 2000. p. 22).

Graduation certificates issued by companies such as Microsoft, attesting to a person's training in particular computer applications, carry substantial clout within industry. Again, such corporate training is a direct challenge to public education's credentialing powers, curriculum, and teaching methodologies. But public education in a democratic society is not all about training workers. The issue before public education is to appropriately adjust to a changing world without giving into unexamined corporate skill demands. Caution is required when displacing or outsourcing the responsibility of educating the nation's students to business partnerships, self-directed learning centres, and on-the-job or in-the-school corporate training centres. However the incursion of the corporate sector into educational spaces does challenge educators to dynamically rethinking the way schooling can be improved. For example it is foolish to bring powerful new technologies into school and try to strap them onto out-moded 19th century pedagogical practices.

Critical Questions for Public Education

As prescriptive pressures for the use of specific technologies intercede into the work of teachers, there are critical questions teachers might begin to ask based on their professional understanding of broader issues.

- How will access to new technologies overcome poor schools?
- Who benefits from closed-ended technological engagements?
- What is lost or gained by moving into virtual spaces for large portions of the school day?
- Will there be long term residual effects by engaging with particular emerging technologies?
- What are the specific engagements with technology that benefit the student's own intellectual, imaginative, and critical capabilities?

Light (2001) reminds us that "historically, powerful political and commercial interests have shaped the ultimate forms and uses of technology" (p. 726) in public schools. Teachers and policymakers need to be mindful of these facts as corporate pressures for engaging technology build. If an economic imperative demands the learning of particular skill sets then we need to be cautious of their real and lasting value to our students.

Before having Canadian students migrate on mass into digital environments and virtual worlds it is important to ask what is being given up, what particular values are being lost, what advantage to human performance is gained? Teachers are struggling to move the use of new technologies toward the creative and imaginative application of these powerful new tools (Cameron & Barrell, 2001; Uptis, 2001). Here again the pedagogical value is invested in and with the student's thoughtful engagements and not in a shifting medium or application.

The New Right (in Canada see for example the promotional video tape of Foundations for the Future, 2002; in the United States, *The Schools We Need*), in mustering popular sentiment, fear, and anxiety about the quality and relevance of public education, promotes the view that things have already gone too far in public education and that students need more structure and prescription. They believe the sooner schools return to the basics (read: the schools they experienced) the sooner things in education will improve. Often the rhetoric is situated around returning schools to a past where discipline is first and foremost about outside control, knowledge is something someone else has, textbooks transmit facts and information to learners, individual differences can be remediated out of existence, and students wear uniforms in gender separated classrooms. The New Right pressures schools to foster traditional values, standards, principles, assumptions, testing practices, and methods of instruction in the face of rapid and systemic economic and social change. It seems their educational clock is set for the traditions of the past; it is certainly not set in time with current Canadian curriculum documents or with the civic or corporate need for flexible knowledge workers who can work in interdisciplinary teams, think "outside the box" and integrate technologies and various digital applications into their learning.

Reformers face varying problems. Community pressure across this country is for schools not to be advocates of broad curriculum change. Schools are not pressured to be leaders in the incorporation of new pedagogical theories, creators of interdisciplinary course work, leaders in educational change, or integrators of new ICT into the various disciplines. It is noted that schools have had a remarkable ability to maintain their overall organization and structure for decades. And while conservatives like E.D. Hirsch (1987; 1996) insist that schools are dominated by progressivism as pioneered by such institutions as Teachers College, Buras (1999) points out that numerous researchers find "schools overall remain traditional institutions that offer teacher-centred, whole class, textbook-focussed instruction" (p. 72). The pressure on schools is often not to be advocates of innovation or to incorporate the newest pedagogies; rather the pressure is to stand by tried and true forms of schooling (the basics) and to reinforce traditional standards, principles, and assumptions. Indeed, one reading of the recently increased emphasis on accountability, testing, and the publishing of classroom test results in local and provincial newspapers all act as a restraint on those teachers and administrators who might wish to venture off the well worn instructional path.

Still, institutional change does occur and existing organizations, no matter how large, can become destabilized and allow for new organizational structures and practices to emerge (Meyer & Rowan, 1999). The collapse of the Soviet Union, the rise of modern China, and the fall of Baghdad act as reminders of these facts. Institutional theorists must be able to account for such change and the forces that bring it about. Globalization does challenge the notion of schools being the single purveyors of knowledge and information and lockstep education procedures and linear views of various curricula.

The technologies that sustain globalization are profound and will continue to advance even if Moore's Law (Brand, 2001) were to dramatically slow in the coming decades. An ever expanding information and communication technological base that spreads information and knowledge through photonic carriers to companies, communities, societies, global environments, and individuals is powerful enough to destabilize the staid, internal, institutional traditions of Canadian public schooling. Furthermore, the availability of primary sources and original materials on the Net challenges the notion that schools are the sole repositories of knowledge. Eight of the world's principle research libraries are now linked through the International Scholarly Communications network of over 600 libraries (<http://www.arl.org/sparc/core/index.asp?page=f50>), abundant statistical data are available through such organizations as Statistics Canada (<http://www.statcan.ca>), networked communications opportunities and the ability to carry on real-time interdisciplinary collaborative work through Internet and Intranet connections are collectively powerful enough to force and support radical changes to existing institutional practices. Textbooks, with their overpowering influence to control curriculum content, are beginning to be supplanted by information electronically gathered by teachers and students. Teachers now have the chance to challenge textbooks and pre-packaged curricula items with their editorially filtered codified information. Teachers can begin to challenge how knowledge gets constructed in classrooms. For instance textbooks often avoid centering the knowledge of the oppressed groups in society (Potter & Rosser, 1992; Apple & Christian-Smith, 1998)) and release into the world textual representations of mainstream thinking. "Findings

clearly show the extent to which content focuses on dominant groups while the experiences of women, labour, and other such groups receive marginal status" (Buras 1999, p. 75). Cultural struggle often succumbs to the need for curriculum coherence thus avoiding the controversy of questioning the parameters of dominant knowledge constructions. ICT, if nothing else, allows for the posing of different sets of questions. It allows the movement outside the confines of the textbook to try and find materials that are more inclusive of varying points of view. ICT allows other voices to be found and brought into play. It allows for the opportunity to do things differently, to show things are more complex. And in return, ICT allows the publishing of student research to the world and the entering into dialogues in authentic ways. The challenge for public education is to use the power of new technologies in creative and dynamic ways to support democratic principles and personal growth. The challenge is to demonstrate that public education is not about training students to work with technology to satisfy immediate corporate needs nor is it about supporting an out-moded transmission pedagogy. The challenge is to find ways of using technology with students to expand their power to think and build knowledge and information.

When the North Central Regional Education Laboratory (NCREL) in the United States did a survey about traditional models of technology effectiveness, the respondents made three major points: a) "effectiveness is not a function of the technology, but rather of the learning environment and the capability to do things one could not do otherwise;" b) "technology in support of outmoded educational systems is counterproductive;" and c) "[the reliance on] standardized tests is ludicrous.... Technology works in a school not because test scores increase, but because technology empowers new solutions" (<http://www.ncrel.org/>). These findings challenge traditional practice. They overtly challenge traditional paper and pencil testing practices.

Students and public school teachers are aware that schooling can be made more relevant in their lives through the wise use of new digital applications and tools. With the digital tools and resources now available to teachers and students, schools can be made more vibrant and exciting places to be. After all, education is not about the technology but where the technology can take students and how it can help them "break apart the old, fragmented, school-bound versions of knowledge that will no longer do" (Jardine, 2002, p. 3).

Concluding Comments

To interrogate globalization is to ask what teachers and learners are committing their resources to and what they are being asked to make education into as lived conceptions and practices. To question the technologizing of the curriculum is to ask what the literate person is being asked to become and to support. It is also to ask what a person is being asked to ignore, displace, or marginalize. Globalization imposes a vision on peoples. A debate needs to take place around the scripts this phenomenon asks individual students and teachers to play out. There is a way of being in the world that will require schools to radically change and blend new technologies and communications devices into practice in emancipatory and democratic ways. Globalization is forcing changes in the values and purposes of education. It requires mobilizing educators around new patterns of instruction and

new modes of operation. Given that globalization is forcing changes to be made to both curriculum and instruction, what will faculties of education be asked to rally around, to understand, and be committed to in the coming decade? What roles can faculties of education play?

Globalization, and its accompanying interwoven reliance on ICTs, advanced communications and access to information, will soon force education faculties to enter into a debate about a myriad of curricula issues. Given what is known about knowledge manipulation work and multiple ways of learning, a debate is needed about whether nineteenth-century subject divisions are still beneficial, whether the sorting of students by grades is still viable, whether assembly-line notions of instruction are still paying off, and whether current testing and grading patterns are worth continuing. Education faculties will be challenged to reconsider what fields of university study constitute suitable preparation for teaching in new environments. Any change to the preparation of teachers often rubs against the educational grain and is resisted by political intransigence. Indeed, educational history, my own observations in schools across Canadian and the United States, and the work of researchers such as Shaver, Davis, and Helburn (1978), Meyer and Rowan (1978), Goodlad (1984), and Cuban (1993), demonstrate that established patterns of schooling have a way of enduring in the face of broad external social and economic circumstances. Unfortunately, the same can be said about many Canadian faculties of education. Traditionally, Canadian faculties of education are rather conservative places with deep political ties to provincial departments of education and strict teacher certification rules and regulations. The Ontario College of Teachers would be a prime example of modern government connectedness and bureaucracy. Generally, teacher education degree requirements are met by courses clustered around "the psychology of learning, classroom management, educational standards [and] assessment, ..." methods courses, and a practicum experience that, more often than not, places pre-service teachers in the hands of teachers pressured to maintain the status quo (Buras, 1999, p. 73). However Canadian faculties of education are beginning to change (Russell, McPherson, & Martin, 2001).

Public elementary and secondary schools will gradually change and respond to the impact of globalization. Accidents in geography are no longer going to sustain our economic and social health; schools will adjust. The challenge for current faculties of education is to somehow welcome pre-service teachers, who by and large have been educated in traditional classrooms, and return them to schools armed with broad ICT skills and a desire to take up the challenge of inquiry based, constructivist, or alternative teaching practices that allow schooling to be done much better. To be sure, delay will see an increase in vocal parental dissatisfaction, the extension of school vouchers systems, an increase in private and alternative school tax relief programs, and increases in corporate involvement in schooling. Each can dramatically affect and undermine the quality of public schools by challenging the level of public funding they receive.

By closely interrogating globalization we begin to see warranted reasons for extensive educational change in both the intentions and structures of schooling. Minor tinkering with the curriculum will not do much to help transform practice. Nor will the incorporation of technology into old pedagogical routines give us the classroom environments that foster robust inquiry. Artificial discipline divisions, the

continued isolation of teachers, deeply embedded images of teaching, conservative community expectations of schooling, and old assessment instruments need to be confronted in the coming decade. We need a major rethink of what really counts as success in school. We also need a more complete understanding of the power of globally linked financial markets and transnational corporations, the corporate isolation of parts of the third world, the corporate consumption of the environment, and the disappearance of the national state. Public educational reform is difficult but we have little choice given the economic, cultural, and social changing that are rapidly taking place around us.

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REFLECTIVE NOTES ON MODERNITY, CHANGING ORGANIZATIONS AND TEACHER EDUCATION

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Textbooks on organizational change often mention many sources of change. For example, many textbooks routinely point out that changes in population size and technology bring about cultural and organizational change. However, in this paper the author suggests that it may be possible to make sense of changing organizations more meaningfully and at a much deeper level if we sensitize ourselves to the ongoing discourses on the spread of modernity, more specifically to discourses on the spread of capitalist modernity. Many scholars now point out that it is this form of modernity that provides the global social contexts in which organizational changes take place. Following this suggestion, this paper highlights some aspects of the discourses on capitalist modernity and organizational change which this author finds relevant, as sensitizing concepts, to his research in the area of teacher education (Singh, 2001; Singh et al , 2001). It is hoped that others might also find sensitizing ideas presented in this paper relevant to their own research and teaching.

Discourse on Capitalist Modernity

Tomlinson (1991) argues that capitalist modernity is technologically and economically powerful but culturally 'weak'. This weakness can be seen in a general failure to direct its enormously powerful forces of production: the results of which are evident in the rapidly developing global environment crisis (p. 174).

In capitalist modernity there is no sense of qualitative social goals in that there is no real long-term direction. Moreover, while humanity faces enormous material problems, people still find it hard to understand why they do what they do (Castoriadis, 1987). Anthony Giddens (1987) sees these later problems as a crisis of moral legitimacy facing capitalist modernity.

It is generally perceived "that the 'modernity' of the present can be distinguished from that of earlier modern periods" (Tomlinson 1991, p. 174). We are said to be living in 'New Times' (Hall & Jacques, 1989) and in a 'postmodernity' period (Smart, 1993). Tomlinson believes that "the prevalent mood of 'postmodernity' (or perhaps 'late modernity' is better) is one of uncertainty, of paradox, of lack of moral legitimacy and of cultural indirection" (1991, p. 175).

Now are these 'new times' characterized? These 'new times' represent a new configuration of global power that "replaces the distribution of global power that we know as 'imperialism', which characterized the modern period up to, say, the 1960s" (Tomlinson 1991, p. 175). What replaces imperialism of the past is 'globalization'. Tomlinson explains that globalization may be distinguished from imperialism in that it is a far less coherent or culturally directed process. For all that it is ambiguous between economic and political senses, the idea of imperialism contains, at least, the notion of a purposeful project: the intended spread of a social system from one centre of power across the globe. The idea of 'globalization' suggests interconnection and interdependency of all global areas which happens in a far less purposeful way. It

happens as the result of economic and cultural practices which do not, of themselves, aim at global integration, but which nonetheless produce it. More importantly, the effects of globalization weaken the cultural coherence of all individual nation-states, including the economically powerful ones - the 'imperialist power' of a previous era (1991, p. 175).

John Urry (1987) describes globalization as a disorganized process symbolizing the "end of organized capitalism."

The history of modernity in the last twenty years or so is preoccupied with the ideas of globalization, the postmodern, Post-Fordist production, late capitalism, restructuring, downsizing (Singh, 2000a) and other similar ideas changing the modern ways of thinking. As a result, the changes in modern world-view of the past have created postmodern conditions, and Giddens (1990) explains the consequences of modernity for individuals and societies. Harvey (1989, p. vii) provides an analysis of "the condition of postmodernity" with a very precise dating, stating that "there has been a sea-change in cultural as well as political-economic practices since around 1972."

In his discussion of Fordism to flexible accumulation, Harvey (1989, p. 151, Fig. 2.10) illustrates how the labour market structure under conditions of flexible accumulation has changed from the Fordist regime of the modern period. Harvey's analysis, like those of many others, shows that the labour market has undergone a radical restructuring. For example, among many other changes there has been "the apparent move away from regular employment towards increasing reliance upon part-time, temporary or sub-contracted work arrangements (p. 150)." Moreover, "the current trend in labor markets is to reduce the number of 'core' workers and to rely increasingly upon a work force that can quickly be taken on board and equally quickly and costlessly be laid off when times get bad (p. 152)."

All this means that our world is changing fast - geopolitically, technologically, socially and culturally. There are positive and negative effects. Some believe organizations are changing but more slowly than environments. Organizations are certainly cost-cutting and continually restructuring, even as they're also trying to flatten, empower, federalize, and even to humanize. But relative to the pace of environmental change, they aren't breaking any speed records (Leavitt, 1996, p. 293).

According to Harvey flexible employment arrangements do not by themselves engender strong worker dissatisfaction, since flexibility can sometimes be mutually beneficial. But the aggregate effects, when looked at from the standpoint of insurance coverage and pension rights, as well as wage levels and job security, by no means appear positive from the standpoint of the working population as a whole (1989, p. 15).

Giddens (1990) discusses dimensions of modernity and postmodernity and shows how they seem to be affecting all major aspects of social reality. He explains how we can make sense of changes in the institutional and globalization dimensions of modernity. According to him, as these dimensions change more and more people get involved in various social movements to protect themselves from the negative

impact of globalization. For example, workers, minorities, and cultural and ethnic groups organize themselves to defend themselves from further exploitation in the changing labor process. People occupying different positions in society get involved in emancipatory politics of inequality. The local concerns get highly politicized. Life politics or politics of self-actualisation takes precedence over societal, economic and market issues. The global issues get politicized from the local and personal points of view. In the event of downsizing, local and personal issues -- as well as issues related to self-actualisation -- get exacerbated and, consequently, much has been written about how managers can plan and implement various aspects of downsizing.

For example, one finds in the literature on downsizing discussion of such topics as: obligations on the termination of employment, notice of termination provisions, material changes to the employment relationship, early retirement allowance, special retirement programs, volunteer separation programs, special separation programs, loss of skills, surplus staff, employment equity impact, re-employment policies, wrongful dismissal disputes, career management programs, career development roles, career development models, career move options, the changing role of the external career consultant, psychology of termination, humanizing the job termination process, practical guides for humane terminations, termination clauses, and well-ness and downsizing. Like the author, anybody involved in research on school restructuring (read basically as "downsizing"), school reform and teacher education perhaps can see how these concepts could serve as sensitizing concepts in helping researchers to articulate and interpret the results of their studies. These ideas have served this author well in various studies he has conducted in the areas of teacher education and reform. Some of these studies are cited in this paper. Moving away from the discussion of modernity now, the author presents below some selected aspects of discourses on changing organizations.

Changing Organizations

Today it is generally believed that "the present day crisis facing human kind is a crisis of perception, the ways in which we perceive our social world." How are today's organizations changing? What perceptions are at work? This section reviews selected discourses which shed light on these and other related questions. Again, this author finds the selected material as good sensitizing material for his on-going research and teaching projects.

Relationships Between Organizations, Employees and Society

According to Noer, the profound and basic change in the typical relationship between employee and organizations, and between organizations and society, is nothing less than the fundamental change in world-view... We are in the midst of a fundamental paradigm shift (1993, p. 15).

According to him, this shift can be measured by using four organizational yardsticks. These yardsticks compare an old world view to a new world view and the changes they measure occur in the assumptions organizations make about the purpose of employees, the language patterns of organizations used to talk about employees, the long-term versus short-term time orientation of organizations, and the optimum operational size of organizations (Noer, 1993, p. 16).

Noer explains that in the old paradigm organizations considered their employees as assets to be developed and cultivate. This orientations has now changed. People are seen as costs to be reduced. Hire and cut has become the ideology. Similarly, the language used by many organizations have changed from a nurturing way of talking to a violent way of having conversations. Instead of using words such as "develop", "help", "grow", today's organizational culture is built on using such words as "take out", "shoot" and "terminate". There has also been change in the old and new time orientation. In the past, organizations were interested in the long tem careers of their employees; they were interested in "making" an employee. Now the focus is on short term, on hiring a person just to do job which needs to be done at a particular time. Finally, there has been change in the size orientation of the organizations. That is, today's organizations focus more on reductionist philosophy (make smaller and cut) rather that on synergistic philosophy (build up and develop), according to Noer (1993, p.17, Fig. 1). To some extent, those who have been following the educational reform and restructuring initiatives taken locally by the school boards, Department of Education, the Newfoundland and Labrador Teacher Association, some researchers at Memorial university, and other stakeholders in the public education, can readily identify the paradigm shift Noer is describing. All one has to do is to read the commentaries by various stakeholders on educational restructuring in the local newspapers to find the "data" supporting the shift from the old to the new organizational paradigm. To be sure, this change is not necessarily always desirable. This becomes clear when one chooses to see educational reform from various critical perspectives.

Organizations and Employment Contracts

There has also been a paradigm shift in the way organizations today handle employment contracts (Noer, 1993, pp. 157-158). Noer (1993, Tables 10.1 and 10.2, pp. 81-82) outlines implicit assumptions, strategies, and outcomes of the old and new employment contracts. According to him, in the old employment contract environment the assumption is that employment relationships are for long term, that promotion is considered as reward for performance, that the attitude of the management is paternalistic, and that organizations tend to offer lifetime careers to their employees. The outcomes of these assumptions from the dominant perspective in the current environment are an aged, de-motivated, dependent, narrow, mediocre and co-dependent work force. All these arguments were put forward to justify the need to restructure schools and other educational institutions by the proponents of the school reform movement in this province. It seems that assumptions made within the new contract orientation have relatively strong impact on the thinking of many policy makers and administrators involved in the education reform process in this province. The new employment contract assumes that employment relationship is situational; that performance is rewarded by acknowledging employee's contribution and relevance; that loyalty is defined in terms of responsibility and good work; that management empowers its employees, and job contracting is offered explicitly. The outcomes based on these assumptions are flexible, motivated, task-invested, empowered, responsible and bonded work force.

The Nature of the Layoff Process

Today's organizations are involved in mergers, downsizing, and resultant layoffs. Generally, layoffs are not neat, tidy, and sterile. They are full of toxic thoughts and feelings. Layoff processes have important effects on both survivors and victims. "Layoffs are often seen as a subset of overall downsizing strategies" (Noer, 1993, p. 88). Downsizing, or the planned elimination of jobs, has become pervasive in the corporate and the non-corporate world of the 1990s and it raises clusters of feelings among both layoff survivors and victims. These include fear, insecurity, uncertainty, frustration, resentment, anger, sadness, depression, unfairness, betrayal, and distrust (Noer, 1993, pp. 89-90). The clusters of feeling could lead to a violent response to downsizing. Thus in some cases downsizing and termination of a single employee or large-scale termination raises fear in organizations that laid-off workers will respond with violence (Labig, 1995, p. 153). Therefore, it has become important for organizations to carefully consider how they conduct any level of layoffs. In these situations, organizations hire consultants or train their own managers for effective organizational downsizing, layoffs, mergers, and restructuring. Thus, consultants and managers are expected to help organizations to develop internal capacity to facilitate both survivors' and victims' catharsis and grieving. In both cases, consultants and managers should provide organizations with a good theory or model to support their work with survivors and victims of downsizing. In this province, the school restructuring process initiated by the Department of Education and the school boards created a cluster of feelings among teachers and other school personnel. The fear, uncertainty and anxiety associated with losing jobs by these group of people were expressed in no uncertain manner in the Telegram and other local papers.

The Old Paradigm Managers and the New Paradigm Managers

Noer (1993) talks about the old paradigm managers and the new paradigm managers. He notes that in the old paradigm the manager's role and description will usually be some combination of the trite and dusty 'ings' of the machine age: planning, organizing, directing, coordinating, and evaluating. Most of these old paradigm managerial functions involve data that can be generated by a computer and handled directly by the employee without any management interaction. The real role of managers in the new paradigm is helping. Managers with basic helping skills are powerful tools in a survivor work force. No one likes to be directed, organized, coordinated, or controlled. When these things are done 'to' employees, they turn around and do them 'to' someone else. The result is a manipulative, co-dependent work force bonded around everything but good work, (pp. 129-130).

Thus, managers at all levels of organizations can learn and use basic helping skills. Noer (1993, p. 130) suggests that "a helping skills workshop for all managers and organizational reinforcement of new paradigm skills and behaviors through the performance appraisal and compensation systems can be powerful tools for ushering in new paradigm behavior." He outlines "_ings" in old and new paradigms that differentiate the changing nature of today's organizations: changes are to be made from old paradigm "-ings", for example, controlling, evaluating, directing and planning to new paradigm "-ings", for example, helping, empowering, coaching and listening (Noer 1993, Fig. 8.1, p. 81). In the area of teacher education, downsizing and merger of schools have accelerated the debate on the best way of providing services to

teachers and other school personnel -- both in-service and in the field. Many education documents prepared in this province reflect aspects of this debate. Suggestions have been made to organize seminars, summer institutes, conferences and forums to consider and evaluate the need to incorporate new paradigm (--ings) as described by Noer and others to train and educate people who play and might play managerial roles in the school system in this province.

Organizations and Paradigms

There are various paradigms or world views that are presently influencing how we perceive, think and talk about organizations (Carlson, 1996). Today, numerous paradigms are available which enable us to understand how various organizations function. Paradigms seem to play a major role in our reasoning processes. Three major paradigms which are often mention in the literature are: positivism, interpretism and criticism. The research done by graduate students in this Faculty (Singh et. al., 1995; Singh, 2000c) have used these three and other perspectives to study various aspects of educational system in this province. The "local knowledge" produced in this way have been very useful in teacher education in this Faculty, to say the least.

Cultures in Organizations

In the following several sections the focus is on the metaphor of culture as applied to organizations. At the end of these sections, the author also describes how he and a colleague have been successful in incorporating some of the ideas discussed below into a research project in the area of teacher internship. In managing change in organizations, managers and leaders need to understand organizational culture. In the school and university systems, managerial and leadership roles are performed by varieties of people, for example, teachers, parents, academic and professional staff. Basically, a cultural perspective on organizations informs us that an organizational's culture holds the organizational together, separates it from outside groups and individuals, and as a form of magnetism draws its members together. There are many images associated with the notion of culture; an organizational culture has been defined by researchers and scholars in many different ways (Carlson, 1996, p. 34).

Schein (1996) emphasizes the need to focus on the concept of culture in organizational studies:

In attention to social systems in organizations has led researchers to underestimate the importance of culture -- shared norms, values, and assumptions -- in how organizations function. Concepts for understanding culture in organizations have values only when they derive from observations of real behavior in organizations, when they make sense of organizational data, and when they are definable enough to generate further study (p. 229).

Organizational Ambiguities

What it is important to keep in mind is that there are many types of organizational cultures. Carlson (1996, p. 35) points out "typically more attention is given to organizational wide cultures and subcultures with organizations, with little

recognition and/or acceptance of organizational ambiguities." In Meyerson's (1991) opinion, a formulation of culture that acknowledges ambiguities will more likely recognize and potentially legitimize a diverse chorus of voices, interests, and perspectives that potentially exists within an organizational... This view, which sees culture as dynamic and multi-vocal, represents a radical departure from those views that depict culture as a mechanistic, hierarchical system of stable relationships and universal symbols (p. 260).

Center and Periphery in Organizational Culture

In any organizational culture there are forces of integration and ambiguity as well as the internalizing of the two (Trice, 1991). Trice (1991) proposes a theory of center and periphery to make sense of this tension. He explains that a set of ultimate ideologies appears to consistently emerge at the center where there is considerable consensus about each one even though they may conflict among one another. These, in turn, radiate outward from the center toward the periphery in varying degrees of consensus to diverse segments of the periphery. This process tends to make for a motley and tangled skein of meanings loosely held together by a distinct center (p. 306).

Organizations, Occupational Cultures and Organizational Learning

Organizations have occupational cultures. Not enough attention has been given to this factor in understanding the nature of organizational culture. Schein (1996, p. 235) points out that what is different today is that organizations are more in trouble and that the environment is changing faster. Leaders both in the private and public sector are wrestling with difficult economic problems, and the public at large has become cynical about the money spent by organizations, particularly public organizations, on social services... All of this requires tremendous learning, how to collaborate, how to become more trusting and open in communications, how to deal with dependency in the new kinds of fluid hierarchical relationships, how to wield personal versus positional power without losing the commitment of subordinates, how to design organizations with fluid boundaries, and so on.

Much attention has been given to the concept of organizational learning. But what troubles Schein (1996) and others (Argyris and Schon, 1996) is that organizations do not learn. They display what these scholars call "learning disabilities" or "defensive routines." These disabilities and routines, they point out, get in the way of the kind of learning that may be needed in today's fast changing world.

Schein (1996) focuses on three cultures of management which, for him, seem to impede organizational learning. He labels these cultures as: the "operators," the "engineers" and the "executives." Understanding of the critical role that these three cultures play in organizations that are attempting to improve their operation is necessary. Understanding these cultures, we believe, also helps us to experience downsizing as survivors. This will become clear as we further explore how these three cultures function in organizations.

Schein (1996, p. 236) defines the "operators" as "the live managers and workers who make and deliver the products and services that fulfill the

organizational's basic mission." From the management's view, he says, it is this group which is typically targeted "in the sense that 'developing managers' is typically conceived of as training people how to better handle the operators in the organizational." His research shows that "it is the operators' group that discovers the systemic interdependencies among the functions and learns to deal with them." The problem he points out is "that the innovations and more effective operations do not diffuse upward in the organizational or last" (p. 236). In order to understand why this happens, we need to understand how two other cultures interact with the "operator culture," Schein says. According to him in every organizational there is a core technology that underlies what the organizational does, and that technology is designed and monitored by various kinds of 'engineers' who share a common occupational culture. I have labeled this community 'engineers,' but it includes the technocrats and core designers in any functional group (p. 236).

The interesting point here is the perspective held by the "engineers" as a cultural group. Schein (1996) gives an example. He says that from the point of view of the 'engineers' on their way to Boeing, the cockpit crew is not necessary because the plane can be flown by computers from the ground. The social interaction that is necessary under unanticipated crisis conditions or the need to reassure passengers is viewed as irrelevant and expensive. If given the choice, the engineers would replace people with machines and routines. Engineers tend to view the need for complex human teams, the need to build relationships and trust, and the need to elicit the commitment of employees as unfortunate and undesirable derivatives of 'human nature' to be circumvented, if possible, because they are so hard to manage and control (p. 237).

What process reveals the presence of a third critical occupational culture in organizations -- the 'executives'? Schein (1996) says that we discover this culture when we notice that operators' initiatives to improve their work is thwarted by the 'engineers.' The "operators" want to implement their new systematic insights and new found desires to work in effective teams, but the 'engineers' do not provide support to their initiatives. Instead, the 'engineers' keep proposing technical solutions that make operators very skeptical and feel threatened because they might lose their job as a result of the technical solution. The resolution of the tension between operators and engineers often result in proposals for new machines or new training programs that have to be pushed 'up' in the organizational for approval (Thomas, 1994, p. 237).

Who is asked to approve the 'engineers' request? The "executives" - the third cultural group.

Schein (1996) here is talking of the "executives" who have worked hard and have been promoted to the position of CEO (Chief Executive Officer). He points out that the essence of this role is financial accountability to the owner shareholders, often embodied in the principle to keep the stock price and dividends as high as possible... The essence of their status is that they are the place where the buck stops, where ultimate accountability lies" (p. 237). From the viewpoint of this group of people "people become 'human resources' and cost factors rather than capital investment (p. 238).]

Schein explains that one consequence is that when the operator culture attempts to improve effectiveness by building learning capacity, which requires time and resources, the executives disallow the proposed activities on the grounds that the financial returns cannot be demonstrated or that too many exceptions are involved that would undermine the control system. Executives thus unconsciously collude with the engineers in wanting to minimize the human factor (p. 238). He further points out that in effect, all of the research findings about the importance of teamwork, collaboration, commitment, and involvement fall on deaf executive ears because in the executive culture, those are not the important variables to consider (p. 238).

What interests us in Schein's discussion of the three cultures of management is his observation, based on a growing body of research (e.g., Donaldson and Lorsch, 1983; Kotter and Heskett, 1992; Collins and Porras, 1994), that some organizations have been able to overcome the negative impacts of short-run financial thinking by evolving cultures that integrate the executive, the engineering, and the operator point of view, but those organizations are still the exception rather than the rule, and we still do not fully understand how they did it... (p. 238).

Significance of Crossing Cultural Boundaries

The final point Schein (1996) makes in his discussion of the three cultures is that "we will not learn about the power of culture unless we cross real cultural boundaries" (p. 239). Incidentally, in another paper the author has detailed the significance of the notion of crossing cultural boundaries in relationship to the notion of the cultural worker by pointing out the fact that one of the defining attributes of a cultural worker is that he/she has learned how to cross cultural borders with relative ease. Further, this author has observed that several cultural groups operate and can be identified when an academic unit in a university setting is being downsized. In these circumstances, cultural workers learn how to interact with various groups effectively (Singh, 2000, b) and become leaders and managers in different unique situations.

Organizational Change as Cultural Change

Laurent (1989) suggests that the management of organizational change depends upon our capacity to conceive it. Our premises, assumptions, and conceptions about the nature of organizations and the nature of change set limits to the change process. Therefore, in order to enhance our understanding of organizational change, we need to probe our assumptions and beliefs about the nature of organizations and the nature of their change in a systemic manner. According to him a probing process conducted at three levels of analysis -- individual, organizational and societal -- can benefit our understanding of organizational change. Laurent (1989) analyzed organizational change at those three levels and reached eleven conclusions, providing us with a number of interesting insights about organizational change and its management. For example, he points out that to a great extent, the dynamics of organizations reflect what is conceived by individuals as being probable, possible, feasible, and desirable (p. 84).

Like Greenfield (1973), he thinks that organizations are social inventions... 'organizational change' refers to the ongoing nature of that invention

process which is embodied in the actors' assumptions (p. 84). Further, Laurent asserts that organizational change should be understood as a process of evolution. We need to ask two questions:

- Where we come from, and
- where we are going

Managing organizational change has little to do with shifting State A to State B; it has more to do with transforming State A into State B, which is very different. A process of transformation requires equal attention to be given to understanding the past, assessing the present, and envisioning the future (p. 84).

Laurent (1989) explains that "a spiral is a more accurate imagery of change than a straight line." While a straight line imagery of change may provide impetus and movement, it needs to be balanced by the insight of many eastern cultures, which exhibit more of a 'being' orientation where individuals and groups are defined predominantly in terms of affinitive relations (p. 84).

Laurent (1989) goes on to say that organizations have a tremendous capacity for change, but this point has not been sufficiently stressed in organizational literature. He argues that organizations have a much greater capacity for change than smaller organisms like the individuals who populate them, or larger entities like the societies and cultures that constitute their environment (p. 85). He further discusses the relative change capability of individuals, organizations and societies and states that organizations are the privileged places where change can occur most drastically. They can also be conceived as the most significant levers of both individual and societal change. They mediate important changes such as technological change (p. 86).

Organizations are born in the minds of people. Laurent (1989) states that for organizations to change, people have to change their minds about them, requiring a collective change of mind in the social fabric of the enterprise. However, this cannot occur without the lever of leadership (p. 87). To manage organizational change and to provide leadership for organizational change are two different things. Laurent (1989) points out that examples abound of carefully planned organizational changes that have failed in spite of systematic management. Management may be an excellent tool to maintain stability, to ensure survival and keep things going. But management is not sufficient to transform or revitalize an organizational. Minds cannot be managed. They can only be inspired (pp. 87-88).

As mentioned at the beginning of this section, the ideas discussed above were helpful for this author to develop research projects in the area of teacher internship. In a study done by this author it is suggested that there are three predominant internship cultures within which the teacher interns have to operate. These are: the cultures of partnership, the cultures of collaboration and the cultures of reflective and critical internship in teacher education. Therefore, there is need to do more studies to understand the details of each of these cultures, how these three cultures interact with each other and, what the real impact the interaction between them has on teacher interns' learning and teaching capabilities in the classroom (Singh, 1998, Rose, 1998).

The Challenges of Dualities in Organizational Cultures

Organizations can be seen as cultures, and organizational change can thus be thought of as cultural change (Laurent, 1989, p. 88). One element of culture is that it is always learned. There are organizations which are learning organizations, thus more prone to change. On the other hand there are organizations which display "learning disabilities" or "defensive routines". (Schein, 1996; Argyris and Schon, 1996).

Most complex organizations seen as cultures face the challenges posed by dualities such as: competition - partnership, differentiation - integration, loose - tight, control - entrepreneurship, planned - opportunistic, formal - informal, vision - reality, top down - bottom up, tolerance - forthrightness, individuality - teamwork, flexibility - focus, decentralization - centralization, business logic - technical logic, to name a few. Evans and Doz (1989, p. 219) point out that "organizations are besieged by the paradoxes that these dualities create."

Today's complex organizations are both highly differentiated and tightly integrated. Thus, "they need both strong formal and informal systems, the properties of both looseness and tightness..." and "there is a need for specialization and generalism, for balancing business logic with technical logic" (Evans and Doz, 1989, p. 220). So the key guiding notion here is of "dynamic balance." Evans and Doz (1989, p. 224) summarizes the findings of many studies in today's turbulent and competitive environment and state that the key top management task becomes one of maintaining a dynamic balance between key oppositions. Dualities should be viewed not as threats to consistency and coherence, but as opportunities for creative organizational development, for gaining competitive advantage, for organizational learning and renewal.

In any organization there is tension and change. An inverted U-shaped relationship exists between change and tension, according to Evans and Doz (1989, p. 225, Fig. 12.3). Evans and Doz (1989) state that many studies show that "to facilitate evolutionary change in the organizational, an optimal degree of tension needs to be built into its culture -- neither too much nor too little" (p. 224). Today the challenge for managers is to develop dualistic capabilities in their organizations. Evans and Doz (1989, p. 225-26) raise a number of questions:

How can a complex multinational develop the capabilities to balance opposites? How can top management develop and maintain dynamic balance? How can one exploit dualities so as to fuel strategic and organizational development? The dualistic paradigm raises new questions for researchers and executives, questions that are pragmatic 'hows.'

The organization of today's classrooms is very complex (Singh, 2001; Martin, 1985). In the context of doing action research in the area of teacher internship, this author had observed and had been told during the conversations by teacher interns, co-operating teachers and university supervisors that some of the ideas presented in this section had been very helpful to them. This is not very surprising because teachers spend a major proportion of their time in managing cultures of their classrooms and schools. For example, consider the composition and resulting

cultures of the classrooms and schools in this province, where all classrooms must incorporate the Pathways Program (Younghusband, 2000; Philpott, 2001) mandated by this province's Department of Education. The teachers in this situation have to face the challenges posed by the dualities in their classrooms in an imaginative manner. They have to be creative in understanding the new context of their classrooms and use this understanding to set new plans and goals in order to act differently to produce desired outcomes.

Dualities also exist in many other forms in today's classrooms and schools. For example, Wilf Martin (1985) in his studies of the schools and the classrooms in the Atlantic Provinces in Canada has identified many dualities. According to him, students have many perspectives on the classrooms and on schools which they have to attend for several years by law. For example, students in his research thought of teachers in terms of: helpful - unhelpful, understanding - not understanding, and co-operative - not co-operative. Further, students in his studies were also concerned with such topics such as rules in the school, homework given by teachers, teachers' pet and class victims and students embarrassment. In all these areas students had generated their own dualities to make sense of their classroom and school cultures. In this author's own research with seconded teachers (Singh, et. al., 1996), he found the following dualities existed in the school and teacher cultures: master teacher - regular teacher, good teacher - bad teacher, novice teacher - experienced teacher, burnt out teacher - energetic teacher, committed teacher - uncommitted teacher, and student centered teacher - personal career oriented teacher. These dualities appeared in the context of teacher internship process when the following questions were asked: who should be seconded from the school system to function as university based student interns' supervisors? Several conflicting issues arose around these dualities, which the author observed having potential for negative impact on the teacher internship process and on the morale of many teachers in the context of school cultures. Many issues - such as Who is the master teacher? How should this be decided? What new status should be accorded to the position of the master teacher at university and the school board levels? In what ways should this new status be rewarded? What is expected of the master teacher? -- created a great deal of tension and conflict among many teachers and school administrators. The process of naming master teachers made some teachers overly competitive, while it made others develop cynical attitudes towards the teaching profession, teacher internship, Faculty of Education and the school system. Some seconded teachers were able to maintain dynamic balance between the opposites. Evans and Doz (1989, p. 220) suggest that what top management needs is the ability to understand an organizational in terms of these dualistic processes, in terms of inherent conflicts and tensions, oscillations from one side of the duality to the other. More particularly, the need is for road maps and mechanisms to build dualistic properties into their firms, to harness the tensions constructively, to play on the chords of opposing polarities.

In any organization going through the process of restructuring, as did the school system in this province, one could experience many dualities at work. Therefore, both the survivors and the victims of restructuring need to make sense of specific operating dualities in their organizations for healthy survival.

Organizational Cultures, 'Hot Groups' and 'Managers Lib'

As organizations change, many consequences will follow. Leavitt (1996) thinks two things are bound to happen:

- First, it is my optimistic faith that the present avalanche of change will liberate managers to do much more interesting, creative, and fulfilling things than they were permitted to do in the past. At least it will do that for those still left after the current orgy of downsizing has passed.
- Second, I think the new architecture will also liberate small 'hot groups' so they can do their imaginative and productive work within large organizations. Both individual managers and small groups were held in near straight jackets by the monolithic, hierarchical organizations of the past, and both, I believe, have just been waiting for a chance to break out (p. 288).

By "hot groups," Leavitt means a small group of people who are full of life and exciting ideas, and are involved in innovative research. Although organizations are being downsized (restructured), they are not necessarily shrinking. In fact, Leavitt (1996, p. 292) suggests that they're growing larger via mergers and conquests. They're also hiring new people as they layoff old ones, so there will still be managers and they will still be members of large institutions. Second, in the volatile new organizational environment, those freed up managers are likely to make much greater use of a heretofore rare and often despised organizational tool, small, task-obsessed hot groups.

The environments of today's organizations are changing at an accelerating rate. All organizations are becoming more like research and development departments. That means everyone has to innovate and develop new products and processes. Managers have to do the tasks that ennoble the human spirit (Lipman-Blumen, 1996). Leavitt (1996, p. 297) says such a quest evokes a Breughal-like organizational vision: dynamic, busy, peopled by many active little groups scattered all over the canvas, each working like the devil. Some are deeply into competitive games, some battle against monstrous enemies, still others work and play together in collaborative alliances, and some are just parting company following yesterday's success or failure. It is a vital human panorama, urgent, flexible, mobile, the whole only loosely coupled, quite egalitarian, and vaguely bounded, a dramatic contrast vaguely bounded, a dramatic contrast to the grim and massive organizational monoliths of the past. And the people who work in those organizations? Quite like those who preceded them, except they are freer, much more autonomous, and much more deeply and positively involved in their work. Optimism run amok?

According to Leavitt, if managers want to do interesting and innovative work, they should think about creating hot groups in their organizations. He states that the smallish, temporary groups are excellent mechanisms for dealing with many of the ever novel and ever more complex problems imposed and enabled by the new world (Leavitt 1996, p. 298).

Leavitt is obviously talking about what managers can do during the restructuring process in different types of organizations, but it is worthwhile to keep in

mind that teachers, principals and other school personnel often play manager's role in many situations in the schools system. After all, schools are social and bureaucratic organizations. Thus the ideas expressed by Leavitt have implications for the school system during the time of restructuring, and also for the various academic units in a university which is being downsized. The author of this article has developed this theme in another related articles entitled, "Practising Cultural Work and Roving Leadership" (Singh, 2000, b), and "Reflective Notes on Downsizing and Change Processes" (Singh, 2000, a). In these articles the author has detailed how it could be possible for many teachers, principals, parents, administrators and other school personnel to function as "hot groups" during the period of rapid school restructuring process by "liberating" themselves from the constraints put on the organizations during the period of educational reform. Similarly, based on his observations, the author has also described how academic and professional staff in an academic unit in a downsized and middle sized Canadian university can do the same. In this author's view, both cultural workers and roving leaders function in many ways as "hot groups" as described by Leavitt.

Summary

All these patterns of organizational change described herein, which are taking place in the larger context of capitalist modernity, explain much about structural changes of organizations and changing cultures in them, but there are still more factors. Individuals or small groups of individuals still have a huge impact on changing organizational cultures in the fragile moments when new organizational structures, cultures and processes emerge and take their moral and ethical shapes. In a similar vein, Singh (2000, a) has earlier written that a big change in any society as whole is often a result of millions of minute changes brought by individuals struggling to resolve issues affecting the quality of their lives and communities at a particular time. It is the desire of multitudes of individuals to improve their own and their loved one's everyday lives that functions as a catalyst to bring about substantive levels of changes in the quality of living in communities and in societies and cultures as a whole. When individuals think, talk and act this way, their social selves expand. This expanding social self in turn could produce happier and unhappier consequences when it impacts on the existing culture. There are many examples of this in history. Let us think about this for a moment; let us see the larger societal structure and the big global picture for a moment. Let us ask if it would be possible to imagine today's South Africa coming into being without Nelson Mandela.

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MULTIAGE AT GANDER ACADEMY

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Introduction

The first *multi age* learning environments were the one-room schools (Mulcahy, 1999; Chase & Doan, 1994); these were the only forms of public schooling in North America before the middle of the nineteenth century. Children of all ages learned together in a single classroom. *Graded* schools, which separated children by age into separate classrooms, have been the dominant and perceived "ideal" form of schooling for the last hundred years. In rural areas, however, because of the scale of schooling, variations on the one-room school continue to this day. In many rural places, children of several different age and grade levels receive their education in what is generally referred to as a *multi-graded* (Miller, 1989; Mulcahy, 1992) classroom. In urban places, where the graded classroom has dominated, there have been over the years several experimental efforts to create alternative grouping arrangements for education and schooling. *Nongraded* education (Anderson & Goodlad, 1959; Beggs, 1967; Goodlad, 1987; Hunter, 1992) at mid century was a major challenge to the status quo of age/graded schooling; so too is the current interest in *multi age grouping* (Stone, 1997; Bingham 1994; Kasten & Lolli, 1998; Mulcahy, 2000). The *combination class* or *split class* (Craig, & McLellan, 1987; Virginia Education Association and Appalachia Educational Laboratory, 1990.) is yet another grouping practice (generally temporary, usually urban) where children of different ages are grouped together for instruction.

The multiplicity of mixed age grouping arrangements from the one room school to the multi age classrooms has created a certain confusion among educators and parents (Mulcahy, 1992; 1999; Katz, 1990; Miller, 1996). In a previous article in the *Morning Watch* (Mulcahy, 2000) entitled "Multi age and Multi-grade: Similarities and Differences" I attempted to address some of this confusion.

Over the last five years, severely declining enrolments and teacher cut backs around the province have been forcing many districts and schools to combine grade levels for instruction. For some schools this is a return to a former organizational structure; for others it is something new. In the past, unfortunately, we have painted a very negative image of such instructional arrangements. This has blinded many parents and educators to the genuine educative value of multi age education. In small rural schools, multi age can enable us to make a virtue of necessity. Low enrolments force schools to combine grade levels. By adopting multi age approach, such schools can create truly responsive learning environments for children.

Perhaps the way forward is to admit frankly that we were wrong about multi-grading. Then we have to do a very good job of convincing parents and educators that creating learning environments where children of different ages and grade levels multi age, far from being a step backward, is an enlightened leap forward for schools in this province.

Collaborative Action Research

Singh et. al. (1996), drawing on the work of Oja and Smulyan (1989), suggest that "action research has recently emerged as a method which addresses both researchers' needs for school based study and teachers' desires to be involved in more effective staff development"(p.6). For the last ten years I have made the study of all forms of multi age grouping, from the one-room school to the current models of multi age education in larger urban schools, a major focus of my work as a university based researcher. An important part of that research has been time spent in multi age classrooms and extensive discussions with multi age teachers. I have learned much from the generosity of teachers who have permitted me to enter their classrooms and not only observe but also interact with their students. Because such visits were always preceded by a conversation between myself and the teacher and were always followed by an extensive reflection, both the teachers and I felt that we were extending our mutual understanding of the theory and practice of multi age education in the Newfoundland and Labrador context.

In this current article I would like to share the latest contribution to what may be considered an emergent theory of multi age education in Newfoundland and Labrador.

In early April of 2000, I had the pleasure of spending the day with Kim and Sandra and the forty-two primary children that make up their K-2 classroom at Gander Academy in Gander, Newfoundland and Labrador.

I had come to Gander to visit this classroom for a couple of reasons. Sandra and Kim had implemented this multi age classroom not because they had to, but because they chose to. In most of our schools where grade levels are combined, the rationale for doing so is generally tied to enrolment. In these schools there isn't sufficient enrolment to justify assigning one teacher per grade level, so two or more grade levels *have to be combined*. Many people still believe that such an organizational structure is second best to the traditional graded classroom that has dominated schools for the last one hundred years, this despite the fact that multi age groupings are increasingly seen as an important and significant educational innovation all over the world.

I am always interested in talking with educators who create multi age classrooms not because they have to, but because they believe in the intrinsic educational value such classrooms have for children and their learning. What do these teachers know that others do not? What do they believe that motivates them to take on the difficult task of making the transition from single grade to multi age?

I was also interested in the fact that Sandra and Kim had chosen to include Kindergarten as part of their multi age set up. There has always been some discussion and debate in the literature about the inclusion of Kindergarten; I was curious as to why they had included five-year-olds and how these youngest children were working out. In addition, Kim and Sandra team-teach their multi age classroom and as far as I know they are the only teachers working this way in a multi age classroom in the province. I wanted to ask them about that as well.

I was made most welcome at the school upon my arrival and was immediately taken to the classroom. I had a very interesting day observing and interacting with Kim and Sandra and the children. The atmosphere in the classroom is energetic, welcoming, open and friendly. It is a very busy classroom with myriad activities going on accompanied by the steady buzz of formal instruction and informal conversation between and among teachers and students. I had the opportunity not only to observe but also to interact with many of the children as they worked independently in mixed age groups at the various workstations around the classroom.

I was very impressed with the way this classroom worked with such a large group of children. It was clear that a great deal of planning and organization has gone into the setting up of the classroom and the day to day planning of the learning and teaching. It was also clear that the children knew how this classroom worked as well. They moved from one instructional period to the next quite smoothly and efficiently. They knew what was expected of them and went about their business with a minimum of fuss and a great deal of enthusiasm. It was a great opportunity to see theory in practice and to see it working so well.

At the end of the day, I sat down with Kim and Sandra and we had a chat about their multi age classroom. Our time together was more a conversation than a formal interview; it was more a sharing of ideas than what might be considered formal research.

I think that it is worth noting that Kim and Sandra became really interested in multi age education just before attending the Small Schools Conference in Gander three years ago. At that conference they heard a number of presentations on multi age and realized that it was an educational philosophy and a practice that had a great deal of promise for all schools and classrooms.

As a preface to the interview I have reproduced two "stories" told by Kim and Sandra. These narratives not only capture the essence of their child-centered educational philosophy but clearly illustrate the fact that multi age, for them, was not a "choice" but a "necessity."

I had a child in Kindergarten who, at the end of the year, knew very few letters, had no pre-readiness skills, and was simply not ready for Grade One. We didn't have the policy of repeating, so we had to put him on and it kind of broke my heart to have to put him on to Grade One. During the year we had spent together I had gotten to know this child. I knew he worked only in a certain kind of setting and only certain things motivated him. Only certain things would make him work and he was so complex, that it took so long to get to know him.

In June, it almost broke my heart to send him on to Grade One, because I said, for the first month and a half the Grade One teacher had to get to know him. She's not going to know how he works, how he learns or what motivates him. She has to learn all the things that I already know about this child. He was so far behind; and I have to send him off to Grade One with a greater chance that he is going to get further behind. If I could just keep him, keep him for another year, I could pick up where I left off in June. I know what he knows, what he can do and how he works, how to motivate him and support him in his learning efforts. It is a shame to waste

that time at the beginning of the year getting to know the teacher, and getting into a routine and getting her to realize that, if you do this, this student will work for you. That's kind of how it started. We were reflecting on our experiences with students like this and asking what can we do.

The point is that at the primary level there is a great deal of diversity among children. Some children come to school not able to hold a pencil and some come to school able to read. We have some children that come here at five years old that have had two years of pre-school and they've done some readiness skills and they've done a lot of pencil and paper work. In that same year in that same Kindergarten classroom, there was a little girl who was a very able student. She was what we would have referred to at the time as, "enrichment material." But we didn't have enrichment for Kindergarten, our enrichment program didn't start until grade three. But here she was in Kindergarten capable of doing grade two math. This child would have been bored out of her mind with the prescribed curriculum for Kindergarten. We had to provide her with learning materials and activities more suited to her capability not tied to her official grade level.

These are the kinds of stories that Kim Dixon and Sandra Penny tell as a way of trying to answer the question, "Why create a multi age classroom?" The stories reflect an awareness of the developmental diversity that exists in every class; they also reflect an urgency and commitment to make changes in the way schools are organized so that they can be more responsive to the way children develop and learn.

Dennis: We have spent a great deal of time and effort in our province convincing parents in small rural communities that combining grade levels and grouping children of different ages in a single classroom is an educational deficient and backward thing to do. Now here the two of you are in a large urban school doing the very thing we have tried to eliminate in our small rural schools. Why are you doing this "old fashioned" kind of schooling in the 21st century? Are the two of you crazy? Or do you feel that you have discovered something that works for children?

Sandra: Well, we felt this kind of classroom had a lot of educational advantages for children. One of the most important is the broad curricula that is available in a class such as ours that spans three grade levels (K-2). I have worked in special education as well as single grade classrooms. Over the years I have seen a lot of kids who come to the end of grade one but who haven't really achieved the grade one outcomes. They move on to the next grade and then they end up getting further behind. They are not really ready to move on but they do. In the next grade they become aware that they are not where most of the other in the class are. This tends to lower their self-esteem and this can inhibit their efforts to learn. But in a multi age classroom, there's always somebody at the level where that are. There is an opportunity for them to receive the instruction they need according to where they are. But in a graded classroom, a lot of the times the teacher doesn't have time to go back to these readiness skills. What tends to happen is that this child, once he gets so far behind, he has to go out to the Special Ed teacher. Although at this younger age, they like to do that, but still, deep down, they feel that they're not as good as the other kids out of their home classroom.

At the primary level there is a great deal of diversity among children. You can't teach the same things to all the children of a given age at the same time. The multi age classroom gives you an organizational structure that enables you to be more easily responsive to individual needs. I am not saying that you can not be equally responsive in a single grade classroom; you can and many single grade teachers in our school and other schools are doing a fantastic job with meeting children's needs. But Kim and I prefer to work in a multi age environment. This is a very viable alternative to the way we have always done things.

Kim: A multi age classroom also serves children at the other end of the exceptionality as well. Some children start school knowing how to read; many, as well, have completed most of the outcomes for Kindergarten. Should we teach these children what they already know and can do because that is the Department of Education's prescribed curriculum for Kindergarten? Why should we hold these children back if they are ready and capable of doing something more advanced? We have some children that come, like Sandra said, already reading. What do you do with those children?

After teaching Kindergarten for twelve years and seeing the wide range of abilities, I said it would be nice to be able to challenge these children. But you really didn't have a whole lot of time to be challenging and enriching because of the single fact that you had to get the curriculum done. You had so many children that you tended to think of them all as more or less normal and you felt you had to stay within the confines of a single grade level. As Sandra said, I think the multi age environment makes it easier for me to be responsive to the individual development needs of children. I am a great believer in the value of play in primary education. Unfortunately, opportunities and materials for play often disappear from primary classrooms after Kindergarten. There is a tendency to abandon play after Kindergarten because of the pressures to do more and more academic work. But children in grades one and two still need and want play opportunities. In a K-2 multi age classroom the materials and opportunity to play can still be part of the classroom experience for all the children. The different ages can play together and this is very socially beneficial for all the children. You can see the connections that they've made with one another, the friendships they've made, and how caring they are for one another, and even their siblings.

We have several sets of siblings in this classroom and they really take care of each other. This is a really interesting aspect of multi age. Many people ask, "Aren't they beating up on each other like they do at home?" But they don't because they take care of each other and they'll say, "Oh, my brother or sister doesn't have a pencil" or, "I'll go sharpen the pencil for him" or "I'll tie up her shoe."

It is not just older helping the younger by the way. Some people have the idea that in a multi age classroom it is always the older ones doing the helping with the younger ones. But it's not that way all the time. At time it is the younger one who is the helper. I remember a seven-year-old at the beginning of the year who sat by a five year old. We were talking about something and she (the five year old) put up her hand and she knew the answer, and the older child looked at her and he said, "How old are you?" She said "Five," and he said "Five! Whoa!" He was blown away that she could answer this question and she was only five.

Dennis: What I am hearing you say is that, in your view, the graded classroom and the graded curriculum does not recognize the true nature of children and how they learn and develop.

Sandra: No, no. The Department says that all children at the age of five should be able to do this. All children at the age of six should be able to do that. In reality, many can't and don't conform to grade level expectations and outcomes. You take a child who comes to school who is able to read in Kindergarten: she's bored to death. And so she starts to develop bad work habits, she doesn't like to come to school, school is boring for her. There is a real danger that such children will lose their love of learning. But in a multi age classroom these children can receive instruction that is better matched to where they are in their development. They can get paired with older kids so they're always learning something new.

Kim and I created this classroom because we believed that this type of environment fosters learning and curiosity more effectively. We came to this belief because of our experience working with children. This has been the best teaching year that I have had so far, It is a lot of work but it is well worth the effort. I am very happy to be in this classroom.

Dennis: What motivates you to do the extra work that has to be done especially in the beginning to set up multi age classroom?

Kim: As teachers, isn't that our job? To care for children and to nurture them and....

Sandra: "provide them with the best possible environment?..."

Kim: ...that they can have? And if the graded system doesn't provide that then we have to do what we have done , even if it is going out on a limb and having someone saying things like, "Really, are you out of your mind?" Sandra and I have a love of children and share a commitment to see them grow as much as they possibly can, and make their first years of schooling happy years.

Dennis: You mentioned earlier that this kind of classroom requires more work. Can we talk about that a little?

Sandra: You have to be familiar with the curriculum for the grade levels that are in the classroom. Yes, it takes a lot more planning. When you're setting up your themes you have to make sure that by the end of the year you have all of your objectives for all curriculum areas covered. So, it takes a lot more planning and a lot more long term planning as opposed to day-by-day planning.

Kim: And even day-to-day planning has to be comprehensive. We have to actually look at children on an individual basis almost daily and certainly weekly. We have to ask of each child, "Have they mastered that concept?" Have they really handled that concept well and if they haven't, well maybe we should spend a few more days on that concept, and then the groups change and then you're on to something else. So you see we are always juggling but with the two of us it makes it a

little bit easier because we can divide up the work in some ways. The planning is the key and it is what takes time.

Dennis: Many teachers view the multi age classroom with some apprehension. However, the point is that there are probably many teachers, frustrated by the graded system, who would actually enjoy being in a multi age classroom if they gave it a chance.

Sandra: Yes, if they got in there! But the thing is, the fear of something different, right?

Dennis: Lets talk about evaluation. How do you assess and evaluate your students? Do you evaluate by grade level or in terms of individual student progress?

Kim: We evaluate students on what they are able to do regardless of age or grade level. If a child is achieving beyond their official grade level, we indicate that in our evaluation report. We indicate what the child can do, and in many cases that is beyond grade level expectations.

So we would indicate to parents that their child has not only met the grade level expectations but has gone beyond them. If a child has not, we would indicate that. Parents want to know where they're in relation to the Grade level. They'll come and they'll ask you, "Well where are they in relation to other kids in Grade Two?"

Dennis: One of the reasons I wanted to visit with you is the fact that you have included Kindergarten in your multi age classroom. As you know there are different views as to whether or not Kindergarten should be combined with other primary grade levels. Some people think it shouldn't be, others are all for it. Why did you include Kindergarten and how has it worked out?

Kim: We just couldn't see doing this without including Kindergartens. As we said earlier there is such a wide range of children coming into Kindergarten, we felt that there would be a real benefit for them in a multi age classroom. The hardest part was getting the schedule figured out so that they would have the required number of hours of instruction and these would be consistent with the other Kindergarten classes in the school. We decided to have them come all mornings because we couldn't see juggling them back and forth. By having them come all mornings, it allows us to have a consistent and workable schedule.

Dennis: One of the concerns some people have with including Kindergartens is their immaturity and how they might be on the one hand disruptive to the older students and on the other hand they might be lost or intimidated by the older students. Have you had any concerns or problems of this kind?

Sandra: Not at all. In fact the opposite is true. The family atmosphere of a multi age classroom is supportive of the younger children and at the same time encourages the development of their work habits. We mentioned earlier to you the number of siblings we have in our classroom. This has proven to be very beneficial. We found that in September it was really helpful to some of the really quiet five year

olds coming into the classroom to have their older brother or sister in the classroom. It made it a lot easier for them. We also found it helpful that the older ones knew so many of the classroom routines and they could help the younger ones. They knew how to go get the milk coupons and they knew where to get the milk and it was just so easy for them to just blend in and "Oh, I'll show you where that is" or "I can tell you where this is." There was one child, who for about a week was a bit intimidated, but now you would never say, you would never pick him out in here, that he was one like that.

Dennis: So in other words, that concern, or that fear, is really unwarranted, that the littler ones would be lost?

Sandra: Yes. In September many of the five-year-olds had a very short attention span. But after observing the older children working diligently, they began to settle in and focus more on their work.

Working and playing with people older and younger than yourself is a natural thing to do in all kinds of activities outside of school. Non of us sticks just with people our own exact age. I'm sure that you work with people younger than yourself and older than yourself. It doesn't even make sense to segregate kids by age. They go to Brownie's, and Sunday school and play with neighborhood kids in mixed age groups.

Dennis: Another interesting aspect of your program is the fact that you team teach this class. Was it always your intention to work in this way?

Sandra: From the very beginning we said we wouldn't go ahead on this unless we were able to do it as a team teaching unit. We had known each other for quite a while and both of us had done considerable research on multi age. Since it was something new we felt it would be more beneficial all around to do it as a team.

Dennis: If you hadn't gotten enough students to warrant the team approach, would one of you have implemented multi age on your own?

Sandra: I don't know if we would have or not. It would have been harder I think because it's so new, so different.

Dennis: Most of the literature on multi age endorses and even recommends team teaching (Stone, 1996; Bingham, 1994; Chase and Doan, 1994). At the same time there is recognition that this is not always possible or even desirable. In fact, in most places in Newfoundland and Labrador teachers would be working on their own in multi age classrooms. In your view can this kind of classroom work with just a single teacher?

Sandra: Yes it can, but a team teaching approach gives it more variety and diversity I think. It adds another dimension to it that you wouldn't have working alone. There is so much more you can do with two teachers and the support you can give each other is really important. When we're planning, we have that other person to say, "Kim, what do you think? Do you think this would work?" And she says, "No, I don't think we should do this. Maybe we'll try it this way." You're always bouncing

ideas off of each other, and end up doing a combination of what we both thought, so it's good in that way.

We have a large group of students (42). That's why we are a team teaching unit. In a smaller school with much smaller numbers one teacher may be able to manage quite well.

Dennis: Let me just give you this scenario and get your opinion on what you would do. Suppose you two found yourselves in a smaller rural school and the principal came to you and said, "Okay Kim, you're going to have a multi-aged K-1 class. Sandra you're going to have a multi-aged 2-3 class." Would you suggest to this principal, let us work together and create a K-3 class and we'll team-teach those four grade levels?

Kim: If the numbers were reasonable, say around thirty, we definitely would ask to team teach the four grade levels.

Dennis: So it is possible even in very small schools to create team teaching situations. I think this would be very beneficial to the teachers and the students. As you have discovered there are so many advantages of having a partner to plan and teach with in a multi age classroom.

Sandra: This is true. However, successful team teaching is not an automatic thing. With team teaching you have to make sure that you're with somebody who has the same philosophies as you do and someone that you're going to be able to get along with. One member of the team cannot dominate the other. You have to have comparable people and that's a big thing. We became a team because we shared an educational philosophy, a mutual concern with the limitations of the graded system, and an enthusiasm for multi age as a solution to those limitations. Teaming won't work if a principal simply says to two teachers you will team-teach this multi age class. In that situation I might say, "Well no, I don't think so." Because I know that person's philosophy is not the same as mine.

Dennis: Before you implemented multi age at your school you did extensive research. I know you read widely and visited a number of classrooms around the province in Corner Brook, Centerville, Coley's Point, and Charlottetown. You saw a lot of different models. When it came time to begin yourselves, did you simply adopt one of the models that you researched or did you create your own?

Kim: We created our own. We learned a lot from our reading and we are really grateful to those teachers who welcomed us into their classrooms and shared their ideas and practice. But we couldn't find anything that was exactly what we wanted. We took lots of ideas; we grabbed ideas from everyone. If you look around our classroom and watch us work you will see what we have borrowed, begged and stolen from other people. But what we do is really what works best for us and reflects our particular views.

Dennis: Do you think that's what all-new multi age teachers should do: do some research, learn from others, but in the final analysis create your own approach?

Sandra: You have to do what appeals to you, what suits you. What someone else is doing, part of it may appeal to you, but in the back of your mind you are saying, if I were doing that I would do it this way. That's like with everything; you always add your own personal touch. We just couldn't find any model where we could say, "That's exactly what we are going to do."

Dennis: So to look for a recipe or a one right or best way to do multi age is probably not a very good idea. If one understands the basic principles of multi age and is in tune with the underlying educational beliefs, a wide variety of approaches and practices are possible, desirable, even advisable. That's why teaching will always be more of an art than a science. As artists we must be free to create our own approaches, our individual learning environments.

Before we finish I have to ask about the administrative and parental support you have for your program. I understand that the principal of the school, Wayne Witherall, has been very supportive of your work. How important has it been to have the backing of the principal with this project?

Kim: We would never have gotten this far off the ground without Wayne's support and encouragement. The multi age concept is new to many people and not always understood or appreciated. We often get the comment, "If it is not broken, why fix it?" But our point is the graded system is not working; it is broken. And we think we have found a very viable fix. Multi age is a real alternative that we think is very promising. But without the support of Wayne Witherall, this classroom would simply not exist at all.

Dennis: Have the parents of the children in your classroom been supportive of multi age?

Sandra: The parents have been very supportive of the work we do.

Dennis: Have you proven to yourselves that multi age classrooms work?

Kim: Oh yes! We are blown away sometimes. We are always amazed at what is happening in the classroom. We are constantly amazed at how the multi age structure supports learners. We are amazed what younger children are capable of when given the opportunity. We are delighted with the spirit of cooperation and caring that the family like atmosphere creates. This works; this works very well indeed.

Conclusion

I want to thank Kim and Sandra for inviting me into their classroom and allowing me to spend some time with them and their students. I learned much about how their classroom works from my interactions with them and their students, who were ever ready to explain to me what was going on. It was a very educational experience for me.

I also want to thank Wayne Witherall for facilitating my visit to his school and Randall Mercer, the Director of Education for the District. You can pay a virtual visit to Gander Academy at: <http://www.k12.nf.ca/ganderacademy/index.htm>

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REFLECTIVE NOTES ON DOWNSIZING AND CHANGE PROCESSES

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Introduction

I have observed that there is seldom a social occasion where people are not engaged in conversations involving reflections on downsizing, globalization and internationalization of our life styles. It seems that the media, schooling and the popular culture have been instrumental in disseminating ideas related to these processes -- ideas which have now become part of people's common sense knowledge.

Perhaps that is why it is not very difficult to witness friends, family members, workers and colleagues making references to these three social phenomena - consciously or unconsciously - in family gatherings, at workplaces, in churches, at schools, at playgrounds, in classrooms, around coffee tables and in pubs. I have also noticed that people in their own unique ways are quite able to use the language surrounding these phenomena to make sense of their past and present life experiences and in making sense of their anticipated future life chances.

I became more aware of downsizing when some of my close friends, colleagues and family members suddenly found themselves in organizations which began to systematically implement downsizing policy. I have friends, family members and colleagues who have been both adversely and positively affected by the downsizing of their work places.

Moreover, downsizing of schools, school boards and university departments, where most of the people I know work, have ushered in new ways of organizing these places. Consequently, programs previously offered have been changed or adjusted to new situations. New teaching and learning methods and strategies have been devised. The classroom activities have been reorganized, affecting classroom interactions. Students expect instructors to discuss and explain research done in the area of downsizing, as it relates to their experiences as students and future workers. These and other factors have motivated me to read more literature related to the phenomenon of downsizing, to try to make sense of what I have read so far, and then to share my understanding of it with friends, colleagues and students so that we could do whatever we are doing in our daily lives in a more meaningful and pleasant way. For it is through participating in social conversations of a community with the purpose of sharing our fears, aspirations, expectations and beliefs, and by adopting caring orientations towards each other, that we solve our common problems and make our community healthier, more balanced and just. Participation in the on-going conversations in one's community, as these conversations relate to the on-going discourses in other people's communities, creates the context in which each of us, to some extent, can become inspirational change agents and leaders in our own unique ways.

Further, participation is one way each of us can effect change in our own locations in given surroundings. A "big change" in larger communities and a society

as a whole is often a result of millions of minute changes brought by individuals struggling to resolve issues affecting the quality of their lives and communities at a particular time. It is the desire of multitudes of individuals to improve their own and their loved one's everyday lives that functions as a catalyst to bring about substantive levels of changes in the quality of living in communities and in societies and cultures as a whole. It is when each individual acts in certain social ways to reach his or her goals by taking into consideration his or her multiple intelligences, multifaceted aspirations and expectations that communities change to new levels, offering its members new opportunities in a fair, just and equal manner (Naipaul, 1990; Odin, 1996).

Acting in social ways requires that individuals learn to communicate with other members of the community in a sharing and caring way. Therefore, in all cultures one can find on-going debates pertaining to the desired relationship between the individual and the community. Whose expectations should govern our actions as human beings --- the individual's or the community's? Is society possible without individuals and vice-versa? These are some of the moot questions which are asked over and again in most cultures and societies.

So in all cultures it is generally agreed upon that each individual, as a social being, at least needs to be a member of a community in order to have "the social-self". Of course, an individual can also be a member of many communities simultaneously. The general point is that it is only through communication with each other that it becomes possible for both the individual and the community to fully develop the social-self. In other words, it is through developing the social-self that both the individual and the community come to know about their values, morals, tastes, expectations and ambitions. Further, in all cultures there are many communities which attract individuals with specific interests and predispositions. Some such communities, for example, are: "the community of inquirers", "the community of queries", "the community of researchers", "the community of interpretation", "the community of loyalty", "the beloved community of the church", and "the great community or world community", to name a few. Such communities and individuals affiliated with them enable each other to articulate their voices in different ways. It is through adhering to the ideals of open communication, cooperation, and public discourse that communities and individuals in them mutually learn to develop the "greater social-self". This form of self enables individuals and communities to be concerned with both local and global problems which impinge on our lives as human beings. It helps us to overcome our egotistic feeling and actions.

Applying these ideas to the local restructuring of the schools means that downsizing can more likely be successful, if the downsizing process includes the voices of different "communities" in this province. To make this type of inclusion happen, all parties interested in the education of children need to build social networks. The goal of doing this should be to create a viable social and educational movement. One function of such a movement would be to produce a countervailing commonsense knowledge about the school change process. This form of knowledge would be used to make sure that any further changes in the school system in this province take place in the context of local struggles put forth by "the community of parents" to effectively challenge the "official" and "professional" forms of knowledge which have been used to formulate school restructuring policies and as a justification

for restructuring schools against the will of many parents, students and others interested in the education of children in this province. These hypotheses will be further discussed in the latter part of this paper.

But before doing so, it is important to mention here that there is no dearth of research on downsizing. There are hundreds and perhaps thousands of articles and books written on this subject. However, in this paper I review a few studies done by professional researchers which provide some insights into the process of downsizing. My purpose is to encourage students, teachers, colleagues, parents and school personnel to make use of these insights in producing their own "educated-locally-situated knowledge", because experiencing the process of producing knowledge, in this case local knowledge, and then being able to make uses of such knowledge to solve one's own localized problems, often deepens people's understandings about the situations in which they find themselves. Such a form of knowledge also clarifies the meanings people attach to their environments. For example, reflecting on the locally produced knowledge on downsizing could help parents better to ascertain what downsizing means to them personally, and why the authorities in this province continue their efforts to restructure the educational system within the framework of downsizing. As well, producing local knowledge about the downsizing of the school system in the context of local struggles by parents could be empowering for all parties interested in the education of children in this province --- empowering in the sense that all parties would find themselves included and thus could claim to own such knowledge.

Downsizing

Downsizing usually involves the planned elimination of jobs. This practice was pervasive in the corporate world of the 1990s. Following this, there is also increasing pressure on non-corporate bodies to adopt business models of downsizing into their operations. Therefore, it is not difficult to observe that the universities, school boards, research and cultural centers are under pressure to adopt business management practices. There are always some people in these non-business institutions who have bought into the business model of downsizing and have become vocal advocates of this philosophy. Consequently, every day we hear of companies, academic institutions and other public organizations eliminating significant percentages of their workforces. Noer (1993, p. xiv) writes that ten years ago, organizations of all types - public, private, military, for-profit, not-for profit - have embarked on a frenzy of layoffs. Organizations that once saw people as assets to be nurtured and developed began to view those same people as costs to be cut. Employees who took job security for granted and expected to be taken care of in return for their work and loyalty have had to face a new reality in which organizations can no longer provide long-term employment or career paths or foster employees' sense of self-worth. Downsizing resulted in layoffs. Restructuring resulted in layoffs. Productivity improvement programs resulted in layoffs. Merger resulted in layoffs. Higher energy costs resulted in layoffs. Foreign competition resulted in layoffs, and on and on!

Thus, in the last decade or so thousands of companies in the United States and elsewhere have reduced their workforces through downsizing for economic and organizational benefits. Casico (1993) reviewed more than five hundred research studies on downsizing and found the anticipated benefits were in fact not realized by

about half of the companies. Notwithstanding these studies, according to Casico, workforce reductions are likely to continue as long as the conditions that cause companies to downsize exist. Conditions that worry companies at the present time are relatively higher overhead costs and higher levels of debt payments than in the past.

Although many companies plan to cut payrolls through downsizing, research indicates that this does not produce the expected cost saving. Profitability does not always improve: In fact, researchers found many negative consequences associated with downsizing. For the majority of companies, productivity did not increase either. Most of the companies that had "restructured" reported that their productivity remained either the same or deteriorated after layoffs.

Downsizing does not always keep expense levels down. More than 50 percent of companies that downsized reported that their expense levels creep back up. Researchers also observed that one out of five companies ends up replacing some of the positions that they had eliminated. Continuous downsizing does not affect all employees in the same manner. For example, middle managers have felt less optimistic about their chances for advancement in the last five years or so. Also, the number of white collar workers was significantly reduced during the recession of the early 1990s. Research indicates that employees are less loyal to companies today than in earlier decades. Many studies show that, on the average, managers left companies five years earlier in the 1990s as compared to 1981. Workers under age 35 stay on a job a median of only 2.5 years.

Many studies show that those employees who survive downsizing become narrowly focused, risk-averse, and self-absorbed. The vast majority of companies surveyed reported that downsizing contributed to workers low morale, fear of losing their jobs, and high distrust for management. Only one-third of companies *got* (realized) the expected results through downsizing (Cameron et al., 1991; Cascio, 1993).

Cameron, Kim and Whetten (1987) have written about the "dysfunctional effects" of organizational downsizing and layoffs. The effects have been described by many researchers as a combination of scapegoating, decreasing morale, and increasing conflict. Brockner and others (1986) see the "dysfunctional effects" in terms of the acting out of survivor guilt. Marks (1991) sees it as a combination of guilt, depression, loss of control, increased substance abuse, sleeplessness, and tension. Harvey (1988) sees it as a depression that results in wasting away.

The "dysfunctional effects" of layoffs as a subset of overall downsizing strategies was reported by Cameron, Freeman, and Mishra (1991). In their best practice survey of the automotive industry downsizing, they found evidence of survivor guilt. Many consulting companies have reported that the way most of the downsizing was implemented had negative consequences. Bad downsizing strategies had caused quality and productivity to deteriorate rather than increase (The Wyatt Company, 1991, Right Associates, 1992). Dorfman (1992) reports that Mitchell and Company studied sixteen large restructurings from 1982 to 1988 and found that the organizational's stock performance trailed that of their competition by an average of 26 percent by the end of this period. (Downsizing vs not downsizing?) On the whole,

the "dysfunctional effects" of layoffs are seen in two ways: as a consequence of ineffective downsizing that results in layoff sickness (Cameron, Freeman, and Mishra, 1991) or as a moral issue caused by collusion and lack of courage (Harvey, 1988). Noer (1993, p. 89) concludes that no matter how layoffs are perceived, the end result is that "layoffs have drained the work spirit, creativity, and productivity from many of our organizations."

Layoffs affect people working in the organizations differently and have been identified using different labels. For example, there are victims and survivors. Layoff survivors are said to be suffering from layoff survivor sickness. Cameron, Freeman, and Mishra (1991) found that survivors of layoffs suffered from survivor guilt. They also found that the best firms were those which practiced paying special attention to survivors. Noer (1993, pp. 12-14) provides definitions of some of these terms as follow:

Layoffs. The term "layoff" is used to generically refer to all involuntary employee reductions for causes other than performance. Layoffs in this sense does not imply that the employee may be recalled when business improves. Other common terms that convey the same meaning are reduction-in-force and termination.

Layoff Survivor Sickness. Layoff survivor sickness is a generic term that describes a set of attitudes, feelings, and perceptions that occur in employees who remain in organizational systems following involuntary employee reductions. Words commonly used to describe the symptoms of layoff survivor sickness are anger, depression, fear, distrust, and guilt . People with survivor sickness have often been described as having a reduced desire to take risks, a lowered commitment to job, and a lack of spontaneity.

Victim. The term layoff victim is used... in both academic and popular literature to refer to the person who involuntarily leaves the organizational, who is laid off.

Survivor. Layoff survivors are those people who remain in organizational systems after involuntary employee reductions. The boundary between victims and survivors is blurred, however, because survivors often behave as survivor-victims.

Survivor Guilt. The term survivor guilt describes a fundamental condition that leads to, and is often expressed in terms of, other survivor symptoms, such as depression, fear, or anger. In the context of layoff survivor sickness, guilt may be generally defined as "a feeling of responsibility or remorse for some offense; an emotional reaction that one has violated social mores" (Gottesfeld, 1979, p. 525).

Noer (1993, pp. 89-93) describes the clusters of feelings that define layoff survivors sickness. He tells us how layoff survivors cope with their feelings and how those symptoms persist over time. Then he describes the four-level intervention

model. For example, the clusters of feelings associated with layoff survivor sickness are:

- Fear, insecurity, and uncertainty
- Frustration, resentment, and anger
- Sadness, depression, and guilt
- Coping methods are:
 - Reduced risk taking
 - Lowered productivity
 - Unquenchable thirst for information
 - Survivor blaming
 - Justification and explanation
 - Denial
- Symptoms That Persists Over Time:
 - Increase in resignation, fatigue, and depression
 - Deepening sense of loss of control
 - Heightened and more focused anger

The Four-Level Intervention Model, consists of the following parts:

- Process interventions
- Grieving interventions
- Interventions that break the chain of organizational co-dependency
- Systems interventions

Some studies show that one-third of companies do get the results they are seeking from downsizing. So what do this one-third of companies do right? K.S. Cameron et al. (1991) found six general strategies followed by companies to improve organizational effectiveness while downsizing:

1. Leaders in the company who initiated the downsizing remained visible and involved throughout the sizing down process.
2. Management asked the employees to analyze the operations of the organizational job by job and task by task. Based on employees recommendations, the company leaders at the top implemented downsizing.
3. Company leaders paid special attention to those employees who lost their jobs. For example, they set up outplacement, made provisions for generous severance pay, and made arrangements for retraining and family counseling. For those who survived layoffs, management increased the flow of information exchange among the top managers and employees.
4. Successful companies, through internal data gathering and data monitoring, focused on evaluating the company's entire system of supplies, customers, and distribution, improving all aspects of its operation rather than just focusing on eliminating positions.
5. Successful companies learned to reorganize through downsizing which often resulted in producing small, semi-autonomous organizations within large, integrated ones. The companies did not simply decentralize. Instead they used the "Clan" type of control system which enabled them to

use both small and large organizations during downsizing simultaneously. Unlike the traditional control system, the "Clan" type control system relies on common values, shared vision, and a collective perspective.

6. The most successful organizations viewed downsizing as an aggressive strategy designed to lower head count and to enhance competitiveness, as well as to achieve organizational improvement. In other words, downsizing is viewed both as a means to an end, as well as the targeted end.

What do we know? What have we learned from the experience of hundreds of downsizing attempts during the late 1980s and early 1990s? Cascio (1993, p. 103) summarized answers to these questions in terms of ten key lessons for managers:

1. Downsizing will continue as long as overhead costs remain noncompetitive with domestic and international rivals.
2. Firms with high debt are most likely to downsize by aggressively cutting people.
3. Far too many companies are not well prepared for downsizing, they begin with no retaining or redeployment policies in place, and they fail to anticipate the kinds of human resource problems that develop subsequently.
4. Six months to a year after a downsizing, key indicators often do not improve: expense ratio, profits, return-on-investment to shareholders, and stock prices.
5. Survivors' syndrome is a common aftermath. Be prepared to manage it. Better yet, try to avoid it by actively involving employees in the planning phase of any downsizing effort.
6. Recognize that downsizing has exploded the myth of job security, and has accelerated employee mobility, especially among white-collar workers. It has fundamentally altered the terms of the psychological contract that binds workers to organizations.
7. Productivity and quality often suffer because there is no change in the way work is done. The same amount of work as before a downsizing is simply loaded onto the backs of fewer workers.
8. To downsize effectively, be prepared to manage apparent contradictions - for example, between the use of top-down authority and bottom-up empowerment, between short-term strategies (head count reduction) and long-term strategies (organizational redesign and systemic change in culture).
9. To bring about sustained improvements in productivity, quality, and effectiveness, integrate reductions in head count with planned changes in the way that work is designed. Systematically question the continued appropriateness of 3-C logic (i.e. command, control, and compartmentalization - see V. Nilakant, Total-Quality Management: What Is It Really All About? "Management Bulletin, August 1992, No. 1, University of Canterbury, Christchurch, New Zealand, 3.)
10. Downsizing is not a one-time, quick-fix solution to enhance competitiveness. Rather, it should be viewed as part of a process of continuous improvement.

Downsizing is a toxic process. Among other things, it leaves remaining employees with low morale. Many studies of downsizing conclude that "a key ingredient that is necessary to sustain programs of total quality management is high morale" (Cascio 1993, p. 101).

In light of this, there are many things that an organization can do, both at the individual and organizational levels, to boost survivors' morale. These can be done immediately following a downsizing in the short-term and for the long-term revitalization and recovery of survivors.

The focus in any organization can be at individual, structural or organizational cultural levels. While there is a need for understanding the structural and cultural levels of ongoing change, there is also a need for understanding it at the individual level. At this level several questions need to be asked such as: How does an individual survivor take greater personal responsibility and avoid dependence in a downsized organization? What type of personal interactional orientation does an individual survivor develop? What pro-active steps does he/she take to initiate personal control that results in enhanced productivity, high morale among co-survivors, and benefit to the organization at large? How could one become a leader in a downsized academic institution? I have attempted to deal with the last question in another paper (Singh, 2000).

Making Sense of Downsizing In The Surrounding Social Milieu

It seem to me that experiencing downsizing at the individual level depends upon how each individual makes sense of organizational and cultural change, and what meaning each individual attaches to the larger change processes taking place within the context of modernity, globalization and post-modernity. In an unpublished paper I have written about globalization as a social context in which downsizing takes place and in what ways making sense of downsizing is an individual experience. Here I will reflect on the literature on downsizing reviewed above in the context of my surrounding social milieu. In doing this, my intentions are to elaborate the discussion on hypotheses presented in the introduction of this paper.

Understanding the surrounding social milieu, among other things, entails identifying social networks which shape peoples' beliefs and attitudes in a given situation. Besides, understanding of social networks is also more likely to provide insights into what the opponent groups know, or think they know, not only about challenges but also about themselves and the world around them. Social networks enable people to get involved in battles for public opinion and for media access and coverage, at local and global levels. Propaganda campaigns, psychological warfare, strategic public diplomacy, efforts not just to educate and inform people, but to deceive and dis-inform them as well revolve around social network. So far parents in various Newfoundland communities have not succeeded in establishing effective social networks in this province. Perhaps this is why they have been and still are unable to collectively produce strong local responses to educational reform initiatives taken by the school boards and the provincial government. In other words, a proper social movement which is dedicated to act as a counter force to critically mediate the educational restructuring plan in this province has yet to emerge. In order to understand why parents have not yet been able to create effective social movements,

there is a need to further explore the context in which downsizing research is usually carried out.

So let us focus on the research on downsizing presented herein, and notice that it can be categorized into two groups. For example, one set of research is clearly directed toward managers. It provides them with information about how to downsize organizations, what precautions to take, how to label the workforce, and what programs should be set up to help workers who have been laid off and who have survived the downsizing. The second set of studies sheds light on whether or not downsized organizations have actually been successful in achieving their goals. This set of studies shows that anticipated goals have been only achieved by a few business organizations. These studies also point out that methods used by one firm to achieve its goals cannot be easily transferred to another company.

Further, the first set of studies do not fully inform the individual workers how they can resist or delay actions taken by the managers, and how to participate and interact with their co-workers to articulate alternatives to downsizing proposals prepared by their managers. These studies are not conducted from the viewpoints of the individual workers in the sense that they do not provide them information in the form of alternative theories, concepts and working hypotheses which the individual workers can use to organize their activities, communicate their ideas to the general public, and to their managers in order to have some degree of control over their workplaces. This is not to say that the individual worker can learn nothing from these studies. Of course, learning how the managers plan to implement downsizing should help the worker to some extent to think about how things are going to be changed in the organization and how exactly changes brought about might affect him or her personally.

Similarly, the second set of studies does not shed much light as to how downsizing practices in business organizations can successfully be transferred to non-business institutions such as universities, school boards, schools, and department units in academic organizations.

Some additional points in relation to these studies that should be kept in mind are that these studies are carried out by professional and career oriented social and behavioral scientists working at various institutions, occupying different positions and seemingly having multiple interests; that to carry out these studies is a costly and time consuming enterprise; and that they are couched within the frameworks of on-going disciplinary (economics, management sciences, etc.) discourses. Several questions related to the cost of studies should also be raised here such as: Who pays researchers to do research? Who are these funding agencies? How are findings of research written and conveyed to the audiences? Who are the primary audiences? Who provides the Data? Who are the beneficiaries of the research findings? What are the purposes and goals of any given research endeavor? Under what conditions is money allocated to them? What sorts of constraints are put on researchers? How does a set of research fit into some scheme of larger social or organizational policy? What is this scheme and whose scheme is it?

The other related points that one needs to be aware of are that only the professionals who are well versed to converse with each other, using the language of

these disciplines, fully seem to understand the logic behind these studies. Therefore, many workers who are not members of those academic linguistic communities find it difficult to understand the exact nature of the studies. This is where the challenge of producing local, experiential, commonsense knowledge lies. The assumption here is that professional knowledge, alone, produced by the experts in particular academic disciplines, is not sufficient to make policy decisions (e.g., to decide to downsize schools in a given school board or an academic unit, etc.) which have the potential to affect the lives of many workers, their families and communities. In addition to this, employees in the organizations have to be aware of the official knowledge. This form of knowledge is produced by the state (e.g., the government, etc.) which variously affects people's ways of thinking and living daily lives. So it is assumed here that a good policy making process in a given organizational setting, as well as in the public spheres, should take into account these three forms of knowledge.

In light of the above discussion, it seems necessary that people working in any organizational environment need to cultivate certain sets of abilities and skills of their own to enable them to produce contextually specific translation of professional and official forms of knowledge, in our case on downsizing, even though the translated knowledge may not be totally sufficient for making sense of one's local environment. To be sure, translation generates its own problems. But the point is that individuals should be able to produce local knowledge of their own through developing a new set of language, allowing them to re-articulate any downsizing situations and the subtle nuances that surround those situations. This new set of language could be a more effective vehicle for expressing their concerns about downsizing than the professional or official languages. Workers' own experiences on the work sites could be a rich source of producing a new set of language. Through this learning process and raised awareness, they could become organic researchers in their own right. In this newly created role of researcher -- as familiar and focused participant observers of their own workplaces --- they can describe their own experiences about downsizing and produce their own suitable narratives. In this way they can also overcome the problem of lack of financial support to conduct research. In order to achieve these goals, locally specific ways to change work places would have to be found.

In summarizing, what I have said above is well expressed by Young and Levin (1998, p. viii) "that knowledge is something people make for themselves, whether individually or, more often and more powerfully, in groups or social settings. Our sense of what the world is and how it is to be understood comes from the collision between each of us as a person --- our ideas and experiences --- and the events of our lives, many of which are beyond our control. People can and do disagree vehemently on what seems to be straightforward matters."

Now I will briefly talk about such organizations as schools, school boards, parent teacher associations, student unions, universities, academic units in universities -- places I am most familiar with -- which were subjected to downsizing regimes and, about other sites such as department meetings, social gatherings, coffee lounges, hallways and offices where people talk about their concerns about downsizing. In interacting and communicating with friends and colleagues at these sites over the course of my daily work, downsizing has been talked about in many different ways. I have noticed that people tend to identify themselves with three distinct groups. These are: the staunch advocates (The Staunch) of downsizing, the

resister of downsizing group (The Resister), and the seekers of the middle path (The Seeker).

The Stauncher cites numerous studies to rationalize downsizing as the only panacea to reform universities and education systems at various levels. The Resister counteracts arguments of the Staunch by citing their own set of studies on downsizing. Both these groups use professional knowledge to support their interests, goals and ambitions. I find the interventions of the Seeker in the interaction process most meaningful and useful in making sense of the downsizing process. This I have witnessed, experienced and continue to experience. Therefore, what I have come to appreciate most is how the Seekers have learned to play the roles of change agents and leaders at the very sites where they interact and communicate informally with their friends and colleagues. They translate professional knowledge on downsizing into locally nuance language -- through the use of selected cultural stories, metaphors, myths and examples -- and then infuse their translated language into the on-going conversations at these informal sites. I have observed that in this way they have been able to influence various actions taken by the other two groups, at least to some extent.

For example, let us consider the thrust toward reforming education in the last three decades in North America. School reforms have forced school boards in this province and in other places to restructure. This has basically meant downsizing -- an effort to reduce the cost of education as expected by the state (the government). The other rationale given by the proponents of school reform was and continues to be that schools will be more efficient, effective and accountable, if they are restructured following the foot steps of downsizing as practiced by the business organizations.

Restructuring of school boards has also meant lop-sided changes brought to the curriculum. I have observed several school boards giving priority to science, math, literature and reading as core curriculum at the expense of a more comprehensive curriculum emphasizing the importance of music, physical education, religious, cultural and multi-cultural studies. In this case, the Staunch advocates of science and math-dominated curriculum and downsizing seems to have won the debate, and so have been able to dominate school restructuring process.

Significant in this context is the fact that the whole restructuring process has been the site where much cultural learning has taken place (in the sense of consciousness raising and enhancing the feeling of empowerment) due to the actions taken by The Seekers. This group, like the other two groups, consist of people from all walks of life: students, teachers, professors, parents, school personnel, government officials, business people and various other people who are interested in schooling from K-12 and in post-secondary education in this province in general.

Here I will briefly focus on the actions of a multitude of parents as, the Seekers, and their engagements with the personnel of school boards and government officials. Together the Staunch and the Resisters have successfully imposed upon parents massive official school restructuring plans, affecting their family and community lives against their wishes. It is significant to point out here that teachers were and are officially discouraged from opposing the policies of school

boards and the government. This is one reason that the focus here is mainly on the parents.

Whilst the school boards and government used economic efficiency, productivity, and accountability arguments to restructure the school system (read downsizing the system) and pushed for science- and math-dominated curriculum, the parents have many other concerns. To be sure, parents are interested in efficiency, productivity and accountability of schools. Of course, they want their children to learn math and science. That was not and is not the problem. Their problem has been with the whole logic of the restructuring process. Parents perceived the way the restructuring process was carried out and the very content of it to be utterly uncaring, abstract and undermining of the healthy social relationships they, and their schools and communities had cultivated through hard work over the years. They thought that in the restructuring process there was no real concern expressed for the feelings, sentiments, emotions, attachments, affection and love, the families, friends, children and communities have for their schools and their locality. Read letters from many concerned parents to the editors of local newspapers, and listen to their daily comments on the radio and television talk shows. Read their presentations to the school boards and school councils. These were the sites where parents, individually and collectively, tried to resist, contest, modify and challenge the abstract, professional and bureaucratic logic of the restructuring process. In their own language they talked about how restructuring of their schools would negatively affect their communities, families and children's lives. In caring and articulated voices they expressed their concerns and understanding about issues such as: the effect of restructuring on the sleeping pattern of their children, who will take them to school if the school bus transportation schedule is changed, which school their children will attend, how far this school is from their homes, and how stressful their family relationships would become. These parents wanted to find some local middle path, a more caring local way, to resolve the problems posed by the school restructuring regimes based on the logic of globalization. In their locally situated conversations, followed by concrete actions taken by them, one sees how individuals, in their own little ways, function as leaders and cultural workers. This is where one also can deepen his/her understanding of global/local discourse (Wilson and Dissanayake, 1996; Dundas, 1997/98; Snow, 1991; Harris, 1999; Arruda, 1997; McGrath, 1997; Cantwell, 1995; Conners-Stack, 1995; Kelly, 1997; Hoddinott, 1999) and its dynamics.

To watch individuals try, little by little in their own unique ways, to modify the overwhelming impact of the abstract globalization forces on their lives, has been one of the most thrilling learning experiences for me. Beside individual actions, parents seeking a middle path also have collectively organized marches to protest against the restructuring efforts of both the school boards and the government. They have taken legal actions against school boards. They have attempted to start various types of social movements. Still they could not stop the radical restructuring of their schools. One of the triumphant chairs of a school board has this to say: "The last three years have been very challenging for everybody on the board." She pointed out that "They were personally challenging for me because of the many threats I've received..... the threats were not only made to me, but to members of my family." She continued, "All members of the board have received threats at one time or another." The local

newspaper reported her saying that all members of the school board should be very proud because through school reform they made huge savings for the government.

After three tumultuous years of bitterness, what has the chairwoman learned? She says that "of great concern to me is that we don't talk enough about the children, which is why we're here. We talk more about bricks and mortar." And then she says "We're all at fault for that. We have to talk more about what's best for our children. I will be a pain in the butt talking about children when I'm not in this chair any longer," (The Telegram, January, 2001).

Ironically, this is what many parents desperately tried to bring to her attention--not once, but over and over again, ever since the school restructuring process began, and ever since she started making decisions against parents' concerns about their own children and the children of others. Parents' main concern was and is that children's interests were and are barely kept in mind in the school restructuring plan.

The chairwoman talks about "we" and "our". What meanings is she attaching to these words? Is she talking to members of communities she belongs to? Is she talking about a community of "the implementers"? Or a community of "the downsizers"? Or "the community of professionals" which emphasizes the value of education and schooling either only in terms of economic return to the business community, or in terms of some vague, human resource development oriented educational policy of the government in power? She does not seem to pay much attentions to the voices of the "I" and "you" and the "they". Her discourse and actions have tended to exclude (or had the effect of excluding) these voices during the restructuring process. Obviously, she did not believe that social and educational policies are heterogeneous in nature and ought to be determined by taking into account the concrete struggles of parents, children, families, communities, teachers in schools and all other parties which did not constitute her "we". Any educational policy would be more successful and accountable if it links the voices of the "I" and "you" and the "we" and "they" before any action is taken.

Parents, as active participants of their children's education, have the right to speak about their own realities with their own voices, and therefore, ought not to be prevented by the school board and government authorities from naming their authentic experiences with the schooling of their children. These acts of naming by parents ought not to be unduly directed and managed by the overwhelming narratives of the "experts" working for other interest groups, pushing their own discrete set of educational reforms. Parents' concerns must be given ethical priority in the school restructuring process. Moreover, the voices of different segments of parents should be given the preferential option in bringing about any changes in the structure of schools attended by their children. Parents' voices should be listen to from the stand point of the nonprofessional/official and be contrasted with voices of the professionals and the government officials. However, in understanding the standpoints taken by different parties, it is important to be aware of the totality of social relations which are now increasingly being influenced by the local/global dynamics.

To be sure, no one can deny that the education system in this province needs changes. However, in order to achieve this goal, efforts need to be made to restore the collective will and the public confidence in the change process. This will require

educating the public (i.e., all parties involved in educational process) in the context of many public spheres. The public sphere is a site where people freely can debate their concerns, which are not solely related to economic matters, market functioning, and government social engineering plans. Parents in this province, individually and to the lesser degree collectively, knowingly or unknowingly, have greatly contributed towards this need for the public education in the context of the public spheres. It should be recognized that in this way they have greatly enhanced the public spheres in this province, and have substantially contributed to the democratic and democratic living aspects of Newfoundland's culture. Historically, Newfoundlanders and Labradorians have been able to create and maintain their own individual self-image and collective identity as unique, independent minded and caring people. In the arena of educational reform, parents as true Newfoundlanders and citizens, have made use of these rich cultural resources in challenging the narrow educational agendas of the professional educators and the agenda of government officials. In doing so, parents have shown they have the ability, skills, courage, and local commonsense knowledge to articulate issues pertaining to the education of their own children in their own voices. It seems each parent has learned to empower himself or herself and has learned to voice his or her concern in the public spheres. In the history of this province, and in the context of globalization, it seems that it is the right time for each individual, as a parent and active citizen, to regain his or her pride and confidence in himself and herself through engaging the policies effecting the education of all the children in this province as a whole. As I pointed out in the beginning, change -- social, cultural, political, and economic --- is brought about by the actions of a multitudes of individuals who are determined to achieve goals they have set for themselves in the context of their cultural history, personal biographies, unique localities in which they live, and their relative positions in society.

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MULTIAGE AND MULTI-GRADE: SIMILARITIES AND DIFFERENCES(1)

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A multiage continuous progress program is, in practical terms, an ideal. It is a goal toward which you travel bit by bit turning theory into day-to-day success. But it involves great changes for everyone involved. It requires time, patience, courage, and commitment (Johnson & Grant 1994, p.40).

Introduction

Making sense of multiage pedagogy is no easy task. Helping others make sense of it is equally difficult. One aspect of the challenge is the fact that here in Newfoundland and Labrador we have a history of *multi-grading* in our small rural schools. One of the first questions I am often asked by parents and teachers is: "Is multi age the same as multi-grade?" The answer to this question has to be, "No, they are not the same." However, I am quick to add that they do have many common features. This common ground makes both multi-grade and multiage quite distinct from sniggered classrooms.

In attempting to explain the terms, I have found it an effective strategy to discuss the relevant issues under three headings: *structure, ideology, and practice*. *Structure* refers to matters primarily concerned with the organizational characteristics of the classroom. For example, the unique time frame of a multiage classroom is an example a structural feature. *Ideology* refers to the set of educational beliefs that underpins and supports multiage structure and practice. A belief in child centered learning is at the heart of multiage philosophy. Finally *practice* refers to the methods and strategies used by teachers to individualize learning in their classrooms so that the unique needs of each child can be met.

Although we can discuss these dimensions separately, they are very much interrelated and interdependent. Multiage beliefs and values impel educators to reject traditional graded approaches to education and schooling in favor of more humane alternative structures. These same beliefs dictate how learning and teaching should occur within the structure. In this essay, I will focus on the structural dimension of multiage pedagogy and in doing so I am going to indicate the similarities and differences between multiage and multi-grade. I will begin with similarities because it is always useful to start with the common ground. Hopefully, this may demystify multiage somewhat for some people, but it will also sharpen awareness of what may need to change if we wish to adopt the multiage model.

Structural Similarities

From a structural or organizational perspective multi-grade and multiage classrooms share the following characteristics:

- Both multi-grade and multiage refer to classroom situations where children of two or more grade levels are grouped together for educational purposes. (3)
- The age range of the children in both types of classroom will be greater than one year.
- In multi-grade and multiage classrooms there will be a wider range of individual differences than one would find in a single grade classroom.
- Students remain in the same classroom with the same teacher for more than one year.
- The actual composition of a multi-grade or a multiage classroom changes each year as older students move to another classroom and their place is taken by a younger group of students joining the classroom for the first time.

Most multi-grade and multiage classrooms have two or three grade levels grouped together. Interestingly, many multiage teachers actually *prefer three* grade levels (Stone, 1996, p.3). I have noted an occasional reference in the literature to multiage classrooms with four grade levels.

The majority of multi-grade teachers feel two grade levels are more than enough; in their view three grade levels is the most anyone should be *forced* to have (Gafer, 1992; Mulcahy, 1992). Although they are in the minority there are some multi-grade classrooms in some smaller and more remote schools with as many as five and six grade levels (Miller, 1989; Mulcahy, 1992.). We still have some one- and two room schools.

It follows, obviously, that by grouping grade levels one is going to create classrooms with a greater age range than a single grade classroom. As the age range increases developmental diversity and individual differences will as well. (4) The number of years students and teacher remain together depends primarily on the number of grade levels that have been grouped: two grade levels result in two years together, three grade levels means three years. (5)

One of the most interesting aspects of both multiage and multi-grade classrooms is the way that the composition of the classroom changes from year to year. Although, as stated above, all children remain in the same classroom with the same teacher for more than one year, the same children are not in that classroom from year to year. (6) The composition of the classroom is constantly changing and this gives these classrooms a very unique dynamic.

At the end of each year in June, the older (oldest if three grades are grouped) grade level group will move on to another classroom and another teacher. They will be replaced the following September by a younger grade level group entering the classroom for the first time. The dynamic of multiage and multi-grade is that the membership of the classroom is always changing.

Both multi-grade and multiage teachers are aware of the potential educational advantages that an extended age range and time frame, characteristic of these classrooms, provide. However, both groups of teachers are also aware that these advantages are realized only in stable situations. Unfortunately, we are living through

a time of sudden and rapid change and few of us know for sure what our professional circumstances will be from year to year. Some schools are closed, others get "reconfigured", teachers move or get "bumped", student populations fluctuate, district leadership changes, and philosophies of education come into and go out of fashion overnight. We live and work in difficult times and that makes long term planning uncertain.

To achieve the optimal educational advantages of grouping students of different grade levels together requires a commitment to stability and continuity. There has to be some guarantee that the organizational structure will be a permanent one. This is a major issue in the multiage literature. In distinguishing multiage from other such groupings that may be only temporary arrangements, Bingham states:

A multiage classroom is not two grades put together for convenience, perhaps to accommodate a population bulge and probably for only a year or two...It is a permanent class grouping of planned diversity (Bingham, 1995, p. 8).

In our province, in many small rural schools, multi-grade classrooms turned out to be permanent arrangements (Mulcahy, 1992). However, it has been the stated intention of those creating multiage classrooms that they be permanent.

This issue is very significant if we are attempting to interest parents in multiage education. I think they need to be given some assurance that the school and district understand why stability and continuity are important and that they are committed to a permanent arrangement.

Structural Differences

It is a little more difficult to describe the structural differences between multi-grade and multiage classrooms. One can define the differences as clearly as one can the similarities. Part of the problem is that one cannot make the same kind of clear and definitive statements regarding differences as one can with regard to similarities. This in itself is interesting.

Be that as it may, I suggest that there are at least two structural differences:

1. Multiage classrooms are intended to be *non graded*. (7) Traditionally, multi-grade classrooms have tended to be *graded*.
2. The intention in a multiage classroom is for students of different ages and grade levels to be socially and academically integrated into a single learning community. In traditional multi-grade classrooms each grade level group has tended to maintain (often by official directive) its distinct identity.

These differences are crucial to understanding the multiage model of education. Multi age advocates believe that the graded structure of schools and graded approaches to instruction that have dominated classrooms since the middle of the 19th century are harmful and hurtful to children. Graded classrooms, graded

curricula and textbooks, and standardized testing ignore the reality of diversity that characterizes our classrooms.

Graded approaches to schooling are justified on the (false) assumption that all children of a given age are, more or less, the same in terms of development and capability. Therefore, other than those that can be labeled as "exceptional" for some reason, all other children can be taught the same thing, at the same time, at the same rate, in the same way. This approach ignores what we know about how children actually develop and learn. As every parent and teacher knows, there is a great deal of variability and diversity among children for all kinds of reasons. Unfortunately, the graded approach to schooling tends to ignore this reality.

"Variability among individuals constitutes the area needing greatest attention," insists Miller (1994), "because [graded] schools too often underemphasize or neglect student developmental differences." Individual variability includes:

Both the time frame for a developmental stage (that is the two-to three-year range) and those factors that mediate differences among learners, such as social backgrounds or dispositions toward learning (p.18).

Throughout the multiage literature one can find critiques of the graded approach and an appeal for a change to a more open, flexible, non-graded approach. In Bingham's view, "uniform grade-level norms, tend to exclude those children who don't fit in, intensifying the experience of successor failure" (Bingham, 1994, p. 6). Stone (1996), citing Connell (1987), writes:

In the graded classroom, children who do not meet the grade expectations feel that something is wrong with them, and those who do not progress satisfactorily are assumed to have failed, rather than see that the system has failed to meet their needs (p.12).

Noted multiage researcher, Charles Rathbone (1994) believes that in order to be more responsive to children, schools have to make changes (8) in the way they currently operate:

- Time and curriculum must be made flexible so learning is not held hostage to inappropriate schedules of coverage.
- School organization must move away from a graded structure to a multiage structure to lessen the damaging effects that grade related status attributions have upon an increasing number of learners.

In, *Children at the center: implementing the multiage classroom*, Miller (1994) states that, "Ideally," in a multiage classroom, "there is a blurring of grade- and age level distinctions as students blend into a caring community of learners." According to Miller, "The defining characteristic of the multiage concept" is the fact that a "child's developmental needs, regardless of grade-level curriculum or administrative placement" (p. 2) determine the starting point for instruction and the reference point for assessment and evaluation.

Miller uses the term "ideally" because creating a non graded learning environment in an educational universe so long and deeply entrenched in the graded tradition is often a difficult task. This is a point also made by Bingham:

In moving toward a multiage classroom, it is sometimes difficult to eliminate grade level labels completely, but it is a desirable goal, particularly in avoiding the stigma of failure when a child needs an extra year before moving ahead. (Bingham, 1994, p. 8).

Are all classrooms that are referred to as multiage actually non-graded learning environments? Probably not. In some situations the term is used to simply avoid the historical stigma associated with multi-grading. In these contexts there is no understanding and/or commitment to the multiage philosophy of child centered, responsive education. Unfortunately, this misuse of the term will impede and threaten more committed attempts to implement "true" (Chase and Doan, 1993) multiage programs (Miller, 1994).[9](#)

One of the chapters in Johnson and Grant (1993) is entitled "On the road to multiage continuous practice." I like this title because it suggests that we think of moving from a multi-graded (or for that matter from a traditional graded) classroom to multiage as an individual journey of exploration, discovery and transformation. I think this is important because changing from a graded to a non-graded structure in some circumstances may take some time. However, if we have a clear sense of direction and understand why we are choosing to change we can productively begin with small incremental changes.

Officially, traditional multi-grade classrooms in small rural schools operated in a strictly graded fashion. This graded approach was generally imposed by official directives (Miller, 1989; Mulcahy, 1992). The expectation was that multi-grade teachers would organize their classrooms so that each grade level group was assigned to a different space in the classroom and the prescribed curriculum for each grade level would be taught separately to each grade level group.

My research has revealed that here in Newfoundland and Labrador, individual rural teachers, some with the endorsement and help of district personnel, others acting independently and subversively, had the temerity to breakthrough the rigidity of gradedness. They became aware that the challenges presented by the unique structural characteristics of multi-grade classrooms could also be seen as opportunities to be more responsive to children's needs. In a sense, they saw the chance to make a virtue out of a necessity. Such teachers often operated with two different timetables. An official one sent to the district office detailed the required graded format and "time allotments." An unofficial one kept in the drawer of the teacher's desk reflected a more flexible and responsive approach to learning and teaching actually followed in the classroom.

Many experienced rural teachers are well aware of the potential educational advantages of creating a non-graded learning environment. Many have benignly waiting for "permission" from the "authorities" to do so. Experienced multi-grade teachers would agree wholeheartedly with Bingham's (1994) comments regarding any attempt to have " a *second grade* curriculum and a first-grade curriculum go on

simultaneously." In her view "insisting that separate curricula continue," presents teachers with "an unreasonable task...and one that undermines the class as a community." "Amen," say many generations of rural teachers.

It is my view that many rural teachers would be more than willing to transform their *graded* multi-graded classrooms into *non-graded multiage* classrooms. All they are waiting for is "official" permission to do so and adequate professional development to prepare for the change. They would also want some assurance that their educational leaders understand and support the implications of such a change not just for curriculum and instruction but also assessment and evaluation.

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Endnotes

1. Earlier versions of this article have been presented at a number of conferences in Canada and the U.S. Making sense of these topics is an ongoing process with me. I would welcome comments from readers who wish to share their views and perspectives.
2. As part of my ongoing work in the Faculty of Education, MUN, I have developed two university level courses on multiple pedagogy. These are available via the web, and thus are accessible to anyone, anywhere. Feel free to contact me for more information.

3. In the case of multi-grade, the primary purpose is so that schooling can occur in rural places; in the case of multiage, according to Miller (1994), it is "to improve learning" (p.4). In rural places, if people did not accept grouping grade levels together, schools would have to close and the children bussed out of their home community.
4. All classrooms (single grade, multi-grade, and multi-age) are characterized by an increasing degree of diversity, but the degree or range of difference will be greater in a multi-age or multigrade classroom than a single grade one.
5. In some exceptional circumstances, these time lines will be different for individual students. The issue of retention and promotion is currently a hot topic in multiage discussion groups. Some argue passionately that providing children with a "gift of time" -allowing them to stay an extra year in a multiage classroom - is fundamental to the multiage philosophy. Others argue, equally vehemently, that retention of any kind, in any kind of circumstances, is harmful to children. This later group refers to the research literature that has consistently demonstrated that retention is a very questionable practice. In multi-grade classrooms, retention policy followed whatever the current practice was in single-grade classrooms. You can explore the contrasting views of multiage teachers on this issue by going to the list serve archives and entering the key word 'retention.' <http://www.connect.more.net/lists/multiage/index.html>
6. This characteristic distinguishes both multi-grade and multiage from the practice of "looping." Looping occurs when a teacher remains with a class of students for two years as they move from one grade to the next. For example, such a teacher has the class as third graders and then remains with them when they become fourth graders. In a looped class, the children are within a single age range.
7. Non-graded education is the practice of teaching children of different ability levels, together, without dividing them (or the curriculum) into steps labeled by grade designation. Children move from easier to more difficult material at their own pace, making continuous progress rather than being promoted once per year. Curriculum and teaching practices are developmentally appropriate. A non graded classroom differs physically from a traditional graded one. Rows of desks do not permanently face one direction; instead, tables and chairs are frequently regrouped. Flexible grouping is a key element of non-graded education. Students are grouped homogeneously by achievement for some subjects such as math and reading. For other subjects, children learn heterogeneously in-groups. At different times, students work independently, in pairs, and in large and small groups." (Gaustad, 1992).
8. Rathbone also believes that "Classroom talk must shift from being dominated by teachers to being dominated by children so intentional conversation and activity become the medium through which thought and learning occurs."
9. There is much concern expressed provincially, nationally, and internationally, that if the adoption and implementation of multiage is not handled effectively, a promising educational concept will be labeled a failure because it "doesn't

work." We have seen this happen many times before, most recently with whole language.

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ONE SCHOOL DISTRICT'S EXPERIENCE IN BUILDING A LEARNING ORGANIZATION

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Within the last decade, there have been strong calls for the development of new models of school administration which recognize the need for collaboration among teachers and school-based management (Caldwell, Smilanich, & Spinks, 1988; Royal Commission, 1992; Fullan, 1993; Nova Scotia Department of Education, 1994). Although school-based management is linked to school improvement and reform efforts, research suggests that the implementation of school-based management may not result in the improvements in student achievement that are anticipated by reformers (Berman & MacLaughlin, 1976; Deal, 1990; Cranston, 1994; Fullan, 1993; Murphy & Hallinger, 1993; Sarason, 1990; Sergiovanni, 1995; Sheppard & Brown, 1995). In fact, "the empirical evidence in the literature up to this point is that the majority of cases are counterproductive" (Fullan, 1995, p. 231). It is within this context of scepticism toward school reform that this research is conducted, as it seeks to determine to what extent (a) leadership training can influence (b) leadership behaviours of school leadership teams, (c) the development of the school as a learning organization, and (d) student outcomes.

Leadership Approach and Training

The need for strong school leadership has been supported by research on effective schools (Edmonds, 1979; Gezi, 1990; Hall & Hord, 1987; Leithwood, Begley, & Cousins, 1990); school improvement (Cox, 1983; Crandall, 1983; Hallinger & McCary, 1990; Louis & Miles, 1990); innovation, change, and implementation (Fullan, 1993; Hall & Hord, 1987; McLaughlin, 1990). However, there is agreement that the concept of leadership is not well understood (Bass, 1981, Bolman & Deal, 1994; Brown, 1995a; Handy, 1985; Owens, 1995). Emerging theories are moving away from technological, rational planning models, toward cultural, collaborative approaches in which teachers are viewed as partners (Blase, 1993; 1987; Evans, 1993; Griffiths, 1988; Laroque & Coleman, 1991; March, 1988; Pellicer, Anderson, Keefe, Kelley, & McCleary, 1990; Weber, 1989). Current studies support the transformational leadership framework as appropriate when schools are engaged in change (Brown, 1994; Leithwood, 1992, 1994, 1995a; Sheppard, 1995a). The collaborative nature of such leadership is supported by research which reveals that department heads play significant roles in leadership for change (Brown, 1994). Additionally, it is based on the proposition that change cannot be left to the experts (Fullan, 1993; Glickman, 1993; Harrison, Killion, & Mitchel, 1989; Kanter, Stein, & Jick, 1992; Lewis, 1989; Peters, 1992). Teachers must be leaders in the change process and they must be critical-reflective, action oriented professionals working in an environment of collaboration where they are committed to making a difference to teaching and learning (Calhoun, 1994; Fullan, 1995; O'Neil, 1995a; Sagor, 1992). Despite such studies supporting the model of leadership noted above, there exists little evidence that such leadership can be developed through training (Krug, Ahadi, & Scott, 1990). Yet, training through leadership institutes is an integral component of this emerging concept of leadership. As our research reveals weaknesses in the

leadership training process, therefore, our training is modified as a means of further contributing to theory in this area.

Schools as Learning Organizations

In light of uncertainty of reform efforts, "the generative concept of the learning organization" (Fullan, 1993, p. 6) provides the basis of a promising theoretical framework for the development of improving schools. This concept is grounded in the five "disciplines" expounded by Senge, Roberts, Ross, Smith, & Kleiner (1994): the development of personal mastery, mental models, shared vision, team learning, and systems thinking. While the concept of the learning organization has developed outside of the school setting (Senge, 1990), research within education (Fullan, 1993; Leithwood, Dart, Jantzi & Steinbach, 1993; Louis, 1994) supports its meaningfulness in the school context. Fullan (1993) sees this as "the new work of the principal and the teacher" (p. 66) and further contends that if we are to succeed in bringing about meaningful improvement "schools must become learning organizations" (Fullan, 1995, p. 234). In spite of such support, the relevance of this learning organization concept to education requires empirical study (Fullan, 1995; O'Neil, 1995b). The intent of this research is to provide such study, and to contribute to the development of a theory of "learning organization" in the school and school district context. It extends research of learning organization into rural and remote schools (smallest is a remote, multigrade school with 50 students, not accessible by road). Also, it addresses teacher leadership training relative to the learning organizations and how this relates to student learning.

Student Outcomes

The intent of efforts at reform in education is improved student learning (Fullan, 1995; Goodlad, 1992; McLaughlin, 1990; Murphy, 1992; Murphy & Hallinger, 1993; Sergiovanni, 1995). Goodman (1995) contends that schools have been based on a model of the efficient and productive business organization where test scores have become the essential products. Successful school reform, he argues, must be based on values other than those of efficiency and productivity. While the selection of appropriate student learning outcomes is subject to debate (Madaus, Airasian, & Kellagan, 1980), Fullan (1993) suggests that The Conference Board of Canada profile of employability skills is indicative of directions schools in Canada are looking toward. This profile suggests that employers need people who can communicate, think, and continue to learn for life; who have positive attitudes and behaviours, are able to take responsibility for their actions, and are adaptable; and who can work with others (McLaughlin, 1992). In Newfoundland and Labrador, desired student outcomes have been determined through a public consultation process (Newfoundland and Labrador Educational Indicators System, 1995). A central contribution of this research is to determine the extent to which leadership training, leadership approach, and the learning organization accounts for variance in student outcomes that have been deemed important by primary education stakeholders.

Methodology

Sample

The sample is composed of 8 schools in one school district in Newfoundland with 139 teachers and 2623 students. School size ranges from 50-530 students located in both rural (50%) and urban (50%) centres. Teams of teacher from all participating schools (38 teachers) attended a week long summer leadership institute developed and conducted by the researchers in partnership with district office personnel. There was equal representation of male and female teachers attending the leadership training. The unit of analysis for the quantitative aspect of this research is the individual teacher. The choice of the teacher as the unit of analysis is based on research which suggests that if leadership is to be effective it must be validated by the consent of individual followers. In fact a criticism of transformational leadership theory is that it presents a view of leadership that resides in the individual leader without due attention to the leader-follower relationship (Blase, 1993; Brown, 1993; Lord & Maher, 1990; Sheppard, 1995a). The focus for the qualitative aspect is the school. This choice is based on the recognition that leadership is context bound and exists within "the corridor of beliefs" which already exists in the followers (Brown, 1995b; Foster, 1989). Bringing both individual and school foci together recognizes that "leadership is interactive in multiple directions such that in schools for instance, the principal is largely shaped by the teachers, the reputation and history of the school, and the expectations that have become institutionalized over time within the school and the community" (Angus, 1989, p. 76).

Data Collection & Analysis

In all participating schools, data were collected throughout the first year. All leadership team members were asked to maintain journals and to participate in school leadership interviews. A sample of one-third of each school staff were asked to participate in school leadership interviews. Interviews were conducted quarterly, in site visits, with the first interview data being collected four months following the leadership institute. All teachers were asked to respond to two survey instruments: School Leadership Survey and Process of Professional Learning Survey (Leithwood, 1995b; Leithwood, 1995c). The survey data were collected midway through the first year. Documents analyzed include: school improvement plans, staff meeting minutes, and team meeting minutes. On-going support was provided to leadership teams in each school through both a district support network and the faculty researchers. District and school teams have agreed to provide student outcome data consistent with the Newfoundland and Labrador Educational Indicators System (1995). At this point, however, there has been no formal attempt to measure change in student indicators that were targeted by this initiative. This lack of formal measurement of these indicators is deliberate. Like Senge et al. (1994), school and district teams and the researchers concluded that "measurements that are made prematurely will lead to erroneous conclusions" (p. 45). Only when it is reasonably certain that leadership approach is shifting toward the model promoted in training sessions and that schools are moving toward becoming learning organizations can impact be measured.

The Advantages of Partnerships

In this research, the university researchers play the role of "critical friends" and the school staffs assume a critical-reflective role which actively involves them in the research process (Lieberman, 1995, p. 3). The staff provides the closeness necessary for greater depth of understanding of practice, whereas the university researchers are more able to distance themselves in interpreting what is happening. Below is an outline of the various roles and responsibilities of the three main groups.

District

Role: School district personnel as members of the research team
Provides: Organization and facilitation, on-going support and continuity, legitimacy

Schools

Role: School teams as leaders of change and researchers
Provides: School ownership and involvement, school-driven research, legitimacy

University Faculty of Education

Role: Co-investigators as "critical friends" in research and change
Provides: Collaborative research design, an outside perspective, graduate student assistance and support, links to the broader research/theory base

The Partnership

Role: A research and development team drawn from school, district, and Faculty of Education
Provides: Complementary expertise, mutual support, follow-up, and synergy

Findings

The partnership model appears to work for all partners: return rate on surveys has been exceptional (86%), thereby providing an excellent sample to help understand the process. Feedback provided to the district and schools has been recognized as critical to their improvement efforts and provides endorsement of the concept of teacher as leader of change. As a result of positive feedback regarding the process, other schools have asked to become involved as partners.

School Team leadership appears to work best when the principal is recognized as a significant source of leadership as well. It appears imperative that one individual must emerge as a source of leadership; otherwise the team leadership appears to falter. Neither training nor support from the district has been sufficient to get two particular school staffs to engage in the process of school growth through team leadership. In both schools, teachers did not perceive that the principal provided leadership. While such a perception existed in a third school, changes have begun. In this school, teachers recognized the vice principal and a lead teacher as providing leadership for school improvement.

Leadership is often perceived as administration. As a result, the development of team leadership can be misinterpreted. Also, one cannot assume that all are ready for a new model of leadership. For example, some principals moving from the traditional model of administration to shared decision-making and school-based management revealed anxiety about their changing role, questioned their effectiveness, and needed on-going support. There is a need to provide principals with clear images of the emerging role, since facilitative power or "power with" appears to be confused in some cases with the abdication of responsibility or laissez-faire leadership. In another case, efforts of the Leadership Team were derailed because teachers viewed the team as "additional administration".

A District Superintendent's desire to shift leadership approach from a traditional hierarchical approach to a school-based model does not result in a quick shift either at the school or at the district level. Even when recognized as a direction to work toward, differing expectations result in frustrations at both levels. One particular district wide initiative promoted by an assistant superintendent and by some principals seemed to cause major difficulties in some schools attempting to operate in the school-based model endorsed by the superintendent. A consistent message reinforced by appropriate action from all district personnel is essential.

Teachers perceive that most leadership for school improvement comes from individuals or groups within the school. They do not perceive that program coordinators or district administrators provide much leadership in that direction, even though close examination reveals evidence to the contrary. They attribute even less leadership to parents, students, and the Department of Education. In the current sample, 72% of teachers perceive that the principal is a significant source of leadership; 54%, the whole staff; 24%, program coordinators; 19%, district administration; 12%, parents; 10%, students; and 16%, Department of Education.

Team members who attended the summer institute attribute much of their progress to the institute. Other teachers are less aware of the influence of the institute, but some recognize a shift in approach to change.

Journal keeping is a key component of this research model. It allows time for reflection and when shared with the "outside critical friends" it provides a critical component for formative evaluation of the process. While all members of the Leadership Teams agreed to keep a journal, for most it became lost in the practical realities of daily routines in the district, school, and classroom. This poses a challenge as we continue to work with teachers to develop a new model in which teachers are critical-reflective action oriented professionals who are leaders in the change process.

In the majority of schools with which we are working, the principal is recognized as the primary source of leadership for school improvement and this is complemented by a team comprised of teachers and school administrators. Leadership is perceived to promote high expectations (87%) and to be democratic (78%), participatory (70%), inclusive (70%), visionary (83%), change oriented (86%), visible (94%), supportive (90%), collaborative (83%), goal-oriented (89%), and intellectually stimulating (75%).

The positive direction of the constructs suggests that the leadership approach and the professional learning is perceived to be consistent with characteristics desirable in "Learning Organizations" that the district has been attempting to promote. In most cases, however, the score is close to the mean, suggesting that work is required on all constructs.

In one school that has been engaged in this process over a two year pilot period (Sheppard, 1995b) results indicate that the model of team leadership training directed at the development of the school as a learning organization is workable and that it contributes to improvements in teaching and learning and student outcomes. Teachers and administrators observed that efforts to implement cooperative learning as a teaching strategy within the new model was much more successful than any previous implementation attempt.

One teacher commented, There is a greater focus on this than any other initiative that we have attempted. There is far more consistency and more follow-up. As a staff we are far more like a team. We are drawn together around the implementation of cooperative learning.

Similarly, a program coordinator stated: There is more cooperative learning going on than before. There is significantly greater commitment to trying cooperative learning. There is a climate of collaboration at the school that did not previously exist. There is a feeling in the school among teachers that they can do something about what is happening in the school.... Teachers see that they have control and that this is not just another bandwagon; rather this is a step by step plan that provides the direction they believe to be necessary in their school.

The deliberate attempt to delay measurement of student outcomes has not prevented casual observations. Teachers believe that the school has fostered a culture that is conducive to learning. Students and teachers have learned the power of cooperation . Students are engaged in developing their social skills each day, they have become more tolerant of student differences, and behaviour problems and absenteeism have been significantly reduced.

The summer institute for team leadership training must include the presentation of methods and tools that assist in the application of theory and must allow practice time in their use. While teams were quite positive during the summer session and were engaged in several problem-solving sessions on team learning and school improvement, they found that back in their schools they did not have the practical experience to sustain the process toward the development of a learning organization. Also, the need for a follow-up reflective session for teams during the Fall Semester was suggested by many as a critical need.

On going support and follow-up with high expectations for change is essential. Many teams expressed the significance of follow-up by the district coordinator for school improvement and the continued presence of the "critical university friends" in providing the support and the motivation to sustain their efforts toward school growth.

Administrative structures can be major obstacles and some second-order changes are needed to facilitate the transition to a learning organization. Evidence

confirms that a school structure which limits teacher flexibility inhibits collaboration and team planning. Also, downsizing, the loss of key team members, and forced transfers into the school can adversely affect the fragile environment being created, and undermine efforts at school improvement and reform.

In summary, findings from this research confirm that leadership training can influence the leadership approaches taken in schools such that team leadership is an integral component of the way schools operate and such teams provide the foundation for the school to become a learning organization. While we have not yet attempted to formally evaluate the effects on student outcomes, informal observations indicate that our current efforts show much promise. This research, however, supports other findings that training and support must be on going rather than a one-time event. Leadership patterns and professional practices in schools and school districts are deeply engrained components of the educational culture that cannot be changed by simply declaring new values. "Deep beliefs and assumptions change as experience changes, and when this happens culture changes" (Senge et al., 1994, pp. 20-21). The partnership between university researchers as "critical friends" and the educational practitioners (teachers and district office personnel) as critical-reflective professionals actively engaged in the research process provides the methods and tools that allowed teachers to explore new ideas. These new ideas result in changes in the traditional structures. Overtime, such "surface movements" begin to change aspirations, skills and capabilities, attitudes, and beliefs--change that really matters (Senge et al., 1994). Findings of this research that indicate a shift in leadership approach and the development of a culture of professional learning consistent with that found in a learning organization indicate that appropriate training can make a difference. This difference promises to improve student outcomes.

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SCHOOL-BASED MANAGEMENT: IMPLICATIONS FOR SCHOOL IMPROVEMENT IN NEWFOUNDLAND AND LABRADOR

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In the last issue of The Morning Watch the author traced the beginnings of school-based management (SBM) in the Edmonton Public School District. With SBM being currently examined by several districts throughout Newfoundland and Labrador, this article discusses implementing the concept in this province and how it may impact on school improvement at the building level.

School-based Management Defined

School-based management (SBM) has a variety of names in the educational field: site-based management; school-based budgeting; collaborative school management; shared decision making; and shared school governance to mention a few. In this article the two terms, school-based management and site-based management are used interchangeably.

The literature on SBM abounds with definitions which attempt to explain the concept. The author has found the definition proffered by Herman (1991) to be a rather straightforward one:

School-based management is a structure and a process that allows greater building level decision making related to some or all of the areas of instruction, personnel, budget, policy, and other matters pertinent to local school building governance; and it is a process that involves a variety of stakeholders in decisions related to the local, individual school. (p. vi)

The Status Quo

At the present time education in Newfoundland and Labrador is a highly centralized operation with the Department of Education controlling the school curriculum and the monies allocated to the 27 school districts throughout the province. In turn, these 27 districts control the monies available to each of their schools and the staffing available to each school, having responsibility as well for consulting services and the overall maintenance and upkeep of the school buildings in their jurisdictions. In recent years there has been considerable talk of having more input at the local building level into the decision-making process. However, for the most part, this has been sporadic and ad hoc with some districts experimenting with site-based decision making pilot initiatives. To the author's best knowledge, nothing has been attempted on a provincial scale even though the recent Royal Commission (1992) has suggested that school-based management is one such model of participatory school administration that schools should be considering.

With the impending school reform initiatives, it appears that the number of school districts will be reduced from 27 to 10. This translates into larger school

districts and the obvious, inherent danger is that these larger districts may tend to be come even more centralized than they are at the present time. For example, the board which is rumored to replace St. John's Roman Catholic, Avalon North, Avalon Consolidated, Conception Bay South, Ferryland, and Western Avalon Roman Catholic will have responsibility for in excess of 35,000 students. Hence, it is suggested that the need for decentralizing the decision-making process to the building level would become even more crucial if stakeholders (parents, students, teachers, and the community at large) are to feel that they have the opportunity for meaningful involvement.

Motivation for School-based Management

It has been stated that school improvement should be the underlying reason for schools operating under a school-based management model (Delaney, 1995). When the Edmonton Public School District made the transition to all of its approximately 200 schools in 1980, the term "school improvement" was not used in the process. However, by schools being responsible for decision making in the areas of curriculum, staffing, and budgeting, the implication was that it would indeed lead to an improvement in the teaching and learning process (Delaney, 1995).

In recent years there has been considerable attention paid to the school improvement process in this province with many schools and boards having established school improvement teams and co-ordinators. Specifically, this has involved schools designing mission statements, strategic and operational plans, as well as specific action plans to bring about improvements at the building levels. The latest initiative, that of school councils, is one for which the provincial government is to be commended. The approach has been a somewhat methodical and cautious one with the establishment of a provincial pilot consisting of seven school councils throughout the province. The suggested modus operandi for these school councils according to the government's own guidelines is that these councils should be primarily advisory at this particular point in time (Department of Education and Training, 1995).

According to David (1996), "reasons for initiating site-based management run the gamut...". She further elaborates on those reasons:

To some, site-based management is a governance reform designed to shift the balance of authority among schools, districts, and the state.... To others, site-based management is a political reform initiated to broaden the decision-making base, either within the school, the larger community or both.... Site-based management may also be an administrative reform to make management more efficient by decentralizing and deregulating it.... Yet another premise of site-based management educational re form is that the way to enhance student learning is to let education professionals make the important professional decisions.... Further complicating the landscape, there are often underlying motives. Stated purposes may obscure far less lofty aims, such as weakening entrenched and distrusted local school boards, creating the illusion of reform without investing additional resources, putting a positive spin on central office downsizing by calling

it decentralization, or simply trying to shift the blame for failure to the school itself. (pp. 5-6)

The author contends that the major stakeholders in education - students, parents, teachers, and the community at large - are primarily interested in school-based management as a vehicle for school improvement. As for other reasons such as political reform, governance per se, or government's sometimes hidden agendas regarding the weakening of school board power, the author further contends that the stakeholders as listed above, could not care less. However, the enhancement of the school as a vehicle for student learning is what will ultimately convince stakeholders of the merits of school-based management.

School Improvement

There currently exists an extensive debate in the SBM literature as to whether or not this form of school governance results in raising academic achievement levels in schools. Detractors of SBM constantly whine about the paucity of empirical evidence linking SBM to increases in student achievement (Allen, 1993; Cuendet, 1993; Levin, 1992; Malen, Ogawa, & Kranz, 1990; Skaruppa, 1994). On the other hand, proponents view SBM as a very positive and successful vehicle of school improvement (Caldwell & Spinks, 1988; David, 1989; Herman, 1991; Levine & Eubanks, 1992; Neal, 1991).

There appears to be a tendency among educators to view school improvement in terms of academic achievement only. School improvement, suggests this author, is a much broader, more holistic concept than academic achievement. It certainly encompasses academic achievement but is not limited to only academic achievement. Proudford and Baker (1994) posited the following very useful definition of school improvement: "an ongoing process linked to an educational philosophy and clearly articulated goals rather than an *ad hoc* implementation of discrete classroom and school-wide initiatives" (p. 33). They also stated that there are three broad dimensions to this process: "namely, the approach to curriculum, the dynamics of school improvement, and the outcomes of school improvement" (p. 22).

Although the literature on SBM and school improvement appears to be conflicting and inconclusive, there is considerable optimism regarding the potential of school-based management. David (1989) exemplified that optimism:

Once school-based management is understood in terms of empowering school staff to improve educational practice through fundamental change in district management functions, the relevant research topics are easy to identify. They include school improvement programs, organizational change, efforts to stimulate innovation, participatory decision making, and effective practices in many areas, from teacher selection to staff development. (p. 46)

School-based management is not a panacea for all the educational ills facing our schools today. "That school-based management is no 'quick fix' is evidenced by the fact that it took 10 years to accomplish in Dade County [Florida].... It takes at least five years for tangible results to be achieved" (Shelton, 1992, p. 2). In a similar vein,

Brown (1990) acknowledged that although the concept had "some attendant problems [there were] also possibilities for the improvement of schools" (p. 9).

A Practical Approach

The Edmonton Public School District in beginning their transition to SBM in 1976 started with a pilot project of seven schools. In 1989 the concept was expanded to the other approximately 200 schools in the district. As of 1996, the concept has been well institutionalized but that is not to say that all is perfect in Edmonton Public. However, educators in that district are generally pleased with SBM and would definitely not want to return to the days of centralized decision making (Delaney, 1995).

As mentioned earlier, there appears to be no concerted effort provincially for schools to adopt school-based management. There are isolated pilot initiatives by certain boards (e.g. Appalachia R.C. School Board) which are presently attempting to implement site-based decision making. A provincial effort is needed if SBM is to receive the attention that it deserves and that may or may not happen as the school reform efforts intensify over the next several months. What are some of the challenges and obstacles which may stand in the way of Newfoundland and Labrador schools going the SBM route?

This province has a history of centralized decision making in education. A mindset exists that school boards need to control every aspect of an individual school's operation, especially its finances. Teachers and school administrators perceive themselves as educators and not business managers, hence the attitude on the part of educators that finances are "low on one's priority list". Similarly, business managers may be of the opinion that educators, particularly building administrators, lack the expertise and the motivation to really "worry about" the money situation in their schools.

Edmonton Public experienced many roadblocks in its attempts to convert to SBM and "one of the most obvious obstacles at the time was the resistance on the part of central office personnel who worked in the area of school finances" (Delaney, 1995, p. 57). Because of their control over finances, these individuals wielded considerable power over the schools and perceived their very existence and employment threatened by the introduction of school-based management. Whether or not similar opposition would surface in Newfoundland and Labrador should schools decide to embark on the road to school-based management is totally speculative at this point in time. Appropriate in-service with a clear definition and understanding of roles and functions of the major players such as district business managers and school building administrators would obviously help to allay various suspicions that may arise in school board offices.

Perhaps the greatest challenge facing those involved in attempts to have schools convert to school-based management would be to come to an understanding of the new roles that are associated with all stakeholders. In the past the majority of "stake holders" have been passive recipients of what school and district administrators have decided was "appropriate and wise" for all involved in the education business. SBM is premised on the basis of stakeholders becoming active

participants in the decision-making process, a leap of gigantic proportions for many of those "stakeholders"!

The roles of central office personnel and the school principal are ones which undergo significant transformation when the decision-making is decentralized and schools begin operating under a school-based management model. In a study by Koerner (1991) several nationally-honored principals in the United States were asked to share their thoughts on the principal's role in school-based management. They perceived a pending role change, seeing SBM as a shift in control from the centralized power structure to the people most affected by the school. They believed, furthermore, that although principals would continue to be decision makers and organizers they must also be bridge builders among local groups and must involve parents and teachers in decisions that affect the student.

This may cause considerable stress for principals who have not been used to working in a "shared decision-making mode" and for the teachers and parents working with these principals. Appropriate in-servicing in the areas of collaborative decision making, conflict resolution, consensus and team building are essential if principals are to be successful in making this transition.

The importance of the school principal in school-based management cannot be overstated. In a recent study the leadership style of the school principal was the primary factor contributing to a successful relationship between school improvement and school-based management (Delaney, 1995).

Central office personnel undergo significant role changes under school-based management. Hirsh and Sparks (1991) quoted a superintendent whose message regarding the nature of his job and that of his staff was to assist in the attainment of long range goals: "Once we sign off on your mission and objectives... it's our responsibility to provide you with the resources and support you need to get the job done. If you fail, we also have failed" (p. 16). They further spoke of this altered relationship:

- Central office administrators were coming to see change as a constant for continuous improvement.
- Central offices were shifting from monitoring and regulatory agencies to service centers for schools.
- Day-to-day, central office administrators were spending more time as planning facilitators and members of school improvement teams either at the school or district level . (p. 16)

Concluding Comment

School-based management is by no means the perfect system. However, as Odden (Mohrman & Wohlstetter, 1994) has stated, "school-based management should be conceived as a part of an overall systemic education reform, not as a reform in and of itself, and that decentralized decision making provides the conditions that allow school-site teachers and administrators to design changes in school organization and curriculum that ultimately will improve student achievement" (p. xii).

The process of school improvement is complex and arduous. School-based management may help to facilitate that process.

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WHAT ARE LEARNER-CENTERED SCHOOLS?

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At first blush, the above title may evoke a reader reaction to the effect that such a question is so basic to what education is all about that it hardly deserves a second thought. Hold that thought for a moment. We as educators would like to think that all schools are and should be learner-centered, but upon further reflection we may come to realize that schools do have some distance to go before they become truly learner-centered. This article will examine the theory and practice of the "learner-centered school" and hopefully shed some light on a movement that appears to be gaining considerable momentum in the current thrust to restructure and reform schools.

Background

According to Schrenko (1994), the concept of the learner-centered school is not new. She further explains that:

...in John Dewey's *Democracy and Education* (1916), a lab school is described as a plan for education with no discrete grades and much emphasis on "co-operative social organization". The Dewey lab school focused on the students' needs rather than on covering a well-defined scope and sequence of curriculum. Much of Dewey's philosophy is evident in the learner-centered classroom. Students become a part of the learning team, empowered to make choices and to move at their own pace. This learner-centered type of education prevailed throughout the early schools, until the onset of the industrial revolution changed America's vision of education (p. viii).

This "progressive" notion of what schooling should be was not without its critics and schools eventually embraced the industrial or factory model of education introduced to the United States by Horace Mann. In the "factory" school, all students were grouped chronologically, were taught the same material from the same textbook, and were expected to function in an obedient, non-questioning manner (Schrenko, 1994). This system was designed to prepare all students in the same way so they would be ready to work on an assembly line.

This model was indeed useful at the time. Today, however, most of the dull, routine, assembly-line work previously delegated to factory workers is now performed by computers and robots. Today's students must be able to think, make decisions, transfer knowledge, acquire new skills, and work together in teams (Schrenko, 1994).

For the past two decades the American educational system (which heavily influences our educational system in Canada) has been undergoing educational reform and restructuring. The so-called "second wave" of reform presently underway has seen a call for "second-order" (Fullan, 1991) or systemic change. Fullan suggests that this second-order change consists of "changes that affect the culture and

structure of schools, restructuring roles and reorganising responsibilities, including those of students and parents" (p. 29).

By the 1990s, the call for this "second-order" or systemic change led people to question the basic principles and practices of the traditional "factory" model of education (Schrenko, 1994). There now seemed to be a renewed interest in the learner-centered concept but, according to Alexander and Murphy (1993), it was not until the American Psychological Association (APA) produced a concise, research-based summary of the basic principles of learner-centered schooling that a concise framework for defining the nature of the learner-centered school emerged.

In 1990, the APA appointed a special Presidential Task Force on Psychology in Education whose task was twofold: (1) to determine ways in which the psychological knowledge base related to learning, motivation, and individual differences could contribute directly to improvements in the quality of student achievement and (2) to provide guidance for the design of educational systems that would best support individual student learning and achievement (McCombs & Whisler, 1997). "Taken as a whole [these principles] provide an integrated perspective on factors influencing learning for all learners. Together, they are intended to be understood as an organised knowledge base that supports a learner-centered model (McCombs & Whisler, 1997, p. 3)."

Learner-Centered Principles

The following is a list of those principles as developed by the APA (cited in McCombs & Whisler, 1997, p. 5-6):

Metacognitive and Cognitive Factors

Principle 1:*The nature of the learning process.* Learning is a natural process of pursuing personally meaningful goals, and it is active, volitional, and internally mediated; it is a process of discovering and constructing meaning from information and experience, filtered through the learner's unique perceptions, thoughts, and feelings.

Principle 2:*Goals of the learning process.* The learner seeks to create meaningful, coherent representations of knowledge regardless of the quantity and quality of data available.

Principle 3:*The construction of knowledge.* The learner links new information with existing and future-oriented knowledge in uniquely meaningful ways.

Principle 4:*Higher-order thinking.* Higher-order strategies for "thinking about thinking" – for overseeing and monitoring mental operations – facilitate creative and critical thinking and the development of expertise.

Affective Factors

Principle 5:*Motivational influences on learning.* The depth and breadth of information processed, and what and how much is learned and remembered, are

influenced by (a) self-awareness and beliefs about personal control, competence, and ability; (b) clarity and saliency of personal values, interests, goals; (c) personal expectations for success or failure; (d) affect, emotion, and general states of mind; and (e) the resulting motivation to learn.

Principle 6: *Intrinsic motivation to learn*. Individuals are naturally curious and enjoy learning, but intense negative cognitions and emotions (e.g. feeling insecure, worrying about failure, being self-conscious or shy, and fearing corporal punishment, ridicule, or stigmatizing labels) thwart this enthusiasm.

Principle 7: *Characteristics of motivation-enhancing learning tasks*. Curiosity, creativity, and higher-order thinking are stimulated by relevant, authentic learning tasks of optimal difficulty and novelty for each student.

Developmental Factors

Principle 8: *Developmental constraints and opportunities*. Individuals progress through stages of physical, intellectual, emotional, and social development that are a function of unique genetic and environmental factors.

Personal and Social Factors

Principle 9: *Social and cultural diversity*. Learning is facilitated by social interactions and communication with others in flexible, diverse (in age, culture, family background, etc.), and adaptive instructional settings.

Principle 10: *Social acceptance, self-esteem, and learning*. Learning and self-esteem are heightened when individuals are in respectful and caring relationships with others who see their potential, genuinely appreciate their unique talents, and accept them as individuals.

Individual Differences

Principle 11: *Individual differences in learning*. Although basic principles of learning, motivation, and effective instruction apply to all learners (regardless of ethnicity, race, gender, physical ability, religion, or socioeconomic status), learners have different capabilities and preferences for learning mode and strategies. These differences are a function of environment (what is learned and communicated in different cultures or other social groups) and heredity (what occurs naturally as a function of genes).

Principle 12: *Cognitive filters*. Personal beliefs, thoughts, and understandings resulting from prior learning and interpretations become the individual's basis for constructing reality and interpreting life experiences.

The phrase "learner-centered" is often equated with terms such as "child-centered" or "student-centered". However, "learner-centered" goes beyond that as Lambert and McCombs (1998) explain:

When one examines the learner-centered principles, it is clear that the concept suggests more than that. The principles apply to all of us, cradle to grave, from students in the classroom to teachers, administrators, parents, and others influenced by the process of schooling. Other people equate *learner-centered* with the affective side of education – quality interpersonal relationships, climates of caring, and focus on fostering students' competence and sense of well-being. Again, we think that's only part of the picture. When one looks across the domains covered in the principles – the metacognitive and cognitive, affective, personal and social, developmental, and other individual differences factors – it is clear that there is an emphasis on both the learner and learning. The central understanding that emerges from an integrated and holistic look at the principles, however, is that for educational systems to serve the needs of every learner, it is essential that every instructional decision focus on the individual learner – with an understanding of the learning process (p. 9).

From these twelve learner-centered principles has evolved the following definition of "learner-centered":

The perspective that couples a focus on individual learners (their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs) with a focus on learning (the best available knowledge about learning and how it occurs and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners). This dual focus then informs and drives educational decision making. The learner-centered perspective is a reflection of the twelve learner-centered psychological principles in the programs, practices, policies, and people that support learning for all (McCombs & Whisler, 1997, p. 9).

Theory into Practice

Transferring the theory of learner-centered schools into actual practice is the challenge faced by classroom teachers and educational administrators. Such transfer begins with practitioners having a clear understanding of the various underpinnings of the concept – the principles that form the prerequisite foundation.

From those principles we are able, according to Schrenko (1994), "[to] build an underlying belief system about how schools and teachers can best stimulate learning" (p. 4). She puts forth the following premises for our consideration:

1. All children come to school willing and able to learn.
2. All intelligence is modifiable.

Teachers enable learning by creating conditions for learning by all:

1. Using mindful approaches, learner-centered teachers mediate learning by all.
2. Learning best occurs when individuals construct their own meaning.
3. Students must learn to work in teams.
4. Teachers facilitate learning by using different pacing and by recognizing multiple pathways to learning.
5. Learning occurs best when the school supports learner-centered instruction (pp. 4-12).

Understandably, the vision suggested in the learner-centered definition, the various principles, and the premises is "admirable and theoretically sound, but idealistic" (Rallis, 1995, p. 227). She ponders the challenges involved in translating the theory and vision of a learner-centered school into actual practice:

The change requires a shifting of perspective, the adoption of a new set of assumptions about schooling. People hold beliefs and assumptions about schooling that shape their expectations and drive their judgments. These expectations often run counter to what a learner-centered school delivers; thus, harsh public judgments prevent attempts to establish alternative schooling from the start or demoralize those that have begun. Society's survival instinct seeks to maintain the status quo, supporting schools that force children into existing molds and sabotaging those that encourage individuality. Most restructuring efforts such as site-based management teams disregard the learner and learning and focus only on improving existing governance structures and organizational procedures (p. 228).

According to Rallis (1995), "becoming learner centered requires more than structural alterations: it requires changing the culture of the school" (p. 228). She further elaborates on that change:

The culture of a learner-centered school is one of a learning organization (Senge, 1990); thus everyone is a learner, adults included. The active learning of the teachers in a learner-centered school is supported and honored as well. They learn to know their children; they learn in order to develop their teaching; and they learn as a result of their interaction with students. They model the inquiry process for their students and for each other... In sum, all inhabitants of the school are students [learners]. Consequently, *they* becomes *we*, and everything contributes to the prevailing culture of inquiry (p. 228).

The literature contains a number of other characteristics of learner-centered schools. Schrenko (1994) offers the following:

1. Unlike the "factory" model of schooling, the learner-centered school centers on thoughtful expectations and high standards. School is defined in terms of the performance desired by the local community and the results obtained by the students.
2. The learner-centered school or classroom focuses on the success of all students. In the traditional classroom, children at six years of age are

expected to know and do the same things. In a learner-centered classroom, developmentally appropriate activities are designed to help students use the thinking and learning strategies they will need to succeed both in school and in life. In a learner-centered system, standards are established, and each child is expected to achieve those standards. The time required to master skills may vary, but the standards do not.

3. Learner-centered classrooms focus on meaningful experiences. Learner-centered teachers know that a "being there" experience is the best type of teaching so they provide as many real life experiences as possible.
4. Scheduling in the learner-centered classroom also differs from the traditional classrooms. Students do not change subjects every forty or fifty minutes but rather follow flexible schedules that integrate subjects enabling depth of study as well as breadth (pp. 28-29).

In learner-centered schools McCombs and Whisler (1997) proffer that students:

1. choose their own projects;
2. work at their own individual pace;
3. show excitement about learning new things;
4. work with students of different ages, cultures, and abilities;
5. demonstrate their knowledge in unique ways;
6. are actively engaged and participating in individual and group learning activities;
7. go beyond minimal assignments (p. 65).

On the topic of instructional strategies and methods utilized in the learner-centered classroom, McCombs and Whisler (1997) suggest the following:

1. utilizing time in variable and flexible ways to match student needs;
2. including learning activities that are personally relevant to students;
3. giving students increasing responsibility for the learning process;
4. providing questions and tasks that stimulate students' thinking beyond rote memorizing;
5. helping students refine their understanding by using critical thinking skills;
6. supporting students in developing and using effective learning strategies; including peer learning and peer teaching as part of the instructional method (p. 65).

Assessment and Evaluation

Assessment and evaluation are topics that cause contentious debate among teachers and administrators. How should students be graded? What criteria should be used in grading? Does one reward knowledge, effort, good behavior, or some combination thereof? These are but a few of the multitude of questions educators are continually asking themselves. Levin and Young (1998) summarize some of the inherent difficulties in evaluating students:

School grades have important consequences for a student's future. They may determine whether a student enters an enrichment program

or qualifies for a particular university or college program. Yet grades in school are not particularly predictive of success in adult life. [Research done by Walberg, 1987 suggests that] grades in university programs, for example, correlate very poorly with measures of adult and occupational success. The problems with grades have been recognized for many years. In principle it ought to be possible to provide a thoughtful and thorough analysis of students' skills and weaknesses without using any comparative measure, whether it be letters or numbers. And [according to Maeroff, 1991] important changes have been made, particularly in elementary schools, in terms of assessing students' progress using other forms of evaluation (p. 269).

Acknowledging the kinds of concerns articulated in the previous paragraphs, many schools and school districts are now experimenting with alternative ways of assessing student learning and performance in an effort to become more learner-centered. Darling-Hammond, Ancess, and Falk (1995) posit that:

These concerns are also related to the increasing demands for a kind of education that encourages students to do more than memorize information and use algorithms to solve tidy problems – an education that prepares students to frame problems, find information, evaluate alternatives, create ideas and products, and invent new answers to messy dilemmas (p. 5).

These alternative kinds of assessment practices are frequently called "authentic" assessments because they engage students in "real world" tasks rather than in multiple choice exercises and evaluate them according to criteria that are important for actual performance in that field (Wiggins, 1989). These assessments take the form of observation checklists, artwork/illustrations, oral projects and observations, artifacts, oral/written reports, and portfolios (Schrenko, 1994, pp. 135-142). Development of mathematical models, literary critiques, scientific experiments, dance performances, debates, oral presentations, defences of ideas, "domain" projects which enable students to work on practices central to a discipline such as rehearsing a piece of music or writing a scene for a play are additional examples of authentic assessments (Darling-Hammond, 1997).

According to Darling-Hammond et al., (1995), "a major goal of authentic assessment is to help students develop the capacity to evaluate their own work against public standards, to revise, modify, and redirect their energies, taking initiative to assess their own progress" (p. 12). The real world of work requires individuals to continually evaluate their performances on the job and authentic assessment provides students with the opportunities to develop those self-assessment skills.

Lambert and McCombs (1998) suggest that learner-centered assessments should have 3 characteristics:

1. They should begin with a commitment to helping the learner function successfully in society by representing the content, skills, and dispositions that society values and is likely to value over the coming decade. For

example, they might include the ability to solve loosely structured problems, work together in groups, and present information orally.

2. Learner-centered assessment tasks themselves function as learning events. The tasks are seen as opportunities for students to learn from one another and deepen their understanding of content.
3. Students are continuously encouraged to self-assess their progress by using publicly stated performance criteria to monitor their own work (p. 212).

Conclusion

Varying degrees of "learner-centeredness" exist in schools today. To suggest that our schools are totally lacking in "learner-centeredness" would be inaccurate and irresponsible; there are teachers and administrators, who, on a daily basis, make valiant efforts to teach from a learner-centered perspective. The message one would like to leave with the reader is that the concept warrants further investigation and study by classroom teachers, building and district administrators.

This article has given an overview of what learner-centered schools are all about – how they are defined, their underlying principles and premises, as well as various other elements of the concept. It is neither the "silver bullet" nor the panacea for the shortcomings and deficiencies in education today. Although it would be naïve and unrealistic to advocate a dramatic and wholesale change from the "factory" model of schooling to learner-centered schools, the concept and its potential to impact on the school reform movement in a positive manner merits further examination. Education in North America and indeed worldwide is at present attempting to respond to a public call for reform; learner-centered schools appear to represent one viable alternative worthy of consideration.

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FORECASTING THE FUTURE SPECULATING ON THE NEXT 25 YEARS

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I am pleased to have been asked to speculate on the future of the Faculty of Education. One of the things I like best about my job is the opportunity, indeed the responsibility, to think and speculate about the future of education. The future is partly shaped by the past, of course, and for Memorial University's Faculty of Education, there are certain events in our past that have influenced the course we are setting ourselves for the future. In the next few pages, I would like to reflect on some of those events and to describe the direction I think the Faculty will take in the next quarter century.

The Past

January 1987: Submission of the report of the *Small Schools Study Project*

The Provincial Department of Education commissioned a study into small schools directed by Dr. Frank Riggs, now retired from the Faculty of Education. The primary purpose of the project was "to investigate problems peculiar to small schools with an aim toward developing proposals to enhance educational opportunities for students in these schools." The Department and the report affirmed that teaching and learning in small schools has special characteristics. The report recommended the greater use of technology for program delivery in small schools, especially in high schools. In making this recommendation, the authors of the report obviously responded to certain educational realities: not every school can afford the teachers and the materials to mount all the courses that students and their parents have a right to expect; not every school can afford a full time music teacher, and the distance between schools is often too great for an itinerant teacher to work effectively. As the range of program and course options narrows, the viability of the school is threatened, and the viability of these schools is essential to the viability of their communities. The importance of, and the need to support, small schools was thus affirmed.

November 1988: The release of *Focusing our Future*

In August of 1987, Memorial President Dr. Leslie Harris established a committee to review all aspects of teacher education in the province. Chaired by Madeline Hardy from London, Ontario, the committee was given very broad terms of reference to conduct a complete and unbiased study of the state of teacher education. In November of 1988, the committee's report was released, and it was to have a profound impact on the direction and the structure of the Faculty of Education. It is impossible here either to summarize the report or to capture the full extent of the Faculty's response to it. Nevertheless, certain of the recommendations and the way the Faculty has responded to them seem to point us in a particular direction.

There were a number of recommendations in the report dealing with the internship, but two deserve special mention not only because they have been demanding a great deal of Faculty time during recent years but because they signify

a different kind of relationship with the schools. In brief, the report recommended that a model for internship be developed that provided for closer involvement of teachers in the supervision of interns and a clarification of the roles of all participants. Under the leadership of Dr. Dennis Treslan and Dr. Alice Collins and with the assistance of many members of the faculty, including Drs. Andrea Rose, Barrie Barrell, Amarjit Singh, Bill Kennedy and Elizabeth Yeoman, a new model for the internship has been implemented in the province and in Harlow. We are excited about this model because it changes the University's role in the supervision of interns and gives greater professional responsibility to teachers, principals and other school district personnel. To venture just for a moment into the future, I see the Faculty in the next decade working with the profession to create a development plan for master teachers and supervisors and to refine the selection criteria and role of all participants in the enterprise of student internships. What is especially exciting about the new model is the opportunity it affords for the University to work in true partnership with professional teachers.

Focussing our Future recommended that the Faculty extend its distance offerings, and that is a recommendation that we have been very active in following. We have added substantially to our list of distance offerings, especially at the graduate level, and have diversified the delivery modes as well. This is a theme to which I will return shortly.

March 1992: The release of the report of the Royal Commission of Inquiry entitled *Our Children, Our Future*

The Royal Commission was established to inquire into the delivery of programs and services in the schools. While the committee was not charged with assessing programs in the Faculty of Education, we are in the business of educating teachers, and so much of the report had implications for the Faculty. During the last few years, we have turned our attention to a number of matters that were identified by the Royal Commission as needing attention although, in fairness to the Faculty, it must be said that many of these issues were already on the agenda. In this latter category, for instance, was the recommendation that the Faculty, undertake research into the school contexts in which first year teachers are placed with a view to gathering realistic information to help shape preparation programs" (p. 31 of summary report).

The Royal Commission recommended the establishment of School Councils to ensure that parents and communities had a voice in the education of their children. The Faculty of Education, largely through the work of Dr. Alice Collins, has played a significant role in establishing and monitoring the work of these Councils. The Royal Commission also recommended "that the Faculty of Education establish a Centre for Small Schools which would address problems of particular concern to small schools and approaches to teaching in multi-grade classrooms." In a slight variation on this theme and with the help of a substantial grant from Industry Canada, we opened in 1997 the Center for TeleLearning. What began as a Center for TeleLearning became effectively a home for both Telelearning and rural education since the context for TeleLearning in this province is chiefly rural or small schools.

Recommendation #86 of the Royal Commission report was that the Faculty of Education, in conjunction with school boards, designate selected schools as University Schools which would assume a cooperative role with the Faculty of Education in order to prepare teachers adequately for the realistic demands of teaching and to enable the Faculty to experiment with innovative teaching ideas and practices." We have begun to meet the spirit of this recommendation through projects initiated by individual faculty members. In particular, Jean Brown and Bruce Sheppard were instrumental in formalizing a partnership arrangement with the Western Integrated School District (as it was then known), and Ken Stevens and I were instrumental in fostering a similar relationship with Clarenville High School. This latter project is part of the school's renewal plan and will see different faculty members involved at different times as the school turns its attention to changing various aspects of its curriculum and administration. Other faculty members are working closely with schools in ways that may be formalized later. Even if they are not, the spirit of such cooperative arrangements is to create environments that truly facilitate learning, both for the pupils in the schools and the teachers and potential teachers who teach there. There were a great many other recommendations made by the Royal Commission that have influenced the Faculty's direction since the report was released and will continue to do so in the coming decades. I have mentioned only a few. The point is that the Faculty has responded to the call for change and has done so quickly and positively.

January 1994: Publication of *Launch Forth*, a Strategic Plan for Memorial University of Newfoundland

In this document, the University affirmed its commitment to education for students whose needs might differ from those of traditional students. It also acknowledged the University's obligation to the community of the province and the region. With regard to the Faculty of Education, many interpretations are possible, but two things seem abundantly clear. One is that we must take a hard look at exactly who our non-traditional students are in the Faculty. Are they part time students? Are they rural? Or are they defined as having particular needs as teachers that we are not meeting? Another perspective on this issue has to do with demographics. As out-migration continues to result in a declining population, a fact that is felt in school and university registrations, the Faculty may well find itself looking beyond the shores of the island and the boundaries of Labrador for students in our courses. Second, we must never forget that however far off shore we may look for our students, our primary responsibility is to students and teachers in Newfoundland and Labrador, and that responsibility extends to *all* schools and teachers in the province, not just those conveniently located in St. John's.

February 25, 1997: Memorial President Arthur May announces the appointment of the Industry Canada Chair in TeleLearning in the Faculty of Education

With this appointment, the Faculty signaled its participation in the information age. Dr. Stevens' mandate is to facilitate research on teaching and learning in the TeleLearning environment. His background and interests in rural schools situate him well to realize that goal within the context of small and rural schools in Newfoundland and Labrador. In my view, that is entirely appropriate. It is consistent with the broader goal of the University as articulated in *Launch Forth*, it is consistent with many of the

recommendations made in the other reports mentioned above, and significantly, it is symbolic of one of the directions the faculty is taking as it prepares to educate teachers for the 21st century.

The Future

There is much about which I could write, many strengths of this faculty that I see developing over the next few decades. The events from the past I have highlighted above, however, point to two particular areas of growth, one related to distance delivery of our existing programs and the other related to the possibility of creating new programs to focus on the needs of small schools.

We are in the early days of a communications revolution that will have a profound impact on teaching. Evidence that this is true comes from the number of courses we now offer via the internet, by the number of courses faculty members are developing for delivery using cd-rom, the world wide web and a number of other delivery options that were not available when the *Morning Watch* made its debut. (I invite you to visit the Faculty's home page and explore some of the options available .) We will continue to move in this direction although there are a great many obstacles to overcome. One is attitudinal.

I often wonder what kinds of discussions occurred at Oxford and Cambridge and at continental universities when the printing press was an emergent technology. Did our academic predecessors engage in speculation about the future of education? Did they worry about the cost of producing books? Did they worry that the publication of books, especially in the vernacular, would change the very elite character of university? In other words, would demands on the universities change as more people had access to books? What would happen to quality? And what about tradition? I don't know whether such discussions took place, but they very well could have, and if they did, our predecessors faced the same questions that we face today. There is not the space here for a full discussion of these issues, but let's take a brief look at a few of those most often heard in connection with computers and on-line teaching.

The most common argument against major expansion into hi-tech delivery is the cost. Certainly this is a serious objection when every public educational jurisdiction in North America is fighting to maintain any kind of capital budget. The fear that computers will wipe out the entire resource budget is a real one. Do we want more modems at the expense of books in the library? The solution to the problem of cost is by no means simple, but we can take some comfort in Moore's Law. This precept holds that the same amount of money spent on a computer today will buy twice the power in 18 months' time. Twenty years ago pocket calculators represented a much larger "hit" to the budget than they do today. In ten years' time, we will be able to buy more powerful computers for much less money. What we are spending now is, in Kilian's words "tuition expenses: some of us have to learn when it's costly to do so, so that we can transmit our hard-earned knowledge to the next generation. Pioneers always have to pay a higher price" (1997, p. 33).

Critics also make the point that not everyone is comfortable using computers and, more specifically, that however effectively they may be used for instruction, on-

line instruction is not better than face to face. As to the comfort factor, as computer applications become more diverse and easier to use, more people are finding some use of the computer with which they are very comfortable. Many people are expanding their computer use to new applications, whether to word -processing, e-mail, or web browsing. In classrooms, teachers are using computers in art and music class as much as in science and English, and they are increasingly using them with students who are themselves familiar with some applications before they come to school. There is little doubt that comfort levels are improving.

I doubt that many educators would claim that computers will replace teachers or argue that there are many instructional applications that can take the place of personal contact. What the computer can do, of course, is provide an amazing array of resources to teachers, and for students who are isolated or home-bound, education delivered over the internet or by cd-rom may be the only alternative to none at all. What is important to remember is that computers, smarter than they once were, are still essentially only dumb machines. Humans still provide the structure and content for teaching. The computer is just a very efficient tool.

Still, there are important pedagogical questions that must be asked, and they are properly asked within faculties of education. This one will be no exception. At the same time that we are looking at the use of technologies to equalize opportunities in small schools, we will be looking at more fundamental issues. We will be asking questions such as what kinds of teaching are most effectively done on line. What happens to the student-teacher relationship and how does it influence learning? What is the effect of putting children in front of computer monitors for extended periods of time? What are the psychological and sociological consequences of our increased reliance on computers? Some would argue that we need the answers to these questions before we commit more of our scarce resources to technology. But of course we can't do that. We cannot sit back and wait for someone else to answer the questions. We have to find out for ourselves what the best uses of the various technologies will be, and we can only do that through active experimentation with those technologies.

I was asked by the editors of **The Morning Watch** to speculate. The most interesting question to speculate about is not what technologies of the future will be or even what they can do but rather what we can do with and because of them. If I thought the answer had to do only with increasing resources and access, I'd still be interested, but I'd also be a lot less excited. I think that the potential of technology lies in the possibility of radically reconceptualizing what it means to learn and to teach. We have an opportunity, an exciting one, I think, to revitalize or even recreate the roles of teachers and learners. What is truly exciting is that this broader perspective crosses discipline boundaries. I am not so worried about creating techno-junkies or about focusing our attention too exclusively in the sciences rather than the arts. Here in Newfoundland, I see the potential of technology to enrich and protect rather than to replace the strong traditions in music and the arts. If it were otherwise, I would not be interested. The work I see faculty members doing nearly every day in drama and music, to name only two areas, convinces me that is the power of technology and that its potential is being realized in exciting ways.

In short, I believe that technology may well provide us with the opportunity to reclaim education. In ruminating about the future of on-line teaching, Kilian puts it very well:

"Somewhere in the fairly recent past, education fell into the hands of the bean counters. Nowhere in Plato do we learn how many evening symposiums were required for a Socratic certificate. Alexander the Great never had to send back to Aristotle for a transcript of his grades. When Paul had his revelation on the road to Damascus, he didn't hand in a term paper on what he'd learned (nor did he cite God's question as a "personal communication in the footnotes), and his epistles did not appear in refereed journals. Custer went to West Point; Crazy Horse didn't.

J. Alfred Prufrock measured out his life with coffee spoons. We measure out our own in credit-hours and essays submitted and MLA-approved citation format. This bureaucratization generates a lot of clerical work and committee meetings, but I really doubt that it advances genuine self-propelled learning.

"After all, what we learn ought to surprise us, open up unexpected opportunities, create whole new industries and cultures....

"We online teachers are domesticated beasts suddenly at liberty, like the conquistadors' horses running wild on the Texas plains. If we can learn how to be free, and how to stay free, then we can teach the same freedom to our students. I can't imagine a nobler calling." (p. 34)

Nor can I, and if we can recreate learning and give learners the permission and the tools to take charge of their own learning, we will be well rewarded for the expense and the effort. We will have provided them with the real tools to become life-long learners. This freedom that transcends discipline boundaries, that creates thinkers whether they be mathematicians, poets or musicians, this is what excites me about technology and the future.

I would like to thank the editors of the *Morning Watch* for the work they have done during the last quarter century. They have provided us a forum for thinking and talking about a great many educational issues over the years, a platform to debate and, as for me in this issue, an opportunity to dream.

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GLOBAL MARKETPLACE

GLOBALIZATION AND THE TEACHING PROFESSION

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It is commonly known that as many as a thousand Newfoundlanders are now teaching English or pursuing other occupations in South Korea. If there are that many Newfoundlanders in South Korea, the number of those in Japan and China may also be considerable. The representation of teachers from Newfoundland in East Asia is remarkable, given that the total employed in Newfoundland schools is just 6,700.

It is interesting to observe as well that many of these Newfoundlanders in East Asia are graduates of Memorial's Faculty of Education who were prepared essentially for teaching in Canada and who were trained to teach subjects other than English as a Second Language (ESL). The environment in which they find themselves, also, is in other ways very unlike that of the normal K-12 school; it is typically that of a small private school, on a busy street or in a residential area, teaching conversational English in return for fees. The terms and conditions of the teachers' employment also differ since the teachers are hired on the basis of annual contracts.

The increasing presence of Newfoundlanders in East Asia raises an important question: should this trend be regretted, or should it be encouraged and nurtured? Certainly, there are points to be made in favour of the trend. The Newfoundland graduates are able to find employment, which might be very difficult to do in the highly competitive Canadian setting. They are therefore able to support themselves and perhaps even save some money, since their salaries are not too bad. In addition, they obtain *some* teaching experience, which will no doubt be of benefit to them as they attempt to advance their careers.

One dimension of the Newfoundland teachers' experience in East Asia that worries me, however, is the requirement that they teach in an environment for which they are not prepared and deal with a people whose culture differs quite significantly from their own. While it is an advantage that they are native speakers of the language they teach, this condition alone may not guarantee them success in their work. They may need some knowledge about the people and their culture. They may also need knowledge about the country's school system and, especially, the way educational services are sold and purchased. On the basis of such knowledge, they may need to be able to form judgements regarding what to do and what not to do in order to be a successful teacher. Otherwise, cultural differences will lay before them insurmountable hurdles.

An incident in which I was once involved may well illustrate how formidable the obstacles can be. It was, I think, two years ago that a local reporter approached me requesting a comment on his niece's experience. His niece had applied for a teaching position in one of the privately-owned English schools to which most Newfoundland teachers have gone. Unfortunately, her application proved unsuccessful. That in itself did not occasion her any grief. What bothered her, as well as her uncle, was the reason the Korean school had supplied, which was that her photograph had not shown up impressively. Some readers may also find such a reason difficult to

comprehend. What does the impression made by a photograph have to do with being a teacher?

Denying a job to a person on the basis of physical appearance seems totally undesirable. It would appear that the applicant in this case had a valid reason to be dismayed. From the point of view of the school concerned, however, the reason was perfectly valid. The school was a private business seeking profit by selling the service of teaching English in return for cash. The greater the profit, the better it is for the school. The school's hiring practice was governed by one single principle, namely, that any new teacher should contribute to attracting fee-paying clients. (If someone needed to be blamed at all it should be the South Korean clients, who apparently preferred nice-looking teachers.) The unsuccessful female applicant, regrettably, was judged not to meet the requirements imposed by this principle. The policy of the school is, in fact, not very different from that adopted by some business enterprises in Canada where certain restaurants, for example, might employ "attractive" waitresses as a means of drawing more customers. Cultural differences are critical and our indifference to them often leads us to chastising others for their not doing things in the way we do. For instance, we may criticize the Chinese for their not honouring human rights in the way we do, disregarding the fact that the concept of human rights is a modern one making more sense in one culture than in another. Respect for such cultural differences is important, however, because otherwise we will lose when we are to do business with those dissenting others.

In terms of cultural difference, there is a point to be emphasized here, which is that we are perhaps less familiar than East Asia with the notion of primary, elementary and secondary schools operating for the purpose of profit-making. Schools at such levels in Canada are mostly publicly funded. Where the public is concerned with what is good for society at large and with respect for the rights of disadvantaged minorities, publicly-funded schools cannot betray the public's concerns. Even private schools cannot be exceptional. Private schools in Canada are institutions for meeting educational demands from those individuals and groups who do not want public education. They are an alternative means for addressing public concerns. Although occasionally we hear of the legendary private schools which produce lawyers, MPs and ministers in return for incredibly high tuition fees, their school brochures actually do not provide any single hint at their seeking something outside our public concerns - profit in particular. Simply put, they are non-profit organizations. The profit-seeking South Korean ESL schools consequently do not conform to normal Canadian expectations. Even less so do some of the profit-seeking teachers in those schools who vigorously advertise themselves in mass media. Many of our graduates are going into the world of profit-oriented teaching with no idea about what that world can be like.

I think it is worthwhile here to reflect on the practice of profit-oriented teaching, which in fact has a much longer history than our non-profit-seeking teaching practice. I have two reasons for this. One is, as I have indicated above, that it is a good thing to see a large number of our graduates obtaining jobs in South Korea's field of profit-oriented teaching. The other is that the recent trends in the globalizing world suggest the possible emergence of profit-oriented teaching within Canada itself. Let me address these points in turn.

Some may disagree that the flow of teachers to other countries is a good thing. Is there not a brain drain here? Have we not invested in these graduates large sums of hard currency? I think that there is not much to worry about in this regard. The brain drain in this instance is a temporary phenomenon, for most of the Newfoundland teachers will come back sooner or later. And, importantly, when they come back their savings will accompany them. Their movement to South Korea is different from the migration of teachers to the United States or even to other provinces in Canada, which usually ends in permanent settlement. The "brain drain" argument is not a strong one, at least not in the case of East Asia.

The phenomenon of globalization, however, is of much greater import. As the globalization of the world economy advances, indeed, the notion of "brain drain" seems to become increasingly obsolete. Globalization refers here to the phenomenon of capital abandoning its nationality and moving freely to any country in which bigger profits await. The new rules for business operation in the age of globalization are two: flexibility and mobility, which, to paraphrase, means contracting and expanding as quickly as necessary and packing and leaving as swiftly as demanded. Profitable businesses observe these rules thoroughly and methodically. As a result, they move out of their country, leaving behind unemployed workers, diminishing state revenues, and increasing state burdens for welfare and education. What, then, can labour do if capital operates in that way? The worst thing to do is sit and wait for manna from heaven. It is important, on the one hand, to improve the business environment so as to lure capital from outside, and, on the other, to make the workforce as flexible and mobile as possible, so that the workforce can quickly adjust to the changing work environment and, if necessary, swiftly move to where there is a job. Seen in this light, then, the brain drain is not necessarily an evil thing. Should the brain remain home unemployed, it would only aggravate the state's burden. Should it move, on the other hand, there would be the kind of benefit which the Newfoundland teachers in South Korea seem to gain. Unlike the times when capital stayed at home, singing patriotism and mobilising nation states and nationals to *international* competition, it is now desirable that brains flow freely across national borders just as capital does.

The above observation has a bearing on the teaching profession. Globalization will continue to wreak financial havoc upon the education system in which teachers work. It will do so because, while the current education system is heavily dependent on state funding, the free flow of transnational capital will continually destabilize state revenues. The recent trend of manufacturing capital's transformation to financial capital will make state revenues even more unstable. Unlike manufacturing capital, which require relatively prolonged operation in one place, financial capital requires swift and massive movement from one place to another, a requirement which now can be handily met through the Internet. The consequence is exemplified by the financial troubles of the Japanese state at a time when Japanese manufacturers continue to amass wealth from exporting Honda Civics and Sony Trinitrons. If this trend continues, and it will indeed do so, the ongoing educational system in most nations will have to undergo restructuring on an unprecedented scale. When state revenues continue to be unstable, policy makers cannot avoid the necessity of stabilizing school operation at a level of funding which the state can afford with its ever decreasing resources. Confronting this necessity means a lot more than simple budgetary cuts. It may mean privatization of public education (that is, putting public schools up for sale) and incorporation of market elements into the remaining public

schools (such as fee charging, payment-by-result for teachers, and elimination of the tenure system). As well, such familiar neo-liberal policy measures as private school funding, charter schools and school choice in the public sector may emerge as more viable than ever. The public system of education may thus collapse. The current arrangement of the teaching profession, then, would no longer be viable.

What is wrong with the current arrangement of the teaching profession? Consider who the teachers are now. They are in law "certified teachers," where certification is made for teaching a particular subject in a particular range of grades, for instance, mathematics in junior high, music in elementary, and chemistry in senior high. The certification paper also specifies the level of competence of the bearer, suggesting a suitable place in the more or less uniform remuneration system. Overall, teacher certification is a procedural device for sorting trained teachers into a national (a provincial, if in Canada) system of schools. It is undoubtedly a product of a time when the public system of education expanded incessantly thanks to the nation state's ambition to construct a large set of schools with which to beat rival nations - a time in which familiar buzzwords were amalgamation, consolidation, and efficiency in organization. As the education system got bigger and bigger, an individual, whether a student or a teacher, needed to be placed in such a way as to maximize the output of the system. Ironically, the procedural device of teacher certification created perpetual problems for the schools which could be neither amalgamated nor consolidated, let alone organized efficiently. Examples are the "small schools" in sparsely-populated communities in Newfoundland and elsewhere, where a teacher certified for a subject had also to teach other subjects for which he/she was not certified..

Privatization of public schools and incorporation of market elements into the remaining public schools, however, will invalidate this procedural device, for both private schools and public schools with market elements in them will develop diverse forms of organization which will require different kinds of teachers. The fluctuation of supply and demand in the education market will require school organization to be flexible and mobile, that is to say, to expand when demand rises, contract when it sinks, and pack and leave when there is a better place to move to. When the schools - that is, the employers of teachers - operate in this way, a teacher cannot remain a mathematics teacher for junior high schools or a music teacher for elementary schools. His or her expertise will have to change flexibly to meet the demands arising from the market. He or she will have to be able to teach a broad range of subjects to a wide range of grade levels. As well, he or she will have to be able to operate successfully not only in the public setting entertaining public concerns, but also in a private setting entertaining private concerns, profit making in particular. Furthermore, he or she will have to be prepared for a wide range of places and sell himself or herself vigorously for a better deal and perhaps a bigger profit. Flexibility and mobility will thus become the governing rule of the teacher's operation.

Viewed from this perspective, then, the significance of the profit-seeking culture in teaching should be clear. That culture is one of the many possible ethical alternatives for the new teaching profession. And that culture suggests that teachers need to prepare themselves to be more marketable and to actually sell themselves globally. In this sense, we can say that those brave Newfoundland teachers in South Korea are the pioneers of our time.

To my pleasure, two of these teachers in South Korea visited me recently as if to verify the pioneering nature of their work. Both were doing very well although they had been in that country for only two years. One of them, a Corner Brook man, told me of his desire for marrying a Korean girl and settling there with a permanent job at a university. He showed me a notebook full of Korean words and asked whether there would be anyone with whom to practice Korean while at home. Another teacher, a St. John's man, came back for a teaching certificate in our Secondary Education program with which to seek a better job back in South Korea. This man missed Korean food so much so that he asked me how I acquired in St. John's the characteristically hot and spicy foodstuff. No institution had prepared them for their adventure yet both teachers were adapting surprisingly well and with a great deal of confidence and hope.

Had we prepared them for teaching environments other than the public system of education in the province, however, would they not perform much better? Had we trained them in a broad range of subjects for a wider range of grade levels, would they not be more competent in teaching whatever they were asked to teach even in a foreign country? Had we taught them even such common courses in other Canadian Faculties of Education as International Education, Comparative Education, History of Education in Selected Nations, Education and Culture, and Education and Economy, would they not make better sense of what they confronted in that country? If prospective teachers continue to enter highly specialized teacher education programs that prepare them primarily for a North American work environment, there is a very real danger that in future they will be less than adequately equipped to deal with a market-place in which globalization is an inevitable feature.

THE STATE AND EDUCATION IN NEWFOUNDLAND IN THE AGE OF MARKET GLOBALIZATION

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Concerns about the Non-Denominational Future

When I returned to St. John's from a sabbatical leave, I was somewhat surprised to see the resurgence of the debate on denominational education. It was the second time in two years that the government had called referendum on the same issue. This time, the question for the purpose of public consultation was bravely set as whether the government should seek the revision of Term 17, the constitutional document governing Newfoundland's schools, to omit clauses protective of denominational rights and privileges in education. The proposed Term 17 read: "The [provincial] Legislature shall have exclusive authority to make laws in relation to education, but shall provide for courses in religion that are not specific to a religious denomination,"¹ and allow religious observances "in a school where requested by parents."² As in the previous referendum, the people of Newfoundland accorded their government a consent clearly and neatly, if not overwhelmingly. They thus endorsed the policy of education reform which had led their government to call the referendum.

Some of the denominations concerned--the Roman Catholic and Pentecostal churches in particular--express a fear that the referendum result will eventually secularize schools. This fear does not seem to be unfounded. Although I am not sure whether the government intends to make schools godless, one point that is obvious to me is that the proposed Term 17 will place the denominations in an unaccustomed difficult situation in maintaining schools. For the denominations which believe only they are truly godly, this may well be seen as a move to the secularization of schools. But secularization in itself, even if the government pursues it, is not a problem at all educationally speaking. So long as the schools concerned are public schools, the problem rests, rather, with their denominational affiliation, especially the arrangement in which religious denominations operate "public schools" although they are private organizations serving private interests. The government's policy to reform the denominational system of schools is commendable, for it promises to modernize the province's public education.

Saying so, however, does not mean the referendum result guarantees a bright future for Newfoundland's public education. Actually, I have some concerns which are, in my view, far more serious.

Term 17: the Original and the Revised

One of my concerns is related to the fact that education reform is pursued on the basis of a generally taken for granted interpretation of the provisions in the original Term 17. It was the interpretation which has complicated the school system in Newfoundland as well as the strategy for its reform. The two referenda, as well, were called on the basis of the same interpretation. That interpretation is that the original Term 17 stipulates that Newfoundland's public schools are to remain denominational so long as the denominations concerned so wished, and that the provincial

government's education funds are to be dispensed only through the denominations. From this, people often jump to the conclusion that the denominational schools are public schools, that public schools in Newfoundland have to be denominational, and that the only way in which the province can have non-denominational or secular schools is the denominations' voluntary relinquishment of their constitutionally-guaranteed rights and privileges. The state--the provincial government which is by Term 17 the exclusive authority as to schools in the province--is in this interpretation deemed to be unable to do anything about schools unless the denominations consent.

Criticisms of this constitutional document arise mainly from the economic side rather than from the legal side. A familiar example of such criticisms is that the duplication of school facilities and services based on denominational division makes it unavoidable that the poorest province in the nation will waste valuable education dollars. As if to confirm this criticism, comparisons of students' academic performances demonstrate Newfoundland students' ranking well below the national average. It is thus argued that the integration of the denominational systems of schools into a single system will maximize the use values of the province's scarce education funds. Such an argument is too familiar for us to document. Suffice it to point to the Williams report of 1992, which compared the existing denominational system with three possible models of integration to conclude that a non-denominational system was the most cost-efficient.³

Newfoundland students' poor academic performance--if that is the case--is clearly a problem. If the poorest province in Canada has to waste money due to the denominational system, that too is a problem. Such problems have got to be solved somehow. And the solution of these problems calls for the establishment of a province-wide system of non-denominational schools. But did it require the revision of the original Term 17?

My previous studies yielded a negative answer. All that the union paper provided for were that the denominations concerned would maintain their schools so long as they so desired, and that the provincial government should not discriminate against any of them in the allocation of its education funds. It did not stipulate that the provincial government shall not have its own schools, non-denominational or secular. Nor did it stipulate that all education funds available for schools shall be allocated to denominational schools only. Despite the protective provisions for the denominations, the provincial government still maintained rights to have its own schools--"public schools" in the proper sense. The available methods for this were two. One was the creation and maintenance of the government's own schools out of its education funds while continuing to offer grants to the denominations perhaps in amounts dramatically reduced but still non-discriminatory, say, from \$6,000 to \$6 per student.⁴ The other was to persuade the rightful and privileged denominations to voluntarily surrender their schools to the public authority.

In fact, Canada's parliamentary proceedings at the time of union reveal this was exactly the way the officials of the Canadian government understood the original Term 17. Answering questions posed by a CCF member of the House of Commons, for instance, Louis St. Laurent, the then Deputy Prime Minister, stated that the Term was not prescribing a denominational system of schools for the new province, nor did

it freeze Newfoundland schools in the existing denominational line-up. In protecting certain denominations' rights and privileges in accordance with Newfoundland's request, his government--he made it clear--assumed that there should be in the future non-denominational public schools as "majority" schools. In his understanding, the provisions for protecting denominational rights and privileges and for a share in the province's education funds had been prepared in the view that such denominations' schools would become "minority" schools similarly to the minority schools in s. 93 of the BNA Act. In his understanding, as well, the denominational schools in the new province would be publicly-funded schools but not necessarily "public schools." After all, Term 17 was not as guilty as many Newfoundlanders believed for the troublesome denominational system.

The origin of this system is not Term 17 per se but, rather, its false interpretation. And the origin of the false interpretation was Joey Smallwood himself, a key member of the Ottawa delegations and later the first premier of the province. Smallwood brought in this interpretation while entertaining questions before the National Convention. And in this interpretation, the two-decade leader of the province gave up the legitimate option of building a non-denominational system by creating "public" schools. Instead, he adhered to the tradition of giving *all* public education funds to the privileged denominations. The reason for this was that the politician who had established a political career by confederation did not wish to jeopardize it by provoking his opponents, particularly the Roman Catholics in the St. John's region.⁵

The 1995 referendum was conducted for the purpose of preparing a way to a single system of education by redesignating denominational schools to inter- or non-denominational schools. The subsequent revision of Term 17 in April 1997 declared that, with an exception, "schools established, maintained and operated with public funds shall be denominational schools."⁶ The exception was the schools to be created according to a newly added provision that "the Legislature may approve the establishment, maintenance and operation of a publicly funded school, whether denominational or non-denominational."⁷ It is here apparent that the provincial government, in drafting the new Term 17, embraced a double tactic. On the one hand, it chose to allay the denominations' fear of their rights and privileges being affected by making it explicit that Newfoundland's publicly-funded schools were to be denominational as a principle. On the other hand, it sought to prepare within the denominational system a niche for schools with no denominational affiliation. This double tactic was bad not only because it *froze* publicly-funded schools to be denominational but also because it ended up exacerbating the denominations' fear by the contradictory move to prepare non-denominational schools within the denominational system. Unless the government had committed a large sum of money to setting up new schools, the exceptional clause for non-denominational schools would suggest to the denominations only that their own schools were at risk.

As a matter of fact, the government after the 1995 referendum pushed ahead with a policy to reduce the number of school boards and redesignate denominational schools as inter-denominational. This invited denominational resistance, of which the end result was Justice Leo Barry's July 1997 decision to grant Roman Catholic and Pentecostal churches the requested court injunction to stop the redesignation process. His point was exactly what I have pointed out above, that so long as the constitution guaranteed the denominations' rights and privileges, the government

could only "improperly" attempt to take away denominational schools from their denominations. Education reform came to a halt consequently.

The Proposed Term 17 and a Possible Controversy

The government's choice at this time was to revise the Term 17 which had been revised only a few months ago. It thus called another referendum. And the second referendum on 1 September 1997 was successful, as already pointed out. What implications, then, will the proposed Term 17 have for Newfoundland schools?

The proposed Term 17, as summarized at the outset, states that the provincial Legislature shall have exclusive authority to make laws in relation to education, but shall provide for non-denominational religious education and allow religious observances if parents request. According to local newspapers, both the proponents and the opponents of the denominational system seem to expect that this revision will bring an end to denominational education in the province. Since the provincial legislature has "exclusive authority" to make laws in relation to education—they seem to assume—it will be able to make any law to turn denominational schools to non-denominational schools. Furthermore, they seem to assume that the provisions for non-denominational religious education and religious observances upon parental request suggest the exclusion of denominations even from religious classrooms. The matter, however, is not that simple.

Precisely, the proposed Term 17 does not say anything specifically as to the future of denominational schools. It simply states that only the provincial Legislature shall make laws to govern education, and, it, unlike the previous versions, keeps silent on the denominations' rights and privileges in their schools. What is here to be noted is that the Legislature's "exclusive authority" to legislate in relation to education means merely that, in the province of Newfoundland, the House of Assembly in St. John's—not the House of Commons in Ottawa or the Legislature of any other province—shall be the exclusive authority to do so. And the proposed version's silence on denominational rights and privileges means merely that the constitution does not offer special protection as to such rights and privileges. This silence does not mean that such rights and privileges shall become null and void in case the Term 17 of 1997 is revised as proposed. Had the denominations rights and privileges regardless of constitutional protection, such rights and privileges should remain intact in spite of the anticipated re-revision of the constitutional document. (Furthermore, the obligation to provide non-denominational religious education does not require the change of denominational schools to non-denominational schools, for the Legislature can fulfill that obligation in the schools it newly sets up, not necessarily in the existing denominational schools. The same can said of the obligation to ensure religious observances upon parental request.)

Thus viewed, what is of interest is whether the denominations actually have rights and privileges regardless of constitutional protection. I think there are sufficient reasons for advancing an affirmative case. Although the denominational schools have been funded by the provincial government before and after the confederation, and although they were brought under a system of public administration in the early 1970s, the schools had been set up, maintained and developed by individual denominations . Although public funding has been so heavy that most of the spending

by those schools was made out of public monies, these monies have been given as *grants*, that is, monies with no obligation to pay back. Traditionally, moreover, at least a fraction of the spending--up to 3% according to McCann's study of 19th-century documents--have been raised by the denominations in the forms of voluntary contributions and school fees.⁸ This tradition continued to prevail even after the introduction of public administration, in which the Department of Education exercised influence upon schools through denominational education councils (DECs). Throughout the post-confederation era--that is, throughout the reign of the original Term 17--the persisting stance of the provincial government as to denominational schools was what Smallwood established before the National Convention, that the denominations had rights and privileges not only to have their own schools but also to claim a share in public education funds. In this tradition, the denominations have been considered to *own* their schools.

Given this, the government may not be able to redesignate denominational schools as non-denominational schools without provoking controversy and resistance over the issue of the ownership of the schools. There are of course precedents of state take-over of private properties with or without due compensation. The normal *modus operandi* of a capitalist state, however, is to avoid that as far as possible. The reason is that the cost of take-over normally outweighs any resultant benefit.

Even though costly and time-consuming, the route of education reform might have been smoother if the government had pursued the reform within the framework of the original Term 17 by taking advantage of the available methods. The denominations which preferred keeping their schools should have been allowed to do so, and supported by public funding, outside the public system of schools. After all, they were private schools although they have been publicly funded. As I shall say shortly, moreover, their turning to private schools will be increasingly helpful to the financially-constrained government in the upcoming years.

Another Concern

Whether there will be controversy and resistance or not, it is all too clear that the provincial government will accelerate its rearranging of schools along non-denominational lines in the event Term 17 is revised as proposed. As I have stated already, such a prospect is a good one. Paradoxically, however, a concern arises out of this good prospect. In order to explain this, I wish to draw the reader's attention to a few facts about Newfoundland's schools.

The first fact is that Newfoundland has no tradition of what educators call "local control of education," that is, the practice of local residents' electing a school board as the primary authority for public schools. In the rest of Canada, the elected school board controls and operates public schools. It levies school taxes upon the residents, sets up schools, decides on the curriculum, hires teachers, and actually operates the schools. The provincial government, meanwhile, makes laws in relation to education, sets educational standards, examines the outcomes, supervises the operation of the school board, and offers financial assistance where necessary. Elsewhere in Canada, therefore, the provincial government as the "exclusive authority to make laws in relation to education" is the ultimate but indirect authority. Although the government's power has visibly grown over the years, the practice of local control has secured

checks and balances between local and central interests. Recently, some local school boards managed to considerably cushion the impact of drastic governmental policy changes, such as budgetary cuts. Newfoundland, meanwhile, has a very different kind of school boards. Their role is limited to such things as keeping records of teachers and students, maintaining school buildings and facilities in order, ensuring that school operation is not disrupted, and reporting what occurs in the school to the superior office. They were the caretakers rather than the primary authorities of schools. Moreover, up until recently they were virtually appointed by DEC's.

The absence of local control in Newfoundland is of course due to the denominational control of schools. Since denominations as religious organizations controlled schools, local residents as members of the denominations had little room for stepping in matters related to their children's education.⁹ But this reason is superfluous. The real reason is that the numerous small communities in the province have--and have had--no solid local tax basis to raise funds for their children's education. Religious denominations intervened here. They set up and operated schools instead of the residents of the communities. Unless the residents are able to raise some funds for their schools their control of local schools must be either impossible or severely limited. Looking ahead, as well, the bad economy of the province and the dwindling population in rural communities do not seem to promise improvement in this regard. Thus if local control of 778schools is not likely to be in place in a near future, what is apparent is that the removal of denominations from schools will result in the concentration of power in the hands of the provincial government.

In defending denominational education before the National Convention, Smallwood at one point observed that this kind of situation is apt to lead to totalitarianism. I do not very much concur with him. The concentration of power in the hands of the government is not a problem on its own account as far as education is concerned. As long as efficiency is important in expending public funds for education, a strong state power is a necessary, albeit not exclusive, condition. My concern stems from a different angle, that it can be dangerous if and when the state's political power in the field of education is not appropriately matched by its financial capacity, if--to be straightforward--the state with excessive political power has little money to spend for the people. In such cases, the power concentrated in the hands of the government may do more harm than good.

What, then, is the financial outlook of the provincial government? The northern cod fisheries remaining closed and, with the province having no significant alternative industries, the sources of governmental revenues are not likely to improve. (The oil of Hibernia and the minerals of Voisey's Bay may not as yet allow a great deal of optimism in this regard.) As well, Ottawa, another major source of money for Newfoundlanders, keeps cutting on expenditures. It will do so even after its Finance Minister has declared freedom from budgetary deficits. Every year budgetary shortfalls are a familiar topic to Newfoundlanders in spite of the highest-in-the-nation tax rates they must accept. Can we, in spite of all this, dream of a near future in which the government's financial power will dramatically increase? If not, it is obvious that the financially constrained government may have to use the power concentrated in its hands to cut into education programmes and thus make educational services no better than before.

This pessimism of mine will sound more plausible if the reader reflects briefly on the reasons why the governments of industrialized nations now undergo financial troubles. The fundamental cause of the trouble is that the economy is now losing its national character. The market becomes increasingly globalized. Consequently, the fall of stock prices in Hong Kong instantaneously call for reaction throughout the world. The reason for the globalization of the market is the fact that capitalists now leave their country for a place where the chances for profit making are greater. Unlike the old capitalists who sought their state's imperialist protection in the foreign market, the new ones abandon their nationality, acquire a new one, then jettison the latter whenever the market dictates. And when they leave for a new place, they leave behind scarce jobs and dwindling state revenues although, as a result, the state's financial burden gets heavier due to the increasing number of unemployed and other welfare recipients. If market globalization goes on--and this world-historical phenomenon will certainly go on--the state's coffer will shrink on and on in industrialized nations.

The Importance of Private Schools

Spending the year of sabbatical leave in South Korea's major governmental think tank for economic policies, and visiting Japan where we hear money abounds, I noted that the globalizing world market was already stamping its negative impact upon those countries. Capital was already pulling out of those countries. Like Canada, therefore, those countries too were cutting governmental budgets and seeking a restructured, "smaller government" by privatization and deregulation. Their education reforms were pursued in this light.

This is, I think, the context in which to consider education reform in Newfoundland. We are heading for a non-denominational, state education while the countries with a long history of such education are now restructuring their education system to a smaller and more affordable form. We are seeking a highly centralized system of public education in which the state will bear an absolute power with all financial responsibilities. We are doing this although our government's financial outlook is not quite good. This is a mistake.

Considered in light of the world historical trend, the principle of education reform has to be, as elsewhere, that the size of public education must be small and affordable not only in the number of offices, school buildings and facilities, but also in the numbers of students. This requires the channelling of as many students as possible from the public to the private sector. The denominational schools resisting incorporation into the public system should be allowed and encouraged to grow into self-sufficient private schools if they so desire. They should receive financial and other assistances in that direction. The major reason for this is that private schools will alleviate the financial burden of the provincial government.

REFERENCES

1. The proposed Term 17 of Union, (2).
2. Ibid., (3).

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4. This paragraph draws upon Ki Su Kim, "Reading Term 17 Anew: What the Legislator is Not to Do about Schools," *Morning Watch*, 19:1-2 (1991), pp. 28-39.
5. Ki Su Kim, "J.R. Smallwood and the Negotiation of a School System for Newfoundland, 1946-1948," *Newfoundland Studies*, 11:1 (1995), pp. 53-74.
6. Constitution Amendment Proclamation, 1997 (Newfoundland Act), Schedule, 1 (a).
7. *Ibid.*, (b)(ii).
8. P. McCann, *Schooling in a Fishing Society: Education and Economic Conditions in Newfoundland and Labrador, 1836-1986* (St. John's: Institute of Social and Economic Research, 1994), p. 94.
9. It was very different from, for instance, Alberta where denominations as a body of local residents belonging to a religious group controlled their schools.

GLOBALIZATION: SOME IMPLICATIONS FOR EDUCATORS

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Today, when discussing educational and schooling issues, it is not uncommon to include references to the world of corporate business. This occurs in spite of vast differences and because of common factors that exist between the two. The corporate and schooling worlds, in their more specific elements, are vastly different. These differences exist both in their intent and in their content. For example, schools are not usually regarded as small or large businesses. They do not exist for 'profit', that is, in the corporate sense of the word. Corporations deal with commodities, such as microchips, which are mass produced and over which corporations exercise absolute control. Schools on the other hand deal with persons, and more specifically, persons as learners. Learning is processed through developing human persons over which schools exercise only a modicum of control and which cannot be mass produced. Learning is not produced in the 'production' sense of the word. Indeed learning, which is the *raison d'être* of schooling, is only cultivated and processed over long periods of time and only through interaction with human subject. Microchips on the other hand are produced very quickly and are completely devoid of interaction.

However, given the above differences in the two worlds of business and schooling they do share one common bond, namely, a common socio/cultural/economic place in society. That is to say, they are both heavily influenced, and to a large extent controlled by, the socio/cultural/economic milieu in which they exist. One of the specific forces operating within the socio-economic-cultural milieu today and impacting very heavily on education and corporations is the rapid development and growth of Globalization.

The term globalization, now a household word, has been described by corporate researchers such as Ohmae (1989), and educational writers such as Hargreaves (1994), as instant access to information about ideas, goods and services from all over the globe. This access to information is not limited to the network of electronic communications such as computer, internet or the visual/audio/print messages of television, but to actual physical interconnectedness as well. One only has to travel to places like Canada, China, Israel, Japan, Australia, Russia, Thailand, Hong Kong, the United States, Indonesia, etc., and observe the masses of people from various countries visiting and interacting with one another. We know for example that some ten million Japanese travel outside their country every year. Easy access to previously inaccessible continents brought on by swift and affordable jet travel, coupled with knowledge attained through television etc. has made such intercontinental visitation a reality for people who some twenty years ago thought it impossible. Some years ago the growing intercommunication network around the earth led people to refer to the earth as The Shrinking Globe. Today, thanks to the accelerated growth in the communication field and the fast pace in the development of telecommunications and transportation, we no longer refer to the earth as the "shrinking globe". People today are citizens of the world and are actually living in, and experiencing, the 'shrunken' globe. We have been 'globalized' not necessarily by choice but by circumstance.

This easy access to travel, and instant availability of information in particular, has had an immense impact on our youth of today. Youth, who are both the present and future consumers of the educational and corporate worlds, have become people of the globe and citizens of the world. They are the participants and consumers in the globalized world. They are members of the new wave socio-economic milieu which Ohmae (1989) refers to as the ILE or the interlinked economy. The ILE, which, in the main, consists of the USA, Canada, the European Community, and Japan and which will soon incorporate the growing economies of such places as Hong Kong, Taiwan and Singapore, is a powerful entity both from a socio-cultural and socio-economic point of view. The ILE has been created, and continues to grow, based on the need for more liberal trading alliances. Freer trading relations necessarily implies and requires a more closely knit and interconnected socio-cultural relationship. To survive politically and be economically viable, the ILE will need more than just freer trade in the so called economic commodities. It will also need greater socio-cultural/educational and political understanding and interaction (interconnectedness) Ohmae (1989).

To live and indeed to function economically and culturally in this interlinked economy requires a major change, both cognitively and emotionally, in the way people view other cultures. They must learn how to work with other peoples who hold varied and sometimes contradictory values that foster different cultures from their own. This necessitates living with differences, letting go of some held values and adopting and/or adapting to those held by others. This implies not only changing the way they think but more importantly, changing the way they do things. In reality, this means adapting to the changes and developments of the new age world or what has been termed the postmodern society. It is within the context of this postmodern world (era) that globalization and such economic arrangements as the ILE has developed and are seen to flourish.

Postmodernism, which I believe to be inextricably tied to the globalization phenomena, has been defined as an emerging set of social, cultural and economic and *educational (my own addition)* conditions that have come to characterize the age of global capitalism and industrialism (Aronowitz and Giroux, 1991; Jenks, 1989). Within the context of this Ism, education, not unlike economics, is going through a period of transition and hence change. While change is generally positive it can also sometimes be negative. One of the more negative aspects of this rapid change is the danger of retreat to the past by the weak hearted. An example of this in education can be seen in the strong movement in Britain, Australia and in Canada towards centralisation of education both in policy and curriculum. This is a paradoxical situation. On the one hand the postmodern philosophy with its proposals for globalization and devolution of power and authority calls for decentralisation, whereas these school systems, which had their development during the modernist era, are retreating to centralisation. In many instances this centralisation of power is enshrouded within the postmodern term, empowerment. Governments, and bureaucrats specifically, centralise the power of educational administration in bureaucratic institutions while at the same time they promote power to parents, for example, in the guise of school councils. However, these councils can be, for the most part, under the direct control of the principal who is under direct control of the bureaucrats. This paradoxical situation weakens the educational system's attempts at globalization and to a large extent renders change neutral. The 'retreating reaction' to

change is one of the many fear responses to the reality of globalization and negatively impacts on the development of education.

Another reaction to globalization has been the development of an identity crises within many nations. With the fact of globalization comes the necessity to become equal/sharing partners with peoples of other nations who may have different/cultural /religious/educational values. This mixing and crossover of cultures somehow raises fear in people that they will all become like robotic newts and lose their own specific 'national' characteristics. In other words, it raises the ugly head of Nationalism (for example, the long fight in Northern Ireland over the issue of British/or Irish identity or the often impassioned debate in Canada over French/English identity). This fear of loss of national identity can also be seen in the Islam movement, or among the West Bank Palestinians, who fear losing their identity and being absorbed by the Jewish community and similarly with the Jewish community and so on. Geographically speaking, we can see that the lines on the map which separate territories are as clear as ever (Ohmae, 1989). However, when it comes to interaction and intercommunication, both from an economic and socio-educational point of view, these boundaries, in most instances, have all but disappeared and in many others they are weakening.

A contributing factor in the demise of (philosophically speaking) geographic boundaries has been the rapid development of technology and the instant availability of information. These developments, however, may not in themselves be the cause of the weakening of the boundaries. It may be simply the inability of governments and bureaucrats to harness and prevent the free flowing characteristic of this information from infiltrating their countries. There is no way to absolutely control this flow. The young person in a remote village in Africa, by the flip of a switch, can become aware of the lifestyle of the person in New York or Toronto. This information is available and packaged electronically and ready for consumption. Globalization of information is limited only by our unwillingness to mobilise it. In our more nostalgic moments we can be somewhat tolerant of this felt need by governments to retreat and to retain their national identity amidst the pressure brought on by globalization. However, there are ways that nations can preserve their own identity while at the same time embracing the identities of other cultures. It is within the context of these national reactions to postmodern globalization, both by the corporate and schooling worlds, that I believe the crux of living productively or not within the reality of globalization lies. It is here that the process of education becomes, and continues to develop into, an all important force.

There are a number of implications for education within the context of postmodern globalization. The practice of teacher education must be addressed. We have to look at our teacher education institutions, and more specifically, the curriculum they offer. The question we must ask ourselves is, are we offering to potential teachers opportunities for awareness and reflection and personal theoretical development that will help them come to grips with their own cultural belief systems? It is only when we have a deep objective understanding and appreciation of our own culture that we can begin to accept and tolerate the culture of others. This implies a deep understanding of not only the good points in our particular culture but also the negative points as well. A shift away from giving teacher education students a curriculum which is insular, localised and nationalistic is required. A broader

curriculum which will take into account more than their own cultural world is needed. Curriculum for teacher education programs in the pre-globalization era was built on the concept of the meta-narrative and positivistic philosophy. It was developed with a belief in scientific certitude and an adherence to traditional based knowledge. Unquestioning belief in both these institutions has been eroded today. Moral, religious and personal theories or belief systems are no longer accepted as absolute and constant truths. Today these values are seen as multifaceted, individualistic and flexible. Teacher education in the globalized context has to be based on inquiry and problem solving which is not confined to absolutes within their intra-cultural milieu but which also concerns itself with inter-cultural diversity and likenesses.

Another concern that must be addressed in order for education to become a useful tool in the globalized world is school based curriculum. Similar to the need for broadening the teacher education curriculum, the need also exists for a broader more comprehensive school based curriculum. Education in the globalized society is not only learning about math and science. It is not only learning about another language and culture. It is not only reading about cultural/ethnic differences. Education in the postmodern globalized society is also about living with and experiencing other ethnic groups and cultures. It ought to challenge the ethnocentricity inherent in the modernist curriculum (Hargreaves, 1994). Like the globalized economy, education should flow freely across all boundaries. The curriculum should indeed retain and foster what is beneficial to its own culture but it also should open up and freely discuss, in an unbiased way, the values/beliefs/ norms/rituals etc, which are part of other cultures. It is imperative that young people in the postmodern globalized world reflect on and cultivate their own specific cultures. However, this ought to be seen as only half the learning process. The other half has to do with understanding and actively involving oneself in the culture/customs and life style of other nations. This has to become the norm for preparing young people for life in the reality of postmodern globalization. To survive, that is, to become in Maslows' terms, self actualised, the student of today must be capable of living in a manner that is flexible and adaptive.

Globalization within the postmodern context has been the cause of instability and uncertainty in a world that up to the late 1980's was thought to be stable and certain. It is difficult to let go of old practices. In fact, what has happened in education in many countries is, instead of looking ahead to the challenges of the new globalized world, they have reverted to the old modernist world. This is an example of not being able to change lenses and see the world as it really is and not as we would like it to be. For example, the return to a fixed and certain scientific curriculum may be a safe move for bureaucrats but not necessarily the best move for the students who have to learn and cope with an unsure and uncertain scientific world. Students, like their teachers, need to be trained in the art of experimentation and inquiry. They have to be encouraged to search for new and different discoveries and not be saddled with a rehash of what the modernist discovered and what they (modernists) have deemed to be immutable and certain. To accommodate this sense of searching for knowledge the curriculum in the schools of today must also be based on creativity and inquiry. Students should be made aware that in the globalized world, geographic boundaries for the most part exist only on paper. Jobs in the future are not necessarily going to be available in the factory just down the road. Indeed, the work environment itself in the globalized world is not only different in location but is also different in substance

(for example there are few jobs in the manufacturing industry today and in the future). Students must be taught to see the world through different lenses. The lenses of the past gave a picture of a world consisting of small nations operating pretty well independently of each other and whose populations were relatively uninformed and uneducated. The lenses of today portray the opposite. Nations of today are interdependent and people are more informed and educated. Consequently, they have different expectations and make more demands on their society. The more informed students are about different nations, economies and cultures, the more adaptable they will become in living and working in these diverse and interdependent environments . Canada and Australia have made progress since the 1960s in preparing their youth for a global society through programs of multilingual and bilingual education. However, these programs have been constrained by such factors as the context of state (provincial) and federal involvement in these programs. There has been and is tension between multicultural education and the needs of the state in areas such as equality and economic efficiency and between the provinces in the relationship between bilingualism and national identity and resource allocation.

Students in today's world need to be made aware of the need to protect not only their own environmental space but also that of the total planet. They have to become aware that the protection of the rain forests in Brazil or Australia is as important to them as it is for the people of Australia or Brazil. It is criminal for bureaucrats to try to revert to the modernist world of education and try to hold on to their past while denying young people the opportunity to get to know, understand and experience the postmodern globalized world in which they will have to live and work.

The impact of globalization on curriculum also affects the role of the teacher in classrooms of today. Much time is spent in schools planning and developing specific subjects such as literature, language, mathematics, physics, etc. These are all useful and necessary ventures. However, in a technologically advanced world a lot of information about such topics is readily available through electronic methods. Hence, we ought to be spending more time with students helping them to become aware of this information and learning how they can access it through the use of the world wide network of telecommunications. There ought to be more time permitted in our curricula for enhancing students' knowledge about the various cultures of the world. Knowledge today is only as limited as our willingness to share it. This is not to imply that technology can replace the teacher. The presence of a qualified teacher in classrooms today is more necessary than ever. However, the role has changed. The teacher today, because of the proliferation of knowledge and of instant access to it, has to be a facilitator for accessing information and not necessarily be seen as the sole source and giver of knowledge. A narrow single minded source of knowledge aimed at giving all the knowledge that students need to know and protecting them from the so called 'contamination of foreign cultures' is not educationally sufficient in the globalized world. However, it continues to be tried. Schools that promote this method of educating will only act as short time barriers to the inevitable effects of globalization. If schools fail to acknowledge the need for more open educational practices, then youth will be the victims and they may not turn out to be the positive contributors to society that we intended them to be.

A third element that must become part of our education system in this globalized society is the necessity to provide opportunities for educators from

different cultures to meet, interact and exchange ideas. In the past, public servants, such as ministerial employees, have been the recipients of this kind of interaction. It is a known fact that very little of what these bureaucrats observe and learn actually reaches the real world of learning. Hence their experiences are of little use to the practitioner in the field. It would be more educationally sound if this kind of exchange was more inclusive and more readily available to teachers who teach in schools and university professors who teach and do research at universities. This kind of exchange, although carried out at present, is done on a very limited scale. There is a danger in the present wave of rational economics to limit or indeed eliminate this very worthwhile and educationally needed practice. The rationale for continuing and indeed increasing this interactive process is obvious. As Dewey wrote in the mid thirties, experience is the best teacher. We can learn a great deal about others and their ideas from the modern print (email) and fax machines and from the audio/visual/print input of the television. We can extrapolate some notions of other cultures from these. However, being there and to actually become immersed in and experience the reality of the culture and its various nuances and sub texts, face to face, adds a dimension to our knowledge and understanding that is totally outside that which we get from the so called technical/print interaction. From a university point of view, I would suggest that a process be undertaken to establish on site extension campuses at various universities around the world. Memorial University of Newfoundland in Canada has such a campus. It is situated in the town of Harlow in Essex, England. This facility affords students and professors the opportunity to interact, in a very meaningful way, with professional educators and researchers from various professions within the European Community. We have only scratched the surface with this facility. It has the potential to become not only an international centre for learning but also has the potential to become and indeed, ought to become, multinational in its scope.

In conclusion, there is cause for optimism for the future in a globalized world. Never have we been so advanced, educationally, technologically and socially. However, despite these advances we have been hesitant to take on the challenge of change. When faced with this challenge, some leaders, in such critical areas as politics, economics and education, have tended to recoil to the comfort of nationalism and traditional fundamentalism. However, therein lies the crux of the problem. They must reflect and analyse their particular contribution or lack of it to this challenge of change. Having done this they must inculcate in youth the common sense to take the winds of change and use them for further advancement and not as signals to retreat to the past. We cannot allow education to become a so called advancement into the past. We must take and reflectively analyse the past, let go what is no longer relevant, preserve and adopt what is relevant, mould and incorporate that into the present, and then advance into the future with revitalised zeal.

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WORLD ENGLISHES, CURRICULUM CHANGE AND GLOBAL CAREER OPPORTUNITIES

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Introduction

This paper suggests a set of curriculum and pedagogical changes in light of the fact that the English language, in the age of globalization, internationalization and post-Fordism which has touched lives - economically, politically, socially and culturally - has been transformed into world Englishes. Hall (1991, pp. 57-58) describes some of the most salient characteristics of post-Fordism:

Post-Fordism is a [broad] term, suggesting a whole new epoch distinct from the era of mass production... it covers at least some of the following characteristics: a shift to the new information "technology"; more flexible, decentralized forms of labor process and work organization; decline of the old manufacturing base and the growth of the "sunrise", computer-based industries; the living off or contracting out of functions and services; a great emphasis on choice and product differentiation, on marketing, packaging, and design, on the "targeting" of consumers by lifestyles, taste, and culture rather than by the categories of social class; a decline in the proportion of the skilled, male manual working class, the rise of the service and white-collar classes and the "feminization" of the work force; an economy dominated by the multinationals, with their new international division of labor and their greater autonomy from nation-state control; and the "globalization" of the new financial markets, linked by the communications revolution.

The culture of the market (Haskell and Teichgraber III, 1993) also has been instrumental in this shifting of English to world Englishes. In this context English has become the most dominant international language. We need to fully understand the scope of this shift for the educational change process. Before commenting on the scope of this shift, however, I make certain observations and suggestions pertaining to the educational changes taking place in this province and elsewhere.

First, the education of future teachers should be broadened so that those who aspire to be teachers are enabled to function as "cultural workers". In recent discourse on teacher education in this province too much emphasis has been given to the professional training of future teachers in a narrow sense. The moot question is: should we simply train future teachers or educate them? This question has not been adequately and publicly discussed in this province. It has not been a major issue in recent rethinking (Cherryholmes, 1988) regarding educational change in this province. Implicitly, the notion of professionalism has become central to the reorganization of the educational system, including teacher education. We have just begun to observe the restrictive impact of a professionalization model on the offering of curriculum and program designs in the area of teacher education. For example, one consequence of professionalization has been that courses offered to students have become too shallow and stream lined - devoid of any historical, political, cultural

and social discussions. A curriculum which is narrowly designed has a tendency to exclude material which has global significance. If the curriculum design follows a narrow professionalism frame (e.g., too much emphasis on science, computer and similar courses), it is more likely that a notion such as world Englishes would be excluded from it. Consequently, students would not have opportunity to function as educators by adopting the role of the cultural worker.

As cultural workers, educators are prepared not only to possess skills required to carry on their responsibilities as teachers in classrooms (e.g., skills involving lesson planning, effective communication, classroom management, evaluation and testing, use of time, and alike), but also to function in ways that would transform or reform their classrooms, schools and communities in the spirit of democracy and democratic living. This means making their classrooms, schools and communities at least more just, fair and open for all stakeholders regardless of their gender, race, class and life styles. Cultural workers are thus committed to expanding the public sphere through pedagogical practices. Fraser (1994, p. 75) states:

The idea of 'the public sphere' in Habermas' sense is a conceptual resource... It designates a theatre in modern societies in which political participation is enacted through the medium of talk. It is the space in which citizens deliberate about their common affairs, hence, an institutionalized arena of discursive interaction. This arena is conceptually distinct from the state; it is a site for the production and circulation of discourses that can in principle be critical of the state. The public sphere in Habermas' sense is also conceptually distinct from the official economy; it is not an arena of market relations but rather one of discursive relations, a theatre for debating and deliberating rather than for buying and selling. Thus, this concept of the public sphere permits us to keep in view the distinctions between the state apparatuses, economic markets, and democratic associations, distinctions that are essential to democratic theory.

Giroux in his writings asserts that critical and reflective educators should function as public intellectuals at sites which provide them openings and safe spaces for trying out new pedagogical practices. Educators like other cultural workers such as lawyers, social workers, architects, medical professionals, theologians, and writers, should rethink and discuss the purpose and meaning of education in the new world system. Traditionally, the artists, writers, and media producers have been seen as cultural workers. Giroux (1993) extends the concept and practice of cultural work by including educators and other professionals and by emphasizing the primacy of the political and the pedagogical. In his words,

The pedagogical dimension of cultural work refers to the process of creating symbolic representations and the practices within which they are engaged. This includes a particular concern with the analysis of textual, aural, and visual representation and how such representations are organized and regulated within particular institutional arrangements. It also addresses how various people engage such representations in the practice of analysis and comprehension (p. 5).

Further, Giroux says:

The political dimension of cultural work informs this process through a project whose intent is to mobilize knowledge and desires that may lead to minimizing the degree of oppression in people's lives. What is at stake is a political imagery that extends the possibilities for creating new public spheres in which the principles of equality, liberty, and justice become the primary organizing principles for structuring relationships between self and others (p. 5).

To Giroux (1993, p. 4) pedagogy means rewriting the relationship between theory and practice as a form of cultural practices. Giroux explains:

Pedagogical theory is not a substitute for the particular practices taken up by historically specific subjects who work in concrete, social, political, and cultural contexts. On the contrary, it is a discursive practice, an unfinished language, replete with possibilities, that grows out of particular engagements and dialogues. It offers up new categories, examples, and insights for teachers and others to engage and rethink everything from the purpose and meaning of schooling to the role that educators might play as cultural workers.

The second suggestion follows the above discussion: that the curriculum should make students aware of the existence of the varieties of world Englishes. Kachru (1995, p. 4) suggests, further, that "qualified teachers familiar with other varieties be appointed to teach English."

As we will soon see, the scope of world Englishes is such that it provides a huge market in Asia, North America and other parts of the world. Any curriculum offered to students should not only open new opportunities for them to learn the subjects taught but also enable young people to pursue their career in the global market system effectively and as cultural workers. Therefore, world Englishes should become an integral part of their career development programs. World English can be seen as a site where educators can function as cultural workers (Singh, 1996). A site is a contested terrain where, according to Simon (1994, p. 128), "the past is traversed by competing and contradictory constructions." Further, he suggests that "cultural workers intending to initiate pedagogies of historical reformation need an understanding of topography on which these struggles are taking place." To struggle as a site means taking into account the specificity of the particular content in which one is located in relationship to others.

From English to World Englishes

Chicago Tribune (March 24, 1995: Section 1, p. 4) reports some concerns of Prince Charles, the heir to the British throne. Speaking at the reception organized by the British Council, an organization which takes pride in maintaining tradition and preserving the national heritage, the Prince attacked American English by saying it was "very corrupting", that "proper English" was the correct version and that it should be the world's preferred means of communication. He explained that overseas adopters of the language are bent to "invent all sorts of new nouns and verbs and

make words that shouldn't be". The Prince said, "I think we have to be a bit careful... Otherwise, the whole thing gets rather a mess." He further contested that, "we must act now to ensure that English... and that, to my way of thinking, means English. English... maintains its position as the world language well into the next century."

The use of English in various international situations, such as in education, in business, in tourism, in personal interaction, and in literary creativity, has no doubt become an international custom. As the Prince pointed out, more than 700 million people worldwide use English as a first or second language. He also noted that four-fifths of electronic information is stored in English.

The globalization and internationalization of our life, and the expansion of the culture of the market, has created "the hegemony of English" in the minds of certain people. Accordingly, some people assert that the use of English has caused problems of linguistic discrimination, cultural imperialism and colonialization of consciousness (Tsuda, 1993, 1994, 1994a). On the other hand, in this broad historical context English itself has been transformed into "Englishes" or "world Englishes".

Kachru (1994, p. 2), one of the leading figures in the field of world Englishes, explains that the cross-cultural function of English has greatly expanded in many spheres of life and

That has given English an unprecedented status as a global and cross-cultural code of communication... It is for this power that English is presented as an Aladdin's lamp for opening the doors to cultural and religious 'enlightenment', as the 'language for all seasons,' a 'universal language,' a language with no national or regional frontiers and the language on which the sun never sets.

The evidence that English has acquired such a status in the world has been documented by Bailey and Görlach (1992); Kachru (1982) [1992], and 1986 [1990]; and McArthur (1992).

Kachru (1994, p. 3) says that the change from English to world Englishes has taken place both in form and function:

Now, at least in some circles, the use of the term 'English literature' is considered rather restricted and monocultural. Instead, the term 'English literatures' is steadily gaining acceptance... and the term 'Englishes' or 'world Englishes' does not raise every brow in every circle.

Kachru (1994, p. 1-2) further explains:

The concept 'world Englishes' demands that we begin with a distinction between English as a medium and English as a repertoire of cultural pluralism; one refers to the form of language, and the other to its function, its content. It is the medium that is designed and organized for multiple cultural - or cross-cultural conventions. It is in this sense that

one understands the concepts 'global', 'pluralistic', and 'multi-canons' with reference to the forms and functions of world Englishes. What we share as members of the international English-using speech community is the medium, that is, the vehicle for the transmission of the English language. The medium per se, however, has no constraints on what message - cultural or social - we transmit through it. And English is a paradigm example of medium in this sense.

When we call English a global medium, it means that those who use English across cultures have a shared code of communication. And the result of this shared competence is that, in spite of various types of cultural differences, we believe that we communicate with each other - one user of English with another, a Nigerian with an Indian, a Japanese with a German, and a Singaporean with an American. It is in this broad sense of interlocutors that we have one language and many voices."

The Shift and Conflicts

This shift in terminology i.e., from English to Englishes or world Englishes - has been full of conflicts. In Kachru's (1994, p. 3) words, "this terminological feud is not innocent; it is loaded with ideologies, economic interests, and strategies for power."

Language has always been a fundamental site of struggle for social, cultural, political and economic control because all these processes begin in language. There are several discourses on this issue. I will touch only upon a few due to the limitation of space.

Let me start by referring to the English only movement in the United States. After the Quebec referendum, Morris wrote in The Evening Telegram that "a movement to make English the official language of the U.S. government is gaining momentum on Capital Hill, buoyed by lingering fears stirred by the Quebec referendum." (November 7, 1995, p. 7). "There are at least four bills pending in the U.S. Congress that aims to make English the official language," Morris reported (p. 7). He said that "other bills would go further, eliminating bilingual education and multilingual publications and making English the only language for citizenship ceremonies and election ballots." (p. 7). In an article in The Evening Telegram (November 2, 1995, p. 37) Morris reported that "opponents say the language bills are driven by racism and the urge to discourage immigration to the United States." He said, "supporters claim an English-first law would help unify the nation, making it clear to everyone that if they want to pursue the American dream, they must speak English." (p. 37). "Supporters also say they're driven by fear - fear of discord, internal isolation - and fear of the Canadian predicament," Morris reported (p. 37). Morris also noted that "there are 323 languages spoken in the United States." (The Evening Telegram, November 7, 1995, p. 37).

Secondly I will examine the idea of post-colonial discourse. Ashcroft, Griffiths and Tiffin (1995, p. 283) state

Language is a fundamental site of struggle for post-colonial discourse because the colonial process itself begins in language. The control over

language by the imperial centre - whether achieved by displacing native languages, by installing itself as a 'standard' against other variants which are constituted as 'impurities', or by planting the language of empire in a new place - remains the most potent instrument of cultural control. Language provides the term by which reality may be constituted; it provides the names by which the world may be 'known'. Its system of values - its suppositions, its geography, its concepts of history, of difference, its myriad gradations of distinction - becomes the system upon which social, economic and political discourses are grounded."

Many writers in Asia, Africa and the Caribbeans use the English language for divergent reasons. These writers "have a common heritage of colonialism and post-colonialism, a common heritage of multilingualism and multiculturalism, a common heritage of displacement and migration." (Jussawalla and Wasenbrock, 1992, p. 14). Many of these writers have expressed their views involving English language use and these opinions have been documented by Jussawalla and Wasenbrock (1992). For example, many writers in Africa who use the English language show confidence that English can be instrumental in resisting the process of imperialism, and in India its use has provided a neutral vehicle for communication between rival language groups (Ashcroft, Griffiths & Tiffin, 1995, p. 284).

There are many other discourses on the language issue which make conflicting demands on educators as cultural workers. For example, Grossberg (1994, p. 10, in Giroux and McLaren, 1994) points out that education as a field in the United States and elsewhere has been caught in conflicting demands:

Between the conflicting demands and critiques are two opposed discourses. On the one side, there is a discourse of multiculturalism and liberation which calls for a democratic culture based on an acceptance of social difference and which is usually predicated on a theory of identity and representation. On the other side, there is a discourse of conservatism based on canonical notions of general education and a desire to impose what it cannot justify - the existence of an illusory common culture.

Another related discourse is on the clash between the western and non-western civilizations (Huntington, 1993). Newt Gingrich, speaker of the U.S. House of Representatives had this to say:

You watch the vote in Quebec and ask yourself, how far down that road do you want to go before it scares you enough? And you have to be one civilization or this country won't make it (Reported by Morris in The Evening Telegram, November 7, 1995, p. 7).

Yet there is another discourse which links the problems of a multicultural workforce and multicultural consumers with the interest of global/transnational/multinational corporations in global popular culture. Global corporations are interested in global programming to sell their products to multicultural consumers through advertising. A multicultural population is seen as

presenting a dilemma for both the transnational corporations and the nationalists. The question is which culture should be reproduced - the global culture or the national culture? Here, there are many conflicting discourses. In the United States, Allan Bloom (1987) argues for maintaining western cultural tradition and Hirsch (1988) argues for cultural literacy based on western tradition to maintain national unity. In contrast, groups dominated by European-American white cultures argue for multiculturalism, multicultural education and Afrocentricity. For these discourses, see Giroux (1993), Giroux and McLaren (1994), Giroux (1991), Giroux (1994), and Spring (1994).

Kachru (1994) presents discourse surrounding English as a pluralistic language and discusses the three themes - cross-cultural communication, global interdependence and educational linguistics - the themes that are closely related to the world Englishes. In all these discourses, world Englishes play an important role directly and indirectly.

The Scope of World Englishes

It should be realized that there now exists a huge amount of professional and research material in this area (Smith & Nelson, 1985; Smith, 1981, 1987). The field has its own journal, **World Englishes**, and there are local, regional, national and international associations which deal with the phenomenon of world Englishes. These associations systematically organize seminars, meetings and conferences all over the world. The second International Conference of the International Association for World Englishes (IAWE) was held in Nagoya, Japan, in May 1995.

Kachru (1985, 1992) discusses in detail the three concentric circles of Englishes (see Figure 1).

Kachru (1995, p. 1) also provides a current profile of English in Asia and enumerates the following major points:

- That Asia comprises the largest English using population in three distinct contexts of use as a first language (e.g., in Australia, New Zealand), as an institutionalized additional language in multilingual context (e.g., in India, Malaysia, Singapore, the Philippines), and as a foreign language (e.g. in Tiwan, Korea);
- That in the Outer Circle India has over 40 million users of the language making it the third largest English using country after the USA and the United Kingdom;
- That in the Expanding Circle China has almost 200 million EFL users with varying competence in the language, approximating numerically the users of English in the US A;
- That the initiative in planning, administration, and funding for the increasing bilingualism in English in Asia is essentially in the hands of the Asians;
- That there is extensive creativity in different literary genres with various types of experimentation and innovation in English as medium and in the messages that the language conveys; and

- That almost every major town in Asia has a newspaper in English and a local radio station transmitting news in English.

Let us not forget the importance of economic trade with Asian countries. Recently this fact was highlighted by Team Canada's visit to the Asian countries led by Prime Minister Chretien. Billions of dollars are involved.

 Figure 1 about here

Conclusion

The current profile of the English using population in Asia, Africa, North America, Europe and elsewhere generates a huge industry. As suggested in the beginning, the transformation of English language into world Englishes needs to be recognized for pragmatic reasons. Every effort should be made to equip people, especially the young people, with those abilities, skills, qualifications and attitudes which would enable them to participate successfully in this industry.

Obviously, this industry seems to provide ample opportunities for young people to make the transition from school to the world of work, locally and globally.

In the area of teaching, the demand for Englishes has never been greater in all parts of the world. East Asia alone constitutes the most dynamic economies in the world and teaching and non-teaching jobs are available in that part of the world (Wharton, 1992).

Kachru (1995, p. 4-5) suggests several strategies to readjust attitudes and approaches to world Englishes. These strategies should be used to redesign curriculum offered to students at various stages of their schooling. In this frame English should be seen in terms of

- One medium and pluralistic canons: Consider the medium as a repertoire of canons and develop a pluralistic vision for English - the vision of world Englishes;
- Repertoire of ESPs and genres: Reject the extreme version of English for special purposes (ESP), and provide exposure to regional ESPs and genres of English (See Kachru 1988);
- Acculturated communicative strategies: Expand the concept of cross-cultural discourse strategies and speech acts, not restricting these to the outer circle;
- Unidirectional culture induction: Use the medium to articulate local cultures, and do not restrict it as a resource for one-way cultural induction; and
- Multilingual's creativity: Teach English within the paradigms of multilinguals' creativity in order to make multilinguals' creativity meaningful at various levels, contextual, sociolinguistic, pragmatic and linguistic, within the theory and methodology of contact linguistic.

Kachru (1995, p. 4) suggest a number of ways to introduce "variety repertoire:"

- That the curriculum include courses to introduce selected varieties of English from the region;
- That text from such varieties be used to illustrate the distinctiveness in acculturation and nativization of a variety;
- That qualified teachers familiar with other varieties be appointed to teach English, for example, Filipinos in Japan, Sri Lankans in Malaysia, Malaysians in the Philippines, and so on, in order to provide 'variety exposure' - that is, of course, the real world of world Englishes. This, indeed, is a very effective strategy to create variety awareness and to develop 'tolerance' toward other accents. In other words, one has to overcome the 'native speaker' syndrome as it has been inculcated by the 'English conversation' approach and such other approaches.

A great deal of work needs to be done in the field of education and in other fields such as tourism, industry, business, communications, advertising and alike, where varieties of English comprise a valuable medium. For example, in the area of education, teacher training/education programs have to be developed. Curriculum would have to be redesigned. Pedagogical resources (e.g., dictionaries/manuals) need to be produced. Textbooks have to be selected and produced. Finally, instruments of testing and evaluation need to be designed, produced and circulated.

All the above areas have potential for providing career opportunities for those whose interest lie in world Englishes and who wish to make the transition from schools to the world of work, locally and globally, in the real world of world Englishes.

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ENDNOTE

OTHER DIVERSE ISSUES IN EDUCATION

THE EFFECTIVENESS OF SCHOOL COUNCILS: VIEWS OF CHAIRPERSONS

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Introduction

The *Royal Commission of Inquiry into the Delivery of Programs and Services in Primary, Elementary, and Secondary Education, "Our Children - Our Future"* (1992), recommended increased local involvement in educational decision making through the establishment of local school councils (Recommendation 15). As a result of these recommendations, the Government of Newfoundland and Labrador legislated that school councils be established in all schools in the province. The purpose and functions of school councils are set out in legislation (Education Act, Bill 48, 1996, Section 26) as follows: "to develop, encourage and promote policies, practices and activities to enhance the quality of school programs and the levels of student achievement in the school". Councils are to advise on the quality of teaching and learning, facilitate parent and community involvement in teaching and learning, and advise the board on matters of concern to the school and community. School councils are further mandated to approve, support and promote a plan for improving teaching and learning in the school, approve and monitor activities for the raising of funds, assist in monitoring and evaluating standards, and conduct meetings with parents and members of the community on matters within its responsibility.

In 1997-98, a survey was conducted with chairpersons of school councils in five school districts in the province. The purpose of the study was to determine the effectiveness of councils in carrying out their mandate as set out in legislation.

Literature Review

School councils

Research indicates that school councils deal with operational matters in their early stages (Collins 1996; Lindle 1995). However, the research on the effectiveness of school councils with regard to the mandate of increasing student achievement and school performance remains inconclusive. Sebring et al. (1995) report that Chicago teachers "offer very positive reports about improvements in their own teaching, their opportunities for professional growth, their experiences with colleagues and their own commitment" (p.4) and "are also positive about parents and community relations" (p.5). However, teachers "do not necessarily see corresponding student results" (p. 5). Kannapel et al. (1995) pointed out that it is not sufficient to accept that a school with a school council is operating under a true shared decision-making model because many councils may serve as a rubber stamp to principals: "It remains to be seen whether the plans, policies, and programs now being developed by councils are more effective at improving student achievement than those developed by principals or teachers alone" (p. 22).

Based on a review of over 80 empirical studies between 1985 and 1995, Leithwood and Menzies (1998) question the efficacy of school councils and their conclusion is that "there is virtually no firm, research-based knowledge about the

direct or indirect effects of school councils on students... There is an awesome gap between the rhetoric and the reality of this initiative" (p. 48). Based on a study designed to estimate the nature and extent of influence of councils on schools, Leithwood, Jantzi and Steinbach (1998) concluded that, at best, the influence of councils on school and classroom practices is unlikely to be more than mildly positive. They do argue that there are two purposes to which councils might contribute: 1) the creation of educational systems with greater internal learning capacities (which would require a dramatic shift in government enactment of policy to allow widely distributed responsibilities for solving organizational problems) and 2) an opportunity for engaging with other members of the wider community in conversations about community values . Leithwood (1998) cautions that "we should not underestimate their [school council] 'opportunity costs' -- the time that could be spent productively in other ways" (p.37).

Site based decision making

A shift of authority from school boards to the school site as a facet of school reform is referred to in a number of ways, including site-based management, school-based budgeting, decentralized decision making, collaborative school management, local school management, and school-based governance. There can also be great variation in the amount of authority delegated to the school site. The authority devolved may be limited to advising or it may include full management of school affairs. There is also considerable variation in governance patterns though normally governance is passed to a school-based decision-making body, variously known as councils, committees, teams or cabinets.

Over the past several years, Great Britain, New Zealand, some areas of Australia and much of the United States have embraced various degrees of devolution of authority to the school site as a major part of their school reform efforts. Generally changes in the amount of authority shifted from central office to the school site have not been as far-reaching in Canada as in other countries. In a number of provinces provincial governments have enacted legislation that provides for the establishment of parental advisory bodies at the school level. Lewington & Orpwood (1993) argue that, with the possible exception of Quebec, legislation in each of these provinces tends to create the impression of a transformation in the structure of the system. They continue:

In reality, there is less here than meets the eye, since the ministry and/or the school board still retains central control over curriculum and funding. Parents, teachers and principals, though more involved in decisions than in the past, are still no more than advisors, at best, in budget and staffing decisions at the local school (p. 66).

Wohlstetter and Mohrman (1996) found that SDM requires are design of the whole school organization rather than a change in school governance. SDM fails when it is adopted as an end in itself. They posit that four resources must spread throughout the organization: power to make or influence decisions, information upon which good decisions can be made, knowledge and skills to perform effectively including good decision-making and problem-solving skills, and rewards for performance.

O'Connell and Yadegari (1996) explore the efforts of shared decision-making teams (SDM) on student achievement. In most districts SDM teams had been in operation for a school year when the survey was conducted. Forty-nine per cent reported that their teams had made decisions that had already had an impact on student achievement, and an additional 28.7% indicated that their teams had made decisions that could have an impact on student achievement in the future. The most frequently made decisions were in the area of some type of modification of the instructional program. The next most-frequently reported decision was in the area of raising academic standards. About two-thirds indicated that an evaluation strategy was in place to measure the effects of changes implemented. These evaluations will make it possible to see if SDM results in changes that really improve student achievement.

Bauer, Bogotch and Park (1998) analyse the relationship between site council practices and outcomes. The results suggest that the devolution of power from traditional authorities to site-based teams may result in the enhanced influence of these teams. What site teams do with this influence, whether it results in better decision-making or improvement in teaching and learning, depends on what happens at the school site and on how the site-based teams practice site-based decision-making. Seitsinger (1998) explores a multiple case perspective of school-site decision making. He concludes that participating parents do feel more connected and informed but become trustees of the status quo, and school-site decision-making bodies are not an effective reform strategy.

Importance of Training to School Councils

The importance of training for all stakeholders in school councils is advised (Brown, 1990; Harrison et al., 1989; Herman & Herman, 1993; Lewis (1989), Murphy (1989), Whitaker & Moses, 1994). Budgeting and planning are the areas of site-based decision making most frequently decentralized. Curriculum planning is also often delegated. While districts set curriculum and instructional plans, there may be significant variation among individual schools to customize and enhance district goals and objectives (Herman & Herman, 1993; Whitaker & Moses, 1994). Involvement in hiring and assignment of employees is the most controversial function (McWalters, 1992). Cohen (1983) states that "the success of any site based management program will depend on the amount of latitude individual schools have to adopt new policies or develop innovative solutions to problems" (p. 12).

Parent and Community Involvement

The value of parental and community involvement in education is now acknowledged by most researchers, for example Epstein (1992), Henderson (1981, 1987) and Henderson and Beria (1994). Researchers continue to advocate parental involvement in all forms, including school councils (Wallace, 1996; Etheridge, Hall and Etheridge, 1995; Danyluk, 1996; Skau, 1996; O'Toole, 1995; Patrick, 1995; Gariepy, 1995). Henderson (1994) also cites school councils as a valuable vehicle for parental involvement. Research has been directed most frequently at the involvement of parents in the learning of their own children through homework programs. Increasingly research is becoming directed at the wider role that parents can play, firstly as volunteers at the school, both behind-the-scenes and in the classroom, and most recently as members of policy-making bodies.

1998 -1999 Survey of School Council Chairs

In 1998 and 1999, quantitative research in the form of a telephone survey of 1997-1998 school council chairpersons in five districts was undertaken (79.8% of chairs were reached). In order to determine the kinds of activities in which school councils are engaged and to examine the processes which enable councils to undertake their mandate or hinder them in its pursuit, council chairpersons were asked to respond to 17 questions on the following topics: council meetings, committees, decision-making, issues addressed, training, barriers, and support. Among the 80% of chairs surveyed, a majority of councils were in the first year of operation during the time period examined by the survey.

SPSS was used for statistical analysis of the school council chairs' survey. The survey was based on a similar survey designed for the Newfoundland School Council Study (1994-96). The unit of analysis will be the school council.

Committees

The majority of councils (71.6%) have established committees. The most common committees are: financial (57.5%), fundraising (43.8%), parent involvement (27.4%), school improvement (23.3%), communications/public relations (23.3%), curriculum (21.9%), and constitution/bylaws/protocol (12.3%). The majority (86.3%) have committees which include council members, parents and teachers as members.

Issues Addressed

The issues addressed by councils most frequently are operational details, school improvement, school buildings, parent involvement and fundraising:

- Of the 102 councils, all but 7 (93.1%), chose operational details as an issue addressed. Just less than half of those councils (48.4%) flagged it as one of the three issues taking the most time, with about one quarter (25.3%) identifying it as the most time-consuming issue.
- The school building was an issue for 95 councils (93.1%), with 41.1% considering it as one of the three issues taking the most time.
- School improvement was addressed by 92 councils (90.2%). Fifty per cent considered it as one of the three issues taking the most time.
- Parent involvement was addressed by 92 councils (90.2%), with 17.4% considering it as one of the three issues taking the most time.
- Fundraising was an issue addressed by 82 councils (80.4%), with 31.7% considering it as one of the three issues taking the most time. There is no accurate way to determine whether these councils approved fundraising, fundraised themselves, or combined these two activities. Comments indicate that at least some councils have a committee which fundraises and other schools have parent groups separate from council which do so.

Although operational details are still a concern of councils, only one quarter of the chairs considered it to be one of the most time-consuming issues, while almost half considered school improvement to be one of the most time-consuming.

Other issues addressed by a significant number of councils were: school policy (71.6%), computers (72.5%), school climate (69.6%), extracurricular activities, (62.7%) bussing (60.8%), student discipline (57.8%) and school scheduling (36.3%) but few considered any of these issues as one of the three taking the most time.

Although not a major focus for many, a number of councils addressed issues until now reserved to school administration and staff, issues such as curriculum delivery (51%), professional development (31.4%) and teaching assignments (24.5%).

A number of councils addressed issues related to education reform, namely, restructuring (14.7%), lack of funding/resources (19.6%) and staff cutbacks (6.9%). A majority who chose these issues felt they were one of the three most time-consuming issues taking the most time.

Other issues addressed by fewer than 6% of councils include: school safety, cafeteria, budgeting, school board cooperation and communication, school board elections, council member roles, library, school population, staff appreciation, union situation, regional zone council, crisis intervention/pastoral care, evaluation process and graduation. Chairs who named these issues often considered them one of the three issues taking the most time.

In summary, the predominant issues occupying councils, in decreasing order, are: operational details, school building, school improvement, parent involvement and fundraising. There is a shift in emphasis, as councils get more established, from operational details to issues closer to their legislated mandate, that is, school improvement. The establishment of committees of the councils indicates that the mandate of increasing parental and community involvement is also in development.

Site-based decision making

On one end of the spectrum, a few chairs (6.9%) felt their councils had a great deal of decision-making authority. On the other end, others (30.4%) felt they had little or no authority. The rest felt they shared authority. Many of them (45%) felt authority was shared with the principal, while others felt authority was shared with various combinations of the school board, the school community, staff and parents. A few felt the amount of authority and how it is shared depend on the issue being discussed. Comments often made a distinction between decisions that could be made at school level and decisions that required approval from the school board or government. Generally, chairs were more likely to consider their council having some degree of authority on decisions made at the school level. Several chairs added comments that indicated dissatisfaction with the amount of authority they felt they had; for example, the extent of their authority is unclear; their school board tells them they have no authority; the school board makes the decisions; their principal is resistant to relinquishing any authority, and their school board is not supportive. A few chairs made comments that indicated satisfaction with the amount of authority they were accorded; for example, the principal is supportive; there is strong agreement between council and school; the school board seems to value council input, and council and staff reach consensus. A few chairs indicated they were satisfied with an advisory role.

There was no significant correlation between districts and amount of authority chairs felt their councils had. In every district there were some chairs who felt they had a great deal of shared authority, and others who felt they had little or were advisory only.

When asked what it would take for councils to succeed, over one quarter (26.5%) of chairs felt increased authority was needed. Limited legislative power, lack of cooperation from the school board, and conflict with the principal about decision making were barriers to council success perceived by some chairs. Some comments indicated dissatisfaction with the authority accorded to councils. It was said, for example, that councils are figureheads with no authority and that the chair interprets more authority from the Act than School Board does.

The site-based nature of school councils, to date, is largely advisory ; however, chairpersons expressed the belief that more decision making will be necessary for councils to succeed. There appears to be no initiative on the part of school boards to devolve more authority and, in some cases, school boards and principals are perceived as barriers to the ability of councils to function and make decisions.

Training

Most councils (85.3%) had some training; almost half (47.1%) had two or more sessions. All districts provided some training. About 80% of councils received some training on their legislated functions and on running meetings, taking minutes etc.

About 65% received some training on board policies. The school board provided the training in all but four cases, where it was provided by the principal.

Fifty per cent of chairs were satisfied with the training provided, although in all cases negative comments were made about some aspect of training. In two districts the number of chairs who were satisfied greatly outnumbered those who were not. In two other districts, the number of dissatisfied outnumber the satisfied. In the remaining district responses were equal.

When asked what training they would like, 20.5% of chairs asked for training that would better define the role of councils. Another 15.7% of chairs felt more or better training was needed. Other comments and suggestions included: the need for more training and at times more suitable to work schedules; training for new members; training on writing protocol agreements, running meetings, issues in curriculum delivery and multi grading, and training in conflict resolution.

There was a wide range of comments in response to the question of what chairs considered positive about the training. These included: focus on practical approaches and solutions, useful materials for future reference, opportunity to compare issues between councils, interaction with more experienced councils, contact with the school board, openness/sharing of information, and insight into purpose/role. One chair suggested high school councils should be trained separately from elementary school councils.

The experiences of school councils as expressed by chairpersons is reflective of the research on school councils, namely, that training is necessary, should be

systematic and must address the purpose of councils. Chairpersons supported the need for improvement in this area.

Factors Helping and Hindering Councils

Most chairs (86.3%) felt their council was working well together. Most (88.2%) felt their principal was supportive. Most (77.5%) felt the support of the school board was helpful. There was no significant correlation between districts and council perception of the support of the school board, though in the case of one district, where all but one chair was surveyed, more councils felt board support did not help than did. While a majority of chairs (65.7%) felt training helped them somewhat, over a quarter (30.4%) felt it did not. A few chairs mentioned sharing of ideas between school councils in the district is helpful. A majority of chairs (61.7%) felt the establishment of school councils has led to increased parental involvement.

Barriers mentioned most frequently were lack of training (62.8%), lack of clearly defined role (50%), difficulty in getting parents to serve on council (48%), lack of time (40.2%) and not dealing with educational issues (30.4%).¹

Other barriers mentioned included: restructuring; lack of cooperation from the school board, limited legislative power, lack of resources/funding, lack of parental/community involvement, conflict with the principal about decision making, too much expected of the school council in the allotted time, lack of government and community support, lack of communication between school council and staff, and lack of council member commitment.

Lack of training, lack of a clearly defined role, and the difficulty of getting parents to serve on council are the greatest barriers. Lack of time is also a significant barrier.

Future Success of School Councils in Newfoundland and Labrador

A majority of chairs (89.2%) feel school councils will succeed. The needs most frequently mentioned are: parent involvement/cooperation (35.3%), increased authority (26.5%), school board support/commitment (19.6%), government cooperation/support (19.6%), principal cooperation/support/leadership (16.7%), staff involvement/cooperation (16.7%), and a defined/understood role (14.7%).²

Process

Chairs had many varied comments on the school council process. The three comments heard most frequently, which corroborated results of questions on training and factors helping/hindering councils, were: school board interaction/support/commitment /communication is needed (6.9%); regional/provincial networks are helpful (5.9%), and more training is needed (3.9%).

Conclusion

Councils are moving away from operational to more substantive issues. Some councils are beginning to address educational issues more directly related to their

mandate to enhance the quality of school programs and the levels of student achievement, such as school improvement and curriculum delivery.

The theme of inadequate training prevailed in the responses and was the most often cited barrier. The other major barriers are: lack of a clearly defined role, difficulty in getting parents to serve on council, and lack of time.

Chairpersons generally expressed satisfaction that councils were working well and believed they will be successful in achieving their mandate provided they have more decision making ability.

After word

Councils are involved in many issues; however, the focus on school improvement is not evident. It is not clear why this is the case. With so many concerns about lack of time, it seems that council members should want to direct their attention to how their schools are performing and achieving. However, many other issues appear to circumvent what should be the focal enterprise of school councils.

The issue of decision making has been a major focus on research on school councils and is evidently an issue for councils in Newfoundland and Labrador. There is a need to analyse the legislation mandating and governing school councils to determine the limits of the authority of school councils. Whether councils have advisory or decision making roles, and whether those roles are different in certain areas, can only be established within the parameters of legislation.

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Appendix I

Barriers to school council effectiveness

Barrier	Yes (greatest) %*	No % *
Lack of training	62.8 (13.7)	37.3
Lack of clearly defined role	50 (10.8)	50
Difficulty in getting parents to serve on council	48 (15.7)	52
Lack of time	40.2 (11.8)	57.8
Not dealing with educational issues	30.4 (3.9)	68.6
People who are not cooperating	25.5 (7.8)	74.5
Difficulty in getting teachers to serve on council	22.5 (.1)	77.5
Unfocussed meetings	8.8 (.1)	91.2

* May not add up to exactly 100% due to missing responses, rounding etc.

Appendix II

More Comments made in response to factors needed for success:

Staff involvement/cooperation (15.7%).
 Cooperation from the community (9.8%)
 Council member time/commitment (11.8%)
 More/better/ongoing training (11.8%)
 Increased public awareness (6.9%)
 Good communication with school board (3.1%)
 Financial support from government (2%)
 Performance evaluation of councils (1%)

¹ See Appendix I.

² See Appendix II for other factors mentioned.

SCHOOL COUNCILS: A PILOT STUDY

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Background and Purpose

Funded by the Canada-Newfoundland COOPERATION Agreement on Human Resource Development, *Enhancing Local Involvement in Education Through Quality Leadership* was undertaken by the late Dr. Austin Harte and this author. The project consisted of two interrelated sub-projects, namely, the *Exemplary Models of Parental and Community Involvement Project* and the *Pilot School Councils Project*. This article presents the research outcomes of the *Pilot School Councils Project*. The complete study is available from the author.

The purpose of the Pilot School Council Project was to undertake applied research on the implementation of seven pilot school councils in Newfoundland and Labrador. The seven pilots provided a means to test the conditions needed for the effective functioning of school councils in the province. It was intended that the research results and recommendations be disseminated to groups such as the Department of Education and other individuals or organizations with an interest in school councils.

Review of Related Literature

In most western industrialized countries during the 1990s and the latter part of the 1980s there has been almost universal agreement that education is in crisis and that reform is needed. The means of achieving reform has focussed largely on two initiatives, namely increasing parental involvement and implementing school-based decision making. The two initiatives have generally been linked in a new structure, usually called school councils.

A shift of authority from school boards to the school site as a facet of school reform encompasses a wide variety of models. While there is no standard definition which describes this type of reform, the concept implies some shift in responsibility to the school and/or community for decisions which affect the school. It is referred to in a number of ways including: site-based management, school-based budgeting, decentralized decision making, collaborative school management, local school management, and school-based governance.

Both Hess (1994) and David (1989) explain school-based management as a central element in two strategies aimed at school improvement, namely increasing school autonomy by "giving school actors more power to determine the program of their school" (Hess, 1994, p. 207) and increasing parental involvement at the school level by sharing the authority to make decisions among teachers, parents, students and community members.

The evolution of "bottom up" influence in school reform and the variety of restructuring models currently being used to achieve this end are evidenced on the international, national and provincial scene. Examples of advisory models with limited authority and management models with substantial authority are evident. Some

models are composed of school personnel only; others include parents, students and members of the community. All shift some degree of authority to the school site.

Over the past several years, Great Britain, New Zealand, some areas of Australia and much of the United States have embraced various degrees of devolution of authority to the school site as a major part of their school reform efforts. To date, the best two documented examples of school-based management and school councils are found in Kentucky and the city of Chicago. In Kentucky, as set out in the Kentucky Education Reform Act (1990), school-based management and the creation of school councils were central to state-wide education reform (Steffy, 1993). The Chicago School Reform Act paved the way for the implementation of decentralization reforms in the city's schools in 1989-90. A central feature of the reforms was the requirement that local school councils be established in each school.

In Canada, the concepts of shifting authority to the school site and increasing parental and community involvement are receiving increased attention. In an overview of education in Canada, Lewington and Orpwood (1993) maintain that "across the country, the tide of education reform now runs towards greater local autonomy for schools" (p. 65). Generally, changes in the amount of authority shifted from central office to the school site have not been as far-reaching in Canada as in other countries. In a number of provinces provincial governments have enacted legislation that provides for the establishment of parental advisory bodies at the school level. The author argues that, with the possible exception of Quebec, legislation in each of these provinces tends to create the impression of a transformation in the structure of the system.

As of September 1995, the status of school councils varied across Canada. Some provinces, including Newfoundland and Labrador, have introduced or are piloting experiments in the concept. The Edmonton Public School Board has initiated a program of school-based management (Brown, 1990). Nova Scotia is midway through a two-year pilot of three models with increasing degrees of authority. Six provinces and the Yukon have enacted legislation regarding councils. All accord advisory status to councils except Quebec and the Yukon, which give considerable decision-making authority to their councils. Legislation is pending in four other provinces with indications that the status of councils will be advisory in most. All provinces embrace the concept of school councils as one facet of the movement to increase parental and community involvement.

Research on council implementation is in the emergent stage because this reform is recent. The literature overwhelmingly supports involvement of the superintendent and the school board in the decision to adopt the concept of school councils. Whitaker and Moses (1994) state that "the leadership culture and support of the district have far greater impact on the success of site based management than the operational details of the process" (p. 63).

The principal as well as the superintendent is viewed as a key figure in the success or failure of school council implementation. The changes to their role are substantial (Barth, 1991; Donahue, 1993; Goldring, 1993; Hoyle, 1994). Boyd and Chapman (1986) cite the president's report of the Victorian Primary School Principals Association which captures much of the changed role of the principal: "The principal is relocated from the apex of the pyramid to the centre of the network of human

relationships and functions as a change agent and a resource" (p. 3). A principal who is unwilling to relinquish security or adjust roles will impede the successful implementation of a school council. The literature also corroborates the view that teachers must support the council concept for successful implementation. Whitaker and Moses (1994) state, "teacher organizations, which should be at the forefront of restructuring, have sometimes been culprits and have been stubborn in opposing change" (p. 44). The importance of training for all stakeholders in school councils is advised (Brown, 1990; Harrison et al, 1989; Herman & Herman, 1993; Whitaker & Moses, 1994).

In summary, increased involvement of stakeholders in education and a shift of authority to the school site are part of a reform movement worldwide. The success or failure of these initiatives is not yet clear. However there is evidence that success depends on involvement of the school board at the outset; support of the principal and teaching staff; training for all stakeholders; clearly established areas of responsibility; and gradual introduction of the concept of school councils.

Research Design and Procedure

The pilot study on school councils examined a number of issues pertaining to the successful establishment and operation of school councils, including authority, objectives and functions, composition, responsibilities, communication, school board involvement, training and processes to facilitate effective decision making, team building and problem solving.

In the selection of schools, consideration was given to the commitment of administration, staff and parents to the concept, and geographic and demographic representation including school size and type (i.e., elementary, secondary, all grade). The following schools were selected for participation in the pilot study:

- A.P. Low Elementary, Labrador City, Labrador West Integrated School District
- Bishops College, St. John's, Avalon Consolidated School District
- Bishop O'Reilly High, St. Thomas Aquinas Elementary, St. Jean Vianney Elementary, Port au Port, Appalachia Roman Catholic School District
- Buchans Public School, Buchans, Exploits Valley Integrated School District
- Holy Redeemer Elementary, Spaniards Bay, Avalon North School District
- Morris Academy, Mt. Pearl, Avalon Consolidated School District
- St. Kevin's Elementary, Goulds, St. John's Roman Catholic School District

The principal at each school was responsible for the establishment of the council. By the end of September 1994, the parent, the teacher, and where applicable, the student representatives, were elected to the councils. Each school board was invited to appoint a liaison person to the council. The council members then appointed the community representatives.

The project provided guidelines and procedures which gave a contextual framework for the operation of school councils and their respective boards. This document supplied specific information on items such as: the nature of school councils, the proposed framework for councils, objectives and functions of councils,

the protocol agreement between the school council and the school board, roles and responsibilities of key players, and sample constitution and by-laws.

A four-day training session in Total Quality Management (TQM) was conducted by the National Quality Academy for all school council members from October 22-25, 1994 in St. John's. At the session, members were provided training in effective decision making, team building, consensus building and problem solving. Throughout the project, teleconference sessions were held with the councils, principals and chairpersons respectively. The teleconferences provided an opportunity for councils to exchange information on the challenges and progress of the councils.

A variety of qualitative data was collected through interviews, focus group sessions, observations, document analysis and process forms. A final evaluation survey was administered to corroborate the qualitative data.

Findings

The pilot school council study disclosed a vast number of issues which range from macro levels of provincial restructuring to micro levels of day-to-day school management. Many of these issues, already evident in the research literature, will be discussed under the following headings: scope of school councils, educational restructuring and issues internal to the council.

A. Scope of School Councils

The scope of school councils refers to the purpose, functions, and the authority of councils.

Purpose and Functions of Councils

In addition to the data collected through interviews, focus groups, observations and surveys, the mission statements designed by each pilot school council indicated how councils interpreted their purpose. Councils incorporated two main themes in their mission statements, namely, a commitment to seek the involvement of all members of the school community and a commitment to improve student achievement through improving the quality of education for students. Despite early consensus on the purpose, councils did not address how to achieve those purposes until seven to eight months into their mandate. At that stage, the use of school profiles emerged as the means of focussing on school improvement, and development of a communication implementation plan emerged as a means of involving parents and the community.

Pilot councils were faced with the task of deciding how to carry out their functions so as to achieve their objectives. A number of council members mentioned that councils should monitor the school's performance and hold the school accountable to the wider community. Increasing parental involvement was considered key. Disseminating information on school issues to constituents and providing school staff with a better understanding of the perspectives of other stakeholders were viewed as important. Presenting concerns and providing advice to the board on school-related issues were also identified as functions.

Though the pilot school councils began the process of crystallizing their views on functions, they were not able to reach clear conclusions though some did distinguish between policy-setting and day-to-day management, pointing out that councils should not be involved in the latter. The problem of defining functions was further exacerbated by lack of specificity regarding authority of councils. The problem persisted for the duration of the pilot project with no clarity by the end of the year. When council members were questioned in the final focus group, their responses were unsure and vague. In the surveys, however, in which possible functions of councils were delineated, council respondents overwhelmingly agreed that councils should have decision making on every item with the exception of hiring. Items on which there was agreement included: school budgets, scheduling, professional development, staff requirements, and instructional practices.

In summary, councils agreed that the main objectives of a school council should be to improve student achievement and to assure the involvement of students, parents, community members and educators. However, councils were unable to delineate specific functions. Almost all participants in this study, both at the school board and the council levels, claimed there is a need to define the functions of school councils specifically in legislation. The broad, general statements as presently described in various documents are vague and caused frustration and confusion on the part of participants as councils and boards worked to understand their roles in the context of school councils. However, many felt that if councils were to be advisory, the need to delineate functions is not as important.

Authority of Councils

One of the major issues which arose during the pilot year was whether school councils should be advisory to the school board or decision making at the school level.

Council members pointed out that if councils are to attempt to improve student achievement, they must have the authority to set policies to achieve their goal. Parent and community representatives in particular were adamant that councils should be decision making. They felt people would not be willing to make the time commitment required of council members unless their contribution would make a difference. One council member reflected the concerns of many others:

If that 's all we are - an advisory group - these councils will very quickly disappear ... councils are expected to have a certain amount of authority ... everyone of us wanted to get on this council so that we could somehow affect some changes which would be for the betterment of students ... If we're not doing that, then councils won't last.

Many principals, chairpersons and council members were strongly of the opinion that decision-making authority for councils should be set out in legislation.

Most school board superintendents expressed frustration and confusion about the role of councils. They felt boards did not have a clear understanding of the mandate of councils and that roles and responsibilities were not sufficiently clear.

Some boards appeared to be more open to according decision-making authority to councils than others. Some had already embraced the participatory philosophy of councils and had given some authority to school sites. One superintendent said, "The school operates on a philosophy of local empowerment already. I don't think any of us believe that it is ever going to work and produce the kind of effects that we want...if parents do not perceive themselves as having a genuine role in decisions at the school level." Others displayed less enthusiasm for the concept but acknowledged the need to involve parents for the purpose of improving student achievement. Many superintendents commented that as the number of school boards decreases, school sites will, of necessity, become more responsible for local decisions. A major concern of superintendents was the absence of legislation and the question of legal responsibility if councils were accorded decision-making authority. One superintendent expressed the view that the board role would become that of training people to make good decisions.

The formal contract negotiated between each pilot council and its respective school board which delineates the lines of responsibility for the board and the council is the school protocol agreement. The lack of clarity regarding the mandate of councils resulted in confusion and frustration on the part of councils and school boards. Some councils spent the year concentrating on the negotiation of a protocol agreement and were left with no time to address substantive issues.

Most councils and school boards agreed that each school council should not be required to negotiate its own protocol agreement since this was too time consuming. They felt a template of a generic protocol agreement, defining the general relationship between councils and school boards, including areas of authority, should be provided. Provision for adjustments where warranted could be made at individual school sites.

In summary, there was a division of opinion between the school boards and the school councils on the question of the authority of councils. In the view of some school boards, as expressed by superintendents or assistant superintendents, school councils should act in an advisory capacity only, while others agreed that councils should have some decision-making responsibility. Most school councils wanted decision-making authority enshrined in legislation. This dichotomy accounts in large part for the difficulty in working out protocol agreements. The problem was exacerbated by the lack of specificity regarding the mandate of school councils.

B. Educational Restructuring

Implementation Plan

Where school councils have been successfully introduced, they have been part of a total reform package. School councils in Newfoundland and Labrador were piloted in an educational vacuum, that is, in the absence of other education reforms. Furthermore, they were piloted in a structure different from that for which they were intended, namely, fewer school boards, each of which would be responsible for many more schools. All school board superintendents and assistant superintendents pointed to this anomaly, and many claimed that the role and authority of councils will evolve more naturally and easily with the consolidation of school boards. Many claimed there is no need of school councils in the present structure.

School Board Involvement

When interviewed, school board superintendents and assistant superintendents stated they had decided to become involved in the pilot council project in order to have input at the formative stages of council development. Despite consultation sessions with each superintendent prior to implementation and direct representation of boards on councils, boards wanted more and earlier involvement. Superintendents recommended that, as full implementation proceeds, all school boards will need to be directly involved.

Perceived lack of support from the school board was often mentioned by school council members. Perceptions of the boards' encouragement of school councils varied with the source of the response. When surveyed, the majority of school board representatives and principals responded that the board had provided a great deal of encouragement to the council. The majority of teachers and parents thought that the board offered some or little encouragement. The survey revealed that two boards were perceived as particularly encouraging toward the councils and two boards were perceived as resistant.

C. Issues Internal to the Council

Composition of Councils

In keeping with the recommendations of the Royal Commission on Education (1992) , the pilot school councils consisted of a broad-based membership representing a number of interests in the school community. The core membership consisted of:

- the principal of the school
- two teachers, elected by teachers
- three parents, elected by parents
- two community representatives, appointed by council members
- in the case of high schools, two students elected by students

For the purpose of liaison during the pilot year, school boards were represented on council by assistant superintendents, or in one instance, a school board trustee.

All council members called for balanced representation. However, a problem arose in the definition of the term. Many principals and teachers felt under represented, whereas parents and community representatives felt that the composition was appropriate . Many teachers argued that, if they were to be held accountable for the quality of education at the school, the number of school staff on council, namely principal and teachers, should equal the number of non-school staff on council. Councils were consulted and though there was consensus by six councils on the pilot composition, they were willing to accept modification somewhat by increasing teacher representation to three and decreasing to one the community representation. Council members were hesitant to accept further modification of the composition, given one of the objectives of school councils, namely, increasing parental and community involvement. However, chairpersons recognized that

teachers might be reluctant to participate if they felt under represented but felt this perception could be addressed by involving teachers who were non-council members on committees. Chairpersons also felt that the manageable size of the council's present composition facilitated consensus decision making.

Guidelines recommended that participating high schools include student representation on council. Those principals and chairpersons whose councils had student representatives strongly endorsed the concept. They found the students' perspective a valuable contribution to discussions. Everyone, including students themselves, suggested there be two student representatives on council for peer support.

Focus group discussions revealed that councils were almost unanimous in their opinion that a school board representative is not necessary on council. While individual contributions were noted, council members believed the principal could carry out any duties associated with the school board such as reporting policies. It was also pointed out that as more schools have school councils, it will not be possible to have a board representative on each council. However, council members were concerned with how councils will communicate with boards in larger structures.

Variations in membership were piloted at different sites to gain information. One alternate model piloted a principal/vice principal team at a site. This combination was favourably judged as both members of the school administration could share council work and information with teachers.

Six of the seven pilot councils served an individual school. The seventh pilot council was a unique model as it served three schools: one high school and two elementary schools. It was thus termed a "systems" council. The systems council was composed of the principals of each of the three schools, a parent from each school, two students from the high school, two community representatives and a board representative. It was advantageous to have a unified voice on district issues which affected the three schools and the principals applauded the opportunity it gave the three of them to meet regularly to discuss matters pertaining to all three schools. However, attention to district matters and to issues common to the three schools prevented issues at individual schools from surfacing. Each individual school did not feel adequately represented by one parent and one teacher yet the already large council made it difficult to increase representation from the three schools.

In summary, the issue of balance between school personnel and parents /community emerged as a major issue. The differing viewpoints reflect two visions: one of councils as school-based bodies controlled by school professionals, the other as community-based bodies giving parents and community members input into setting the school's policy and direction. The administrative team concept and the concept of a systems council have merit.

Roles and Responsibilities

All council members who were surveyed were asked to what extent they understood their roles on the council. In all councils, those who had the most clearly defined roles, namely the principals and chairpersons, were more certain of their duties than teachers, parents, students and community members.

Council members indicated they did not always think of themselves as representatives of stakeholder groups, but rather as members of a cohesive group trying to accomplish the collective goal of enhancing student achievement.

The data from the pilot study revealed consensus that the principal chair the council only if necessary and that the principal have the right to vote when decisions are taken.

Working Style of Council

Consensus decision making was favoured as the internal decision-making process of all pilot councils. However, with the exception of one council, no major policy issue emerged to test the commitment to consensus. The vast majority of council members felt they had input into the decision-making process. Councils established committees to distribute the workload and involve non-council members in council activities. Almost all council members felt that they were cooperating as a group and were working effectively as a team.

Communication

Effective communication between council members and stakeholder groups is critical if councils are to function well. Communication with stakeholder groups was a challenge in the pilot year as councils struggled to define their role. As a result, the extent and means of communication with the various stakeholder groups varied considerably between councils. At one end of the continuum, a number of councils paid a great deal of attention to this issue and employed varied forms of communication. At the other end of the continuum, some councils communicated only informally with stakeholders through conversations with parents and community. Council members were cognizant of the fact that they needed to be aware of the views of their particular stakeholder groups. Even those that expended considerable efforts to communicate with their stakeholders were dissatisfied with the amount of input received. Some councils stated that parental involvement in the school had decreased in the pilot year. Most indicated that in future, the links between stakeholder groups and council would have a higher priority.

Communication to teachers was more systematic. Generally teachers were informed of council activities at staff meetings by the principal and/or teacher representatives on the council. These individuals would also provide information to teachers on an informal basis. Members of five councils indicated that minutes of council meetings were made available to teachers. Teachers also received the council newsletters which were sent to parents.

Communication between councils and school boards was important to the development and support of the pilot councils. When interviewed, all of the school board superintendents or assistant superintendents maintained that effective communication between the council and the board is critical. For the most part communication flowed through the school board representatives on the councils who acted as a liaison between the two groups. A concern for future councils is the method of communication when boards no longer have a representative on each school council.

Councils, being pilots, found various ways to communicate with each other including teleconferences, STEM-Net and informal contact.

In summary, communication among council members was adequate. However, communication with other stakeholders, especially parents, community and the school board, was not sufficient in scope.

Training

All respondents thought the team-building aspect of training was the most valuable portion of the training provided. It was suggested that a block of time is more effective than several short training sessions. It was also maintained that it is essential to provide both orientation training for new councils and continued training to incorporate new council members and to retrain current members.

Superintendents and assistant superintendents mentioned the need for training at the board level as well.

Conclusions

The main goal of educational reform has been to improve student achievement and the quality of teaching and learning. The means of achieving this goal, provincially, nationally and internationally, has focussed largely on two initiatives, namely increasing parental involvement and implementing school-based decision making. These two initiatives have generally been linked in a new structure, usually called school councils. The research to date, as well as the experience of the pilot school councils in Newfoundland and Labrador, is inconclusive as to the success of school councils as a means to achieving either of these goals.

School councils in the pilot study were unanimous in their view that the main objectives of school councils should be to improve student achievement and to assure the meaningful involvement of students, parents, community members and educators in the school. The success councils will have depends on a number of issues both macro and micro in nature. The authority of councils is of foremost importance with members of councils claiming the need for decision making at the school level. The position of school boards varies on the issue of councils as advisory or decision making. Functions are dependent on the type of authority; where councils are decision-making, it was recommended that the functions be outlined in legislation. There seemed to be less need for this if councils are to be advisory.

School board input and involvement is also a necessary component for success of school councils. The issues internal to the council were resolved at the council level through consensus. These issues included: councils composition, roles and responsibilities, working style, communication and training.

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ENDNOTES

JOKING IN THE CLASSROOM: STUDENT VIEWS IN ATLANTIC CANADA

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In a survey of over twenty thousand high school students in Atlantic Canada, the final item invited respondents to outline aspects of their experience in school that were of concern to them. The students' observations in response to this open item covered a great diversity of topics, one of these being school humour (Martin and Baksh, 1995). Almost nine hundred students wrote about some aspect of school humour. The present paper deals with students' perceptions regarding a particular dimension of school humour - joking in the classroom.

Based on the formal organization of the classroom, there are two general types of joking relationship: one between teacher and student and the other among student themselves. Focusing on joking in teacher-student interaction, students have highlighted the extent to which the humour is reciprocal. Also, they have observed that they use humour to break the monotony that sometimes characterizes teacher-student interaction. The negative consequences of teacher-initiated humour are also of major concern to some students, as is the proliferation of boring jokes on the part of some teachers.

Reciprocity in Joking Relationships

There is a widely held view among high school students in each of the four Atlantic provinces that students should have more respect for their teachers than is often the case, and teachers should reciprocate with respect for their students. Earlier published comments on the helpful, co-operative and understanding nature of teacher-initiated relationships with their students in Newfoundland and Labrador schools illustrate the positive meanings which students give to such relationships (Martin, 1983). Similar observations were made by students in other Atlantic Canada schools (Martin and Baksh, 1995: 71-72).

Focusing more specifically on student references to reciprocity in the joking relationships in teacher-student interactions, a Grade 11 girl in Newfoundland and Labrador wrote: "I appreciate it when teachers can joke with students and take a joke as well." Similarly, a Grade 10 boy in another Newfoundland and Labrador school evaluated his teachers as "all right" because "you can joke around with them".

The positive orientation which a Grade 10 boy in New Brunswick has toward one of his teachers who "can take a joke" is contrasted with his view of another of his teachers:

Most of the teachers I have can take a joke, my shop teachers and I get along real good, my carpenter teacher is like a friend to me, but my math teacher is another story.

A similar view was echoed by the Grade 9 Newfoundland boy who named one teacher who "don't mind a joke every now and then" while "all the other teachers would hang you" for attempting to joke with them.

Other students expressed their view that some teachers do not reciprocate student attempts to pursue humour related actions in student-teacher interactions:

I feel the teachers are very good sometimes. Sometimes you can say something to be funny and get a laugh, the teachers take it seriously and you find yourself out in the hall.

(Grade 9 boy, Newfoundland and Labrador)

We have a rule in this school about being friendly which says: Mingle with the other students; talk to them; smile at other people.... Often, when I smile at a teacher he doesn't smile back. I don't think this rule is fair because very often the teachers don't do their part.

(Grade 10 girl, New Brunswick - translated from French)

Student perceived consequences of teachers not reciprocating their attempts to make humour a part of student-teacher interactions were noted by different students in the present research: I feel our school is an adequate institute for becoming educated. I feel all teachers do not like me because sometimes I make a joke in the class to break the monotony although my marks are in the eighties.

(Grade 11 boy, Nova Scotia)

Some of the teachers are too strict. Some never hardly smile and if you just say something funny, they get mad.

(Grade 10 girl, Newfoundland and Labrador)

As noted by a Grade 11 girl in Newfoundland and Labrador, students should keep their "side of the bargain" if they want to "laugh and have a good time" on occasions in the school.

Very likely there are a number of issues relating to the reciprocity in the joking relationship among students themselves. One such issue is raised in the comments of a Grade 11 New Brunswick girl, who draws attention to the unfairness that might arise when students do not engage in reciprocity:

Teachers should understand the student when they do something wrong. I put butter in someone's hair one and half months ago for her birthday and she went to the office. The Vice-principle made her tell who did it and I got into 'shit' because I did that. About a week before someone got me for my birthday and she got my pants, shirt, coat and hair and I didn't say a word to no one.

Benefits of Classroom Humour

An earlier analysis of comments of high school students in Atlantic Canada identified the monotony of teacher strategies to include "dullness", "passivity", "abundance of teacher talk", "spoonfeeding" and requirements regarding memorization (Baksh and Martin, 1986: 117-123). As a response to this monotony, it is not uncommon to find students suggesting the need for variety in teaching strategies which would include new and challenging activities (Baksh and Martin, 1986: 123-130). Among the teaching strategies suggested by students is the need for teachers to inject humour into the teaching to break the monotony of classroom life.

The injection of humour into classroom interaction is thought likely to produce a variety of benefits. If teachers were "to get a little humour into the air", in the words of a Grade 9 New Brunswick boy, it would enable them "to put themselves down" to the students' level, thus facilitating an improved relationship with their students. On the whole, a teacher's inclination to introduce humour seems likely to generate a positive student attitude toward him/her. A Grade 9 boy in Prince Edward Island, for example, claims to "like a teacher who can have a good laugh once in a while with the class" and "does not always stick to work all the time", while a Grade 9 boy from that province admits to liking teachers who "joke around" a bit.

The use of humour by teachers is viewed as having other potential benefits. It might help to stimulate or maintain student interest in the lesson:

Teachers should have better way of getting important things across to the students and perhaps by using humor or other techniques to get the class interested in what they are doing.

(Grade 11 boy, Newfoundland and Labrador)

I feel that the majority of teachers are just teaching the class for the sake of getting paid for it. However, some teachers do go out of their way to make class more interesting. Just by adding a humorous remark in the middle of class can make a class more interesting.

Grade 10 girl, Nova Scotia)

The best teachers are able to communicate with a class and have a sense of humor about what they do and teach. In that way, they keep the classes attention and interest. If handled properly, all students are capable of working hard and being obedient.

(Grade 12 boy, New Brunswick)

It might help make learning seem like fun:

Our teachers are easy going and give us the most important notes. Their classroom behaviour is usually relaxed, sometimes funny, and always fairly enjoyable. Some of our teachers mix comedy in with their teaching routine, making for a relaxed class, where you still learn but its

not grind, grind, grind. Others make sure they're work is completed and then maybe a few laughs which I think is good.

(Grade 10 boy, Newfoundland and Labrador)

Teachers should have a good time during class. This makes it fun for everybody even the teachers will be more relaxed and feel better about his or her work.

(Grade 10 boy, Nova Scotia)

In the school the teachers should make the learning fun. Joke about some things.

(Grade 10 girl, New Brunswick)

It might enhance student-teacher relationships:

I really do like all the teachers here and get along with most of them well, there are a few exceptions such as not really knowing them and not really trying to either. I feel this should be the way between teachers and students so that you know if they really are concerned about you, that you always have somebody there to talk to, whether it be problems of some kind or just to share a joke with and have a good laugh.

(Grade 12 boy, New Brunswick)

As for the environment around (this school) it is very good, some teachers joke around and you feel like your at home, other teachers aren't so liked.

(Grade 11 boy, New Brunswick)

It might contribute to student enjoyment of what is being taught, perhaps even inducing a liking for the subject:

I find some teachers are interesting and make you like what you are learning. They do this by keeping you busy and by keeping a good sense of humour most of the time.

(Grade 11 boy, Newfoundland and Labrador)

I like math the most because I find that I understand all or most of the work we do. Another reason I like Math is because we have a teacher with a good sense of humour, which I think is a very important quality in teachers.

(Grade 10 boy, New Brunswick)

It might also make learning an easier task:

I like the teachers who can take a joke and who'll let us have fun but still teach us a lot. I think we learn a lot better and a lot more.

(Grade 9 girl, Prince Edward Island)

Most of the teachers make learning a lot easier by relieving the tension in the classroom. They tell a joke or do something comical.

(Grade 11 boy, Newfoundland and Labrador)

Negative Consequences of Humour

Students identified several negative consequences of different varieties of classroom humour, including students' "joking around", teachers' "making fun of students", students' "making fun of" each other, and teachers' "laughing at" students. The substantive issues noted in students' comments are (1) the waste of time associated with joking around and (2) student hesitancy to become more actively involved in classroom situations because they fear being the butt of teacher and student jokes.

A Waste of Time

According to a relatively small number of students, what should be valuable teaching-learning time is sometimes wasted by teachers who are "always telling stories" and "jokes". A larger number of students claimed that teaching-learning time was lost because of student antics. While the students who initiated such behaviours may have thought it to be "funny", others had a different meaning for it. In addition to interfering with their own learning such behaviours are often seen to be disruptive to the overall teaching and learning processes in the school.

Waste of Time by Teachers

While the claim of one Grade 11 girl in Newfoundland and Labrador that teachers "often stray" from the subject "to talk about trivial things" reflects the views of many students in other provinces, only a few students specifically complained that teachers wasted time by telling jokes and pursuing other humour related actions. One Grade 9 boy in Newfoundland claimed that "there are some teachers who... only come in class... to have a laugh and to tell jokes". Another Grade 9 boy in this province linked excessive teacher humour with "slackness" and a wastage of class time; he described as "slack" a "couple of teachers" in his school "which jokes around in class too much and never gives you any notes". A third Grade 9 Newfoundland boy expressed his liking for "teachers who talk openly and joke now and then" and his distaste for "a teacher who tells jokes and makes fun *all* the time". In a similar vein, a girl, in the same grade and school, expressed the view that while some teachers "are always joking" other teachers "say there is a time for joking and a time for" being serious with students. A Grade 9 girl in another Newfoundland and Labrador school expressed the view that even though "school is a place where people come to learn", some students "just come for a joke", thereby wasting their own time as well as that of others.

Comments from students in provinces other than Newfoundland and Labrador also suggest that time is sometimes wasted by teachers who tell stories and jokes.

The teachers that we have all of us get along with them for helping us get a better education. Also some of the teachers here act real jerks. Their always laughing and telling sick jokes.

(Grade 9 girl, New Brunswick)

The teachers in this school are all nice, but sometimes they can be mean and most of the time they are all wasting time joking around with the students and teachers.

(Grade 10 boy, New Brunswick)

Sometimes they (teachers) just ramble on about things which don't even have anything to do with the subject being taught... They joke and laugh at the silliest things.

(Grade 10 girl, Nova Scotia)

As I see it the school is a sort of circus. When that bell rings people go wild in the halls. When we are in class the teachers are the clowns there to entertain us.

(Grade 12 boy, Nova Scotia)

A Grade 10 Nova Scotia girl associates an excessive use of humour with immaturity and warns that "teachers should act mature and not joke around all the time".

Waste of Time by Students

A widespread complaint among high school students in each of the four Atlantic provinces is that there are students who disrupt the teaching-learning processes in the school. While some of their negatively oriented behaviours are not intended to be humorous, some of their actions are initiated in jest. After complaining that there is too much homework and not as many school buses as there "should be" and noting the need for more lockers in the school, a Grade 11 girl in Prince Edward Island wrote: "Another thing is when you are trying to do work in class and people are laughing at us."

It has been observed that some students "just come to school to have a good time" (Grade 9 girl, Newfoundland and Labrador), and consequently interfere with others who are more serious about getting an education. A Grade 12 girl in New Brunswick claimed that she failed Grade 9 because she "joked around and had a good time". In addition to interfering with the academic efforts of others, students who are always trying to be funny sometimes "get others in trouble". Several other students complained about their peers who became trouble makers with actions that involve one or another dimension of humour. While blaming students for the disciplinary problems that were related to actions with a humorous intent, a Grade 10 boy in New Brunswick reported that "some of the teachers can't handle" the class she is in and "classroom is like a jungle" where everyone is doing exactly what he/she wants to do. According to a number of students those who disrupt the class, "thinking they are funny", should be kicked out the school. Other students suggested that all the time in school should not be spent laughing.

The indications are that student gender may be a factor in situations where students' attempt at humour result in disruptive behaviour. For example, girls from one or more schools in each of the four provinces accused boys of creating discipline problems in the school. Without reference to disciplinary problems as such, a Grade 9 girl in Newfoundland and Labrador said that some of the boys "think they are real duds in school but they are so stupid it's not even funny".

As seen from the student perspective, problems with student clowning are not confined to the school environment. For example, after writing about the noise, the teasing, the action of "clowns" on the school bus, a Grade 10 girl in Nova Scotia questioned why other students should "suffer because of a bunch of clowns who can't behave *properly*".

Student Hesitancy

Although not a widespread feeling among the high school students participating in the present research, comments were made to the effect that students have been hesitant in taking a more active role in certain classroom situations because they were afraid that the teacher would "make fun of them". Students' concerns about teachers' actions which have been known to result in student embarrassment have been illustrated in an earlier book on *Student Embarrassment* which is based on the schooling experiences of students in Newfoundland and Labrador (Martin, 1985). Focusing specifically on student hesitancy which is said to have been a result of teachers' laughing at them, it may be noted that this cause and effect situation was not identified by any of the males in the present study. While by no means conclusive evidence of a gender difference in perception, it is interesting that all the observations regarding this particular effect of teachers' making fun of students come from female students. For example, a Grade 9 girl echoed the view of at least two other girls in her Grade in one Newfoundland school when she claimed: "Some teachers laugh at me if I try to express my feelings or try to prove a point." To further elaborate on this point of view, here are comments from Grade 12 students in one Nova Scotia school:

I feel that in order for a person to feel that he/she belongs or to have a fulfilling school life one must be encouraged to form and participate in other activities besides studying, etc. I feel that it is absolutely imperative that teachers encourage students for if they do not and in this there is one particular teacher who even goes so far as to discourage students from partaking in extra curricular events and organizations, the students will lose all interest. I feel that students should be able to express individuality in and out of the classroom and not to be mocked for expressing their individuality.

(Grade 12 girl)

I think that teachers should care more about the individual who needs help. Most of the study time in class is spent swapping ideas with the classroom 'brain' and the student who does not understand something has to fend for himself. I realize that these students could ask the teacher to help, but are afraid that the teacher or other students will make fun of them. This happens a lot and a student ends up failing a course.

(Grade 12 girl)

Another Grade 12 Nova Scotia girl expressed her view on the consequences of having teachers who "laugh at" students when she wrote:

Some teachers seem to actually enjoy humiliating a student in front of other students which can have a terrible effect on younger students. This makes them lose their self-confidence in school and other areas. From my experience with teachers that laugh at you and try to embarrass or humiliate you, I hardly ever ask a question in class or even try and get to know most teachers.

Stupid Jokes

Students from a number of schools observed that teachers are not always successful in their "telling jokes" with the intention of adding humour to the classroom. On the contrary, their jokes are often perceived by the students to be "stupid" and tend not to get the teachers' desired effect. For example, a Grade 9 boy in one Newfoundland school wrote: "Some teachers tell the driest and the more boring jokes, so many times it makes you sick," while a Grade 11 girl in another Newfoundland and Labrador school complained that her "teachers tell boring jokes" which are "dry and uninteresting". A New Brunswick boy in Grade 10 blamed his teachers, who allegedly "act as if they are dried up" with their "teaching and jokes" for school, for being "boring sometimes". Here are the comments of three students from one Newfoundland and Labrador school: "...teaches us History and makes it very boring. He also tells the horrible dry jokes" (Grade 9 boy); "The History teacher is dumb. He gets in front of the class telling dry jokes and insulting students" (Grade 9 boy); "Most teachers are boring, they tell dry jokes and you can't understand the teacher at all" (Grade 10 girl).

A Grade 10 boy in New Brunswick argued that a teacher cannot make class "interesting" with "boring jokes". A Grade 10 girl in Nova Scotia wrote:

Most teachers make their classes interesting and their classes are the classes that I like to go to. But some of my teachers make their classes boring with jokes and by the end of the class, I am ready to go to sleep.

The subject of the stupid jokes of one of his teachers was identified by one Newfoundland boy in Grade 9 as "religion". The student wrote that his teacher "is ignorant" and "tells religious jokes". A Grade 10 girl in New Brunswick was upset because "there are also teachers in" her "school who talk and joke more about what they did the night before than they do about the subject." Another Grade 10 girl in a second New Brunswick school noted that her "teachers are mostly boring because" she "cannot understand their stupid jokes". In the view of one Grade 10 boy in New Brunswick, one of his male teachers tells "dirty boring jokes" which are not appreciated by his classes.

The suggestion was made by one Prince Edward Island student that teachers who "try to be funny" by telling jokes are not usually successful in getting "laughs from many students". In contrast to this view, a Grade 9 girl in New Brunswick observed that all teachers do have, and need to have, a sense of humour. But, what really

bothers her are those "teachers with no sense of humour... who think they're funny when really they are pathetic". Similarly, the pitfalls in teacher exploitation of humour as a classroom technique were suggested by a Grade 9 boy from New Brunswick who pointed to the futility of teachers' trying "to be funny" when they are unable to be truly amusing, a situation that usually results in their making "stupid jokes" and thus earning their students' contempt.

Conclusions

High school students in this survey noted their desire for reciprocity of humour in teacher-student interaction. Different students report that classroom humour could help stimulate and maintain student interest in a lesson. Such humour may help make learning fun and induce a liking for the subject at hand. In addition, classroom humour has been seen as an effective way to enhance student-teaching relationships. On the other hand, high school students note that inappropriate use of humour can be a waste of teachers' and students' time. Also, from the student perspective, teachers would be well advised to be sensitive to the student view before telling "stupid jokes".

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REFLECTIONS ON RELIGION IN THE SCHOOLS OF NEWFOUNDLAND AND LABRADOR

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Introduction

The Education System of the province of Newfoundland and Labrador has undergone a period of turmoil during the past decade. Attempts to reform the system have led to periods of frustration, confusion and, in many cases, conflict between parents, teachers, leaders in education and the churches. The province has been subjected to a Royal Commission in Education and two referenda in order to develop a more effective and efficient educational system. The following represents a brief review of the events which have led us to the current state of education in this province. The focus in this paper is primarily on the involvement of the churches in education and some personal views on the potential which exists for churches and parents to have input into the Religious Education Component of the school programming. It is worthy of note that the views expressed by the author may reflect an element of bias resulting from his former role representing the *Churches In Integration* as Executive Officer of *The Denominational Education Commission*.

Historical Background

In the province of Newfoundland and Labrador, schools were started by churches or by various religious societies inspired by churches. As a result, a system of denominational education evolved with several denominations having rights in legislation when Newfoundland became a Province of Canada in 1949. These rights were included in the Canadian Constitution under *Term 17* of the Terms of Union. Following Confederation, tremendous growth was experienced in many aspects of education in the Province. Largely in response to this growth, in 1964 the government of the day established a *Royal Commission* to make a careful study of all aspects of education in Newfoundland and to make recommendations regarding change. As a result of the discussions which were prompted to a substantial degree by the work of this Commission, two major developments occurred which were very significant for the denominational system of education. Through a process of discussion and negotiation, the major churches involved in education agreed to withdraw from direct involvement in the *Department of Education* and carry out their mandate through agencies established outside the Department structure. As a result, in 1969 *Denominational Education Councils* were established to represent the educational interests of classes of people which had rights to operate schools in the province. Therefore, the rights exercised by the various denominations in matters of education were reposed to these councils which were given specific mandates in provincial legislation.

A Royal Commission: Our Children Our Future

In August, 1990, the *Government of Newfoundland and Labrador* announced the appointment of a *Royal Commission* to study the organization and delivery of education in the Province. Over the next year and a half, the Commission examined all aspects of education and were told by the public that significant changes needed

to be made in the whole educational enterprise. Although most people felt that something drastic was needed in order to improve the quality of education for the children of this province, there was no clear consensus as to what ought to be done. Each special interest group was lobbying for their own version of reform and these, not surprisingly, were often in tension and conflict. With respect to the denominational nature of education, the report states that " the Commission was told repeatedly that the denominational system in its present form creates divisiveness and is an impediment to social cohesion." Parents wanted to maintain traditional values in schooling to ensure the stability of the family and the community. A public opinion poll conducted by the Commission clearly showed that the public viewed offering a religious education component in the curriculum as contributing to a better overall education. The public also expressed the view that teachers have a responsibility to show a commitment to religious values and standards.

After significant input and consideration, the Commission in its report of March, 1992, proposed a modified denominational system. Under the proposed model, the churches were to have educational input at the highest level of government and a continuing role in the spiritual development of students of their denominational persuasion through the development of religious education programs and pastoral care initiatives. It envisioned a system which involved the formal integration of all faiths and the development of policies and practices which would involve all citizens in schooling and school governance.

The Referendum of 1995

Following the release in 1992 of the Royal Commission report *Our Children Our Future*, considerable discussion took place between Churches and Government related to possible ways to make significant changes in the structure of the educational system and yet maintain a significant influence of the Churches in the governance and operation of the school system. When it became apparent that differences held by the two parties were not resolvable, government went to the public of the province to seek approval for a change to the *Terms of Union* which would allow for the implementation of a new model for education. A referendum was thus called for September 5, 1995. By a majority of 55%, the people of this province voted to accept a new model for education, one which would retain the denominational character of the previous system, but which would provide the provincial government with additional powers to organize and administer education in the province. In October, 1995, the provincial legislature passed a resolution to amend *Term 17*, adopting the model that had been presented during the referendum. In December, 1996, the Term was passed by Parliament in accordance with section 43 of the *Constitution Act, 1982*. The amendment was proclaimed April 21, 1997.

The Legislation which followed the change in *Term 17* mandated that the denominations representing the classes of persons having rights under Term 17(a) of the Terms of Union of Newfoundland with Canada jointly establish a *Denominational Education Commission*. An agreement to establish this Commission was signed on January 24, 1997. The main roles of the Commission were to support programs in religious education and to advise the Minister and the denominational committees of school boards respecting issues of concern to the Commission.

The government, through a revision of Term 17 and the introduction of new legislation assented to December 19, 1996, provided for significant input by the churches into the governance, administration and programming of the school system. In the programming area, the new Term gave persons having rights the right to provide for Religious Education as well as religious activities and observances for the children of these classes in these schools. However, what was created with this new constitutional term and legislation was a system which was more confusing and complex than existed prior to the 1996 legislation. The new legislation made provision for uni-denominational schools as well as interdenominational schools. School trustees were allocated on the basis of proportional population by denomination. Committees of school boards had significant authority in uni-denominational schools with lesser roles in interdenominational schools. Often these committees consisted of individuals who were not school board trustees. Inequalities began to occur as a result of teacher reassignment and redundancies. Concerns were being expressed as to which students would be able to attend schools classified as uni-denominational and those classified as interdenominational schools.

A particular concern for the *Church Leaders in Integration* was the greater division which was created among their people as result of the new structure being put in place. Within our province, some neighbors and family members with opposing viewpoints on these educational issues were having significant problems resolving their difficulties. Indeed, friction was created among church leaders and further divisions occurred.

On May 23 and June 18 -20, 1997, Mr. Justice Leo Barry heard a petition from the applicants, adherents and representatives of the Roman Catholic and Pentecostal denominations, seeking an injunction to prevent alleged violations by the school boards and government of constitutionally guaranteed rights to uni-denominational schools. On July 8, 1997, Justice Barry made his decision known and subsequently issued an order restraining the school boards from closing schools operated as Roman Catholic and Pentecostal schools in the school year 1996-97, without the consent of the *Catholic Education Committee* or the *Pentecostal Education Committee* of *The Denominational Education Commission*. Mr. Justice Barry stated, however, that there must be an expressed parental preference for a uni-denominational school under the minimum standards or requirements for adequate schooling by the *Department of Education* and the school boards for 1996-97, after allowing, in a non-discriminatory fashion, for changes necessary to recognize the declining student population and reduction in teacher allocation. The order also required that the effects of the school designation process carried out in the spring be suspended until the government had an opportunity to have school board members elected on September 30, 1997. The newly elected boards were to have had a reasonable opportunity to carry out a new registration process to determine parental preference for any school, where so requested by a Denominational Committee of the Denominational Commission. In the new designation process, the non-returns were to be ignored.

The decision of Justice Barry referred specifically to the Roman catholic and Pentecostal Denominations. On Friday, July 11,1997, the *Church Leaders in Integration* met with the Minister of Education and members of his staff and requested the same benefits afforded the Roman Catholic and Pentecostal denominations be afforded to *The Churches in Integration*. In a letter dated July14, 1997, the Minister of

Education stated that "we would be willing to afford your committee similar treatment in similar circumstances and facilitate discussions with the appropriate school board, as necessary." The proposed new structure for education and the resulting frustrations appear to have precipitated the call for a new referendum in September, 1997.

The Referendum of 1997

A new proposal from government to the people of Newfoundland and Labrador involved the complete removal of the churches from the governing of the schools. It meant that the existing *Term 17*, which sets out denominational rights in the constitution, was to be completely replaced. The new term made the legislature responsible for the administration of schools and gave students the opportunity for religious education and observances. The question posed to the people of the province on September 2, 1997 was as follows:

"Do you support a single school system where all children, regardless of their religious affiliation, attend the same schools where opportunities for religious education and observances are provided?"

Prior to the referendum vote the wording of the proposed *Term 17* was released to the province's people:

17.(1) In lieu of section ninety-three of the *Constitution Act, 1867*, this term shall apply in respect of the Province of Newfoundland.

(2) In and for the Province of Newfoundland, the Legislature shall have exclusive authority to make laws in relation to education, but shall provide for courses in religion that are not specific to a religious denomination.

(3) Religious observances shall be permitted in a school where requested by parents.

Seventy-three percent (73%) of those who voted indicated support for the approach which the government was proposing. Analysis of the results indicated considerable support in all parts of the province and among people of all denominations and religious faiths.

Post 1997 Referendum Initiatives

Since the passage of the revised *Term 17* and the subsequent legislation, new school boards have been elected and considerable reorganization has taken place at the school level. In the programming area, development of a common religious education program for all students has been taking place.

In a document entitled *Religious Education, A Curriculum Framework (Interim Edition)*, the *Department of Education* has clearly described a rationale for a religious education program. This framework points out that humans have always had a quest for the spiritual side of existence and a determination of the purpose of life. Young children seek answers about life here on earth and life beyond. They wish to know

what makes us different from other living things, what is the source of suffering, how happiness can be found, what happens after death, and other fundamental questions. These are questions addressed by all major religions and should be addressed in the curriculum of this province. Although the school has an obligation to provide opportunities to address these questions, the church and home carries greater responsibilities in this area.

Students in this province must recognize that they live in a world that is truly multi-cultural and multi-faith and that each person can value and celebrate his/her faith. Religious and denominational intolerance can only be eliminated when individuals have a greater understanding of the worth of religious views and traditions that are not their own. Although our tradition has been greatly influenced by the Judaeo - Christian, a religious education program should provide accurate information about other world faiths without diminishing the values and truths found within Christianity.

Support for a religious education program in this province exists within *The Atlantic Canada Framework for Essential Graduation Learnings in Schools*. A specific Learning for this province states that "Graduates will demonstrate understanding and appreciation for the place of belief systems in shaping the development of moral and ethical conduct."

The religious education program proposed for this province is a non-denominational program. Some of the principles and objectives which underlie the curriculum are:

- the curriculum will be non-confessional.
- major attention will be given to Christianity because this reflects contemporary Newfoundland society and its heritage.
- students will be given opportunities to make personal decisions about their own spirituality and religious traditions.
- students will develop an understanding and a respect for different belief systems.
- students will develop an awareness of the influences of religion on local and global events.
- students will acknowledge that human beings share essential truths and experiences that are much more important than those which divide them.
- students will develop a respect for the place and role of parents and faith communities as primary influences on the faith lives of young people.
- through their study of Christianity and other religions, students will come to appreciate the intrinsic worth of each of these religions for its adherents.

Further delineation of these principles is evident in the Curriculum Framework. Curriculum materials which existed under the former structures are being used and others are being developed to meet the needs. The result will, no doubt, be a strong curriculum and with periodic modifications will help prepare the students of this province to face the challenges of the twenty-first century.

Conclusion

During the past decade the educational system in the province of Newfoundland and Labrador has confronted significant challenges. Declining enrolments in a province with vast and varied geography have meant that difficult decisions have had to be made related to the reorganization of the school system. Movement from a system where the churches have had a considerable impact on the administration of schools and on the delivery of programs to one which removes all legislated authority has been a difficult and demanding one. The system which is developing, however, appears to be a one in which there will be a greater cooperation among those who administer the school system and a greater understanding of and appreciation for the religious beliefs of those who adhere to different denominations and faiths.

There are those who have concerns about the availability of a religious education curriculum and the opportunities to celebrate religious observances. Legal opinions state that, under the revised *Term 17*, religious education courses of a non-denomination nature are guaranteed. The term also makes it clear that "religious observances shall be permitted in a school where requested by parents". It is thus the responsibility of the churches and parents to ensure that the valued religious observances and celebrations are carried out.

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STARTING A THESIS, FOLIO, PROJECT OR INTERNSHIP PROPOSAL

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Many graduate and undergraduate programs require students to demonstrate their research knowledge by having them complete a major research paper, usually in the form of a thesis, folio, or project. In programs involving a field experience or an internship, candidates are often asked to prepare a similar paper though on a smaller scale. All of these papers start with a proposal. Suggestions for initiating and carrying through the writing of a proposal are offered below.

Several features are common to the development of all proposals. These include finding a legitimate area, identifying a specific topic within that area, identifying a researchable question or a legitimate need, developing a plan to address the question or need and, finally, the formal writing of the proposal. The final document thus states the problem or need, explains its importance, gives an overview of the supporting literature, and outlines your 'proposed' way of dealing with it.

The Starting Point - Understanding the Reasons for the Task

Your research paper is not intended just to offer you one more learning experience or just to test you one more time! While the learning and testing aspects are certainly there, so is the goal of adding to the corpus of knowledge owned by your discipline. Your paper should be an original work that makes a contribution to your field. Your research focus must thus be legitimate or, in other words, recognized by others in the field as adding to the useful knowledge of the field.

Your paper may contribute in various ways. In papers addressing a "question", the work may be of an exploratory, descriptive or hypothetical nature. Exploratory papers seek to identify or perhaps support the existence of phenomena and novel, not understood situations, patterns or relationships deemed to be of potential importance or significance. Here the research explores the phenomenon to determine if it is 'real' and not a mis-perception, hoax or some type of error. Descriptive papers follow closely on exploratory papers. In these, the effort is to describe phenomena and catalogue the attributes of those events which have been delimited. In hypothetical papers, one seeks theoretical (i.e., constructed) explanations for the information or data gathered through descriptive research. Here, one might alternatively seek to identify predictive relationships that exist within the information described.

In "need focused" papers, the effort is toward the clarification of issues, the development of theoretical positions or the summarizing and integration of information. "Need" focused papers (i.e., projects) can also be aimed at solving problems through developing intervention strategies or perhaps the creation of new resources or services. In both "question" and "need" focused papers, an original contribution is offered.

A Closer Look at the Goals for Each Type of Research Paper

As suggested, differing types of papers have both shared and more unique, goals. All demand scholarship and all use an academic or scientific methodology to address their target. A folio might explore a question by organizing information, clarifying or identifying issues, summarizing or encouraging policy development or perhaps critically assessing and/or suggesting new directions or initiatives. A project is a need focused paper which typically collects together background information and, based on this information, creates or proposes a new way of meeting that need. A thesis usually seeks to answer a question by verifying and supporting positions, by demonstrating or refuting the existence of particular hypothesized relationships or by testing the legitimacy of a position, explanation or model.

What is done in any the above papers overlaps with what is typically done in an internship. The difference rests primarily in the more limited scope of the work. While it is the goal that an internship study address a need or question of interest to the discipline, this paper is often aimed at meeting a situation specific to a particular setting.

Finding an Area and a Specific Topic or Question

A common question proposed by a candidate is: "What will I do my paper on?". Many people find it hard to narrow down their broad interests to a single specific focus. It is common for a student to say: "I know I want to work in the area of ____ but I don't know exactly what should I focus on". Finding an area, then a topic and finally a focus (i.e., question or need to address) within that area are three somewhat discrete tasks.

(a) Finding Your Area

Finding an area must be your first priority. This task requires you to answer questions like "What would I like to work on for the next three to six (and often more) months?" The most common route begins with your pursuing an interest or topic which is of personal relevance or is a source of genuine curiosity. Perhaps some topic based on your background, a major event in your life, or even a chance comment might offer a start. Some students go to faculty members and ask about areas within the discipline that are current and worthy of in-depth study. Some have the good fortune to find a faculty member whose suggestions "match" what is of interest to the candidate. When a faculty member's interest aligns with yours, you often can skip the next step!

(b) Finding a Topic

Once you have identified an area, you will virtually always find many topics or aspects of that area which could be further researched. There is no known single, quick and easy way to identify a topic. Finding a topic involves addressing questions like: "What do I want to know more about within the area?" or "On what aspect or specialization within the discipline and profession do I want to become more expert?" The topic you pursue will be one about which you will become very informed and one on which you will become a specialist. Often the specific topic you focus upon will follow closely from the same background interest that guided you to the broader

discipline or area in the first place! Sometimes a professor or a faculty advisor will alert you to topics or situations that need addressing as you proceed through your program.

The typical routes to identifying a topic involve reflecting on your growing professional interests, talking to professors, scanning texts in the area and learning about what others (both faculty and peers) are doing. Occasionally topics of discussion in special interest or "chat groups" which are found on the World Wide Web might provide a stimulus. Sometimes, a faculty member, recognizing an aspect of your interest or a personal strength, will encourage you to join his or her research. You must be open to a range topics.

If you do not find a topic of personal relevance and personal interest to you, you are likely to find the completion of a major piece of research quite difficult. It should be noted that it is common for a student's interest in a topic to grow as a result of becoming immersed in that literature.

(c) Finding a Question or a Need

Once you have identified your area and a topic, you need to continue to narrow your search and to identify the very specific aspect of the topic that you will focus upon. This focus is the question or need that you will address in your research report. Making your focus clear and explicit usually involves a great deal of writing and redefinition and, of course, thought! It also often involves some false starts and the need, perhaps a number of times, to readjust your focus. It is common to start with a question or focus which, while important, is too broad or too comprehensive to be dealt with within the confines of your program. You may find, as you work along, that your question has been largely answered, that the need you identified has been met or that the interest within the field in your focus is low and hence the legitimacy of your effort is questionable. Often, even though the question or need is legitimate, an original or practical way to address your concern simply cannot be found!

Some students are initially disappointed when they are encouraged by their advisors to focus on a need or question that is much more narrow and specific than was their original aim. It is often difficult for students, early on, to appreciate how important (and time consuming) it is for scholars to take the many small steps associated developing new knowledge. There is an immense effort invested in each of the many individual references cited after a single statement in an article or paper!

Advisors usually assume, when you approach them, that you have identified an area and probably a topic. Many assume you already have a research focus or question and that you are seeking ways to address, refine or make operational your question! It is usual for you to be asked to supply a two or three page draft of your ideas which outlines what you are seeking to study and how you plan to go about the task. From these early steps and after much discussion, critical thinking, redefining, planning, literature review and rewriting, you will eventually draft your proposal.

(d) Suggestions If You Have No Topic and No Question

If your question is "Where do I start?", there is no single easy answer or no formula that is guaranteed to work. There are, however, some strategies that might

help. Assume that looking for a focus will require you to be very active and very focused. When starting out, it can be useful to read early and late chapters in recent books in your area that are focused on issues. Look for the questions, needs or unresolved issues that these identify. Often ideas will come from the conclusions of recent theses and research reports wherein your predecessors have identified areas needing further work. It can be useful to start by identifying the key journals publishing in your area and reviewing the types of studies and topics that are current.

If you choose to follow the journal route, try photocopying the tables of content for the past one to two years from four or five key area journals. In studying these you will find what questions and topics are being currently researched and quite likely find certain papers and topics that draw your attention. Mark the most interesting article(s) in each issue and collect, as a separate list, each of these "more interesting" articles. Prioritize this list to form your own personal "most interesting" list. Next read these articles and, perhaps with the help of an advisor, reflect on both these questions or needs and ways to address them.

It is highly recommended that, as soon as you begin framing your question (i.e., drafting your proposal), you force yourself to write a title for your final paper (and of course, your proposal). If necessary, actually create a list of possible titles you develop. These titles are extremely important as they will both direct your thinking and impose limits on what you are doing should your start, as most pre proposal writers do, to wander inappropriately!

What to Do Once You have a Topic

A proposal is a clear statement of your focus, a sample of the literature supporting the legitimacy of that focus, a sample of the background literature on your specific topic and, finally, a detailed description of the activities you propose to carry out to address your specific question or need. Early drafts of your proposal must be carefully reviewed to ensure that what you are doing is within the scope of your time and resources and that it meets the expectations of your advisor and the applicable regulations.

It is suggested that the following steps be taken once you have an area or a possible topic identified:

- (a) Meet with your advisor to more clearly delimit the topic. (This is when you draft what might be the title of your document and when you likely will be asked to write a brief statement of your ideas.)
- (b) Initiate a literature review to determine if your topic has already been extensively researched. Here is where you begin to identify possible supporting literature.
- (c) Start drafting your actual proposal. Keep in mind that your proposal tends to gradually become your final paper. In other words, if you do more work at the beginning, you will have less to do at the end!
- (d) Consider adopting the following proposal format.

For all Proposals:

Title Page
Table of Contents
Introduction

- Statement of problem/ focus
- Significance of study
- Background of question
- May include aims, hypotheses or research questions
- May include definitions
- May include limitations of study/folio/project
- Summary of Relevant Literature

For a Thesis:

- State research method or procedures to be followed
- May include: participants/ sample, instrumentation, procedure to be followed, data collection methods, and data analysis procedures

For a Folio:

- Include tentative individual paper titles
- Include an overview of each paper as well as its goal and a clear statement of the issues addressed in each
- Include a tentative sub-topic and/or headings list
- May include statements on the style and format you plan to use

For a Project:

- Include a verbal description of the actual product you plan to develop
- Include how you plan to go about creating the product (i.e., consultation, field testing and evaluation strategy)
- May include information related to a need assessment

For an Internship:

Note: It is useful to see your proposal as having two parts, the first dealing with the professional experiences you will engage in during the internship and the second a description of the embedded research component.

- May include a statement of the regulations and university expectations associated with an internship
- Include a verbal description of your setting, your supervision, duration
- Include a detailed listing of your goals and how you propose to meet them
- Include, often as a final general goal the completion of a study aimed at...
- Include (perhaps as "Part 2") a mini-proposal outlining the research you plan to complete. Usually interns complete a thesis-like or project-like type of paper. The contents of this component will depend on the type of study you plan to do. Suggestions for each type are found above.

References

Appendices (instruments, parent permission letters, etc.)

A useful strategy for developing a proposal involves your first reading and developing an overview of an area, second (without making detailed use of the previously reviewed literature) drafting an outline of what you want to do and why, and third returning to the literature to seek support for and clarification of what you proposed.

Getting an Advisor

Early in the process, perhaps when you are seeking an area and certainly when you are specifying your focus, you should be seeking an advisor. Getting an advisor typically means first going to the chair or academic administrator of your area and seeking advice as to policies and procedures that you might follow. This person may suggest individuals to contact. It is also useful to learn about what might be expected of Faculty and about how many students different advisors are working with. Getting the advice of students further along in the process than you is also highly recommended. Next it is necessary to begin beating on doors and seeking support. Keep in mind that advisors want and need students! They are especially interested when the work you wish to do complements or builds on work the advisor is already doing.

When seeking an advisor, be prepared to be flexible. While it is good to have thought through some ideas, the more detailed and firm your ideas are, the greater you run the risk of the advisor not being interested or not agreeing with what you are proposing to do.

Also bear in mind that you will need to spend a lot of time with your advisor. Pick someone you feel you can work with. Also pick someone who will have both the skills and the time you need.

A Closing Thought

Gaining expertise is a key personal reason for doing research. What you learn about your area and what you learn about thinking critically and actually doing research contribute very significantly to making you an expert. The effort is worth it!

Realize that writing a proposal and designing a good piece of research is typically much more difficult than actually carrying through your plan. You can succeed at both. Although the acts of writing your proposal and finally finishing your paper together probably represent the biggest academic task you have ever taken on to date, by taking one step at a time and trusting both yourself and the people around you it will get done. When in doubt, look at all the other students who have made it!

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**TEACHERS, CHILD ABUSE, AND THE COORDINATION OF SERVICES
TO CHILDREN AND YOUTH: POLICY REVISIONS
IN NEWFOUNDLAND AND LABRADOR**

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This paper focuses on the implementation of a new model of service coordination for children and youth in Newfoundland and Labrador (Government of Newfoundland and Labrador, 1997). The model, which draws together the services of the Departments of Education, Health, Social Services and Justice, is based on an ***Alntegrated Services Management Approach*** aimed at providing specific supports or interventions for children with special needs. For the purpose of the policy a child with a special need is defined as Aone who is identified to be at risk or has a special need as determined by one or more of the service partners (Government of Newfoundland and Labrador, 1996: 1). My interest in this most recent initiative has to do with my ongoing research into the relationship between teachers' work and the school's response to victims of child abuse.

The school's role in responding to child abuse has been generally viewed in two ways: surveillance and prevention. The surveillance role involves requiring teachers to report disclosures or suspicions of abuse to their local Child Protection Service (Government of Newfoundland and Labrador, 1993). This is a legal requirement and therefore highly emphasized by school boards. Prevention efforts, such as the development of curriculum materials or workshops for teachers, have so far been given less attention (Tite, 1993, 1994, 1996). My goal in this paper is to focus on the integrated services approach in order (1) to explore its potential with regard to improving current surveillance and prevention models and (2) to speculate on the extent to which the new policy reflects an adequate response to the difficulties associated with teachers' surveillance role.

The Coordination of Services

The current trend toward the coordination of services is based on the idea that "coordinated intervention is the ideal goal...and that a collaborative multi-disciplinary response is needed "...to increase reporting and conviction rates, increase the effectiveness of treatment, and to decrease the trauma of disclosure for survivors" (Kinnon, 1998, 8). Clearly, though, while the formal coordination of services has influenced the thinking and activity of the professionals involved (Frenken & Van Stolk, 1990; Furniss, 1991; Martin, 1992; McGuire & Grant, 1991; Trute et al, 1992), and although a range of collaborative models have been developed (Hunter, Yuille, & Harvey, 1990; Kilker, 1989; Rogers, 1990), current intervention in Canada and throughout the USA remains fragmented and ineffective (Cotter & Kuehnelle, 1991; Trute et al, 1992). In general, the difficulties are attributed to philosophical disagreements that divide professional communities in their attitudes toward victims and offenders and their beliefs about the causes and consequences of abuse (Finkelhor & Strapko, 1992; Trute et al, 1992; Kays, 1990).

As teachers have become increasingly persuaded to take part in coordinated intervention, much of the research on the school's role has been aimed at uncovering

the procedural difficulties associated with reporting cases to Child Protection Services (CPS) (Brosig & Kalichman, 1992; Foster, 1991; McEvoy, 1990). Teachers' lack of knowledge about abuse (Abrahams, Casey & Daro, 1992; Baxter & Beer, 1990; Beck, Ogloff & Corbishley, 1994), their general wariness about becoming involved, and the conflicts that arise in dealing with agents from outside of the school (Haase & Kempe, 1990; Zellman & Antler, 1990; Zellman, 1990) have also been emphasised. What is often missing from this work is a full understanding of the overlapping bureaucratic, professional and personal contexts in which identification and reporting decisions are made.

The Teacher's Role

By focussing most of my previous research (in Ontario and Newfoundland) on teachers and their experiences and perspectives of both hypothetical and real cases, I have tried to develop our understanding of these contexts in several ways. These findings, drawn from Tite, 1993, 1994a, 1994b, 1994c, 1996, 1997; 1998 (forthcoming) and Tite & Hicks (1998) are summarized in general terms below:

1. Discrepancies between teachers' attitudes and the legal definitions/requirements:

Teachers seem reluctant to be bound by legal definitions or formal reporting requirements. Instead, they include a wide range of behaviours in their own theoretical definitions and often prefer to deal with cases informally at the school level. Underlying these informal interventions is the sense that some cases can be handled more effectively by the school than by CPS, a perception which seems rooted in a view of children which emphasises discipline and intellectual and emotional needs.

2. Barriers to detection:

The vast majority of teachers in both provinces indicated that they probably would not notice the signs of abuse *if the child is not having trouble at school*. It is clear, however, that classrooms present other complicating conditions. Detecting abuse is difficult, for example, in a setting where children frequently present themselves with minor injuries, where abused children can explain away injuries with excuses that sound entirely plausible in their familiarity, where it is not unusual to see a child who seems emotionally distressed, and where, increasingly, children are displaying advanced sexual knowledge and behaviour.

3. Inadequate training:

While interpreting children's symptoms in such circumstances would seem to require a sophisticated knowledge base, more than half of those surveyed in both provinces were unable to indicate whether their school board has a reporting policy, and fewer than half had attended a mandatory child abuse in-service session in the last five years.

4. Difficulty of distinguishing between suspicion and proof:

Many teachers engage in their own informal investigations of their suspicions, sometimes feeling that they need proof before making a formal report, but more often out of their professional concern for the whole child and maintaining good working partnerships between the home and school. This process is fraught with difficulty, however, as teachers often find themselves acting in ways that contradict their normal concerns for children's trust, privacy, and safety.

5. Uncertainty/lack of consensus:

Teachers indicate a pervasive sense of self-doubt about their role in the coordination of services. In part, this seems to arise out of the increased demand to be more responsive to abused children, and a lack of confidence in their ability to do so. For some, the uncertainty seems rooted in the perception that they are taking on a role which is outside of their normal teaching role. For others, it is a question of parents' intentions. Also evident is a lack of consensus about how to balance their concerns for children's safety against the need to maintain the child's family unit, especially where there is a question about CPS ability to provide long-term solutions.

6. Conflicting views about the victims of abuse:

Related to this are the findings from my most recent research which suggest significant differences in teachers' and social workers' views about the victims of child sexual abuse i.e., their opinions about the characteristics and credibility of sexual abuse victims and the extent to which they attribute to the victim some responsibility for the abuse. The most obvious issue is the extent to which the child's age and behaviour appears differentially to influence attitudes about the child's credibility, with teachers more likely than social workers to accord little credibility to adolescent victims, particularly if they are seen as a "problem" children (e.g., promiscuous or runaways).

7. Frustration about the outcome of reports to CPS:

Teachers' frustration with the outcomes of their reports is very clear. There is widespread concern about "budget cuts, long waiting periods and huge caseloads," and an overriding sense that CPS is simply unable to cope. Another source of frustration concerns disagreements about the severity of the abuse, particularly with cases of emotional abuse and neglect. Teachers often feel unheard or misunderstood by child protection workers when they believe that they have clear ongoing evidence of abuse or neglect, but where there are no "marks" or "witnesses" to support them.

8. Concerns about consequences:

Related to this is teachers' fear that reporting will only make matters worse. This is expressed in a variety of ways: as apprehension about traumatizing the child at the early stages of disclosure; as a concern about upsetting the other children in the class; as fear that parents may react to the report by becoming even more abusive; and as anxiety about the difficulties of dealing with the child and his/ her parents after a report. It is clear as well that some teachers see themselves at risk of

personal revenge, either in the form of physical violence or attacks on their professional credibility.

9. Significant gender differences:

While I was unable to conduct a gender analysis for the Ontario study, the findings from Newfoundland and Labrador indicate statistically significant gender differences in the identification of cases; 42.7% of men teachers compared to 60.1% of women teachers indicated that they had suspected a case of abuse. There are two interesting aspects to this gender distinction, the first the fact that men tend to predominate in the higher grades and administrative roles, the second pertaining to policy and training. The prevailing view is that identification should be influenced by type of teaching assignment and exposure to policy and training. However, the data here is very clear: only women's suspicion rates are not statistically influenced by grade level or type of class assignment, and only for women is there a strong positive correlation between suspicion and in-service training and between suspicion and awareness of policy. Put another way, after controlling for grade level, type of class assignment, and exposure to policy and training, differences in suspicion rates remained significant for males, but not for females.

10. The potential for inappropriate screening:

The majority of teachers are reluctant to make formal reports to CPS, but most of their suspicions are reported, and most reporting is done through the principal. Principals seem adequately prepared to handle reports, but at least half seem unwilling to pass teachers' reports on to CPS, or to encourage the teachers to do so. Apart from the possible effect of gender, this seems connected to how abuse is narrowly defined procedurally and to principals' experiences of what CPS will investigate and what they will otherwise dismiss. Thus, although teachers' reporting seems initially to be consistent with accepted procedures, in practice the process appears to be sufficiently vulnerable to principals' responsiveness to raise questions about the potential for the inappropriate screening of cases at the school level.

The Integrated Services Management Approach

Because they so clearly underline the educational difficulties associated with reporting, these findings compel us to consider the potential benefits (or drawbacks) of an integrated services management approach. The most obvious question seems to be whether the model provides an opportunity for teachers to become more engaged in the problem of child abuse, while resolving their own difficulties within the educational context, and coordinating their activity with other professionals such as social workers, health-care providers and justice officials.

In Newfoundland and Labrador, the Integrated Services Management Approach is meant to be a collaborative process involving the child, the parents, and service providers from Education, Health, and Social Services. The idea is that personnel from the relevant agencies work together to identify the child's needs, to define appropriate goals for meeting those needs, and to provide the required supports and services. The aim is to provide a holistic approach which ensures that the child and family are full partners in the process, while encouraging the sharing of knowledge and expertise among service providers. Although this paper is focussed

on child abuse, it is important to note that this is not the only issue addressed by the model. In fact, it is designed to deal with a wide range of special needs and problems, e.g., hearing impairments, the need for a wheelchair, death or disability of the child's parents, learning disabilities, behavioural problems, shoplifting convictions, and so on.

A central component of the Integrated Services Management Approach is **The Individual Support Services Plan (ISSP)**. Given the objectives outlined above, presumably there is room within the ISSP planning process for flexibility in terms of the level of formality and format. Nevertheless, a formal process is outlined very clearly in the policy (see figure 1). As Figure 1 indicates, the process consists of four essential stages: pre-referral; referral; planning and implementation of the service plan.

Figure 1

- (i) **The pre-referral stage:** The ISSP process begins with screening and identification. Screening and identification is followed by assessment and exploration of strategies, and then, if a referral is not deemed necessary, the service provider should engage in ongoing evaluation and monitoring. Unfortunately, as we have seen, in terms of the child abuse issue, this is where the teachers' role generally begins and too often ends. This is because most of the difficulties associated with reporting, discussed above, act as barriers to the referral stage. To repeat: it is difficult to detect the symptoms of abuse in the classroom; too few teachers are aware of the legal definitions, school policies and legal reporting requirements; those who are aware often disagree with, or at least feel highly uncertain about the legal definitions and the official CPS response. Finally, given the significant gender differences along with the fact that the vast majority of school administrators are male, clearly, the chances of teachers' suspicions going beyond the pre-referral loop are low.
- (ii) **The referral stage:** The second stage of the ISSP process is the referral stage. Prior to the implementation of the new integrated services management approach, a child abuse referral generally meant a quick phone call to CPS or the police (very few teachers in my samples indicated putting anything in writing). The ISSP process is different; here the key player is the Individual Support Services (ISS) Manager. A referral to an ISS Manager begins a process whereby he or she determines the membership of a team and completes a profile which is sent to the Child Services Coordinator and communicated to a Regional Services Management Team. In determining the composition of the ISSP team, the ISS Manager is expected to take into account the nature and complexity of the child's needs. Most teams, however, are expected to be comprised of the child, the parents/guardians, service providers, and other relevant players. (Government of Newfoundland, 1997, 8-12).

Presumably, in cases where a child abuse referral comes from the school, the teacher could be considered a relevant player or a service provider (in cases where a child's learning has been affected by the abuse, for instance). However this is not clearly defined in the document. While teachers are

mentioned as team members and service providers, their role does not come up at all in any of the examples of child abuse. Where teachers are mentioned in the document, it is generally in relation to providing services for children with identified learning disabilities. This raises the question of whether or not teachers are expected to be part of the referral process and leaves us to wonder how teachers' confusions and uncertainties will ever be resolved if they are left out of the loop at this early stage.

Close to one-half of the teachers in both my samples indicated that they never heard about the outcomes of their referrals. When I raised this issue at a recent ISSP workshop, I was told that this was confidential and therefore could not be communicated to teachers, leaving me to puzzle out how teachers could be relevant players or service providers without appropriate information. Since health, social services and justice officials can readily obtain children's school records, while teachers cannot have access to the outcomes of their referrals, we clearly need to question the extent to which the integrated service management approach is truly integrated or service oriented.

(iii) The planning stage: The planning stage begins with a team meeting, a meeting which is seen as a continuation of the problem solving process begun at the pre-referral stage.(23). The team meeting is meant to be: child-focussed; a forum for shared decision-making; a means to acquire solutions to problems; a place for respectful honesty; inviting and comfortable for all members; a place where everyone's expertise and point of view is valued; and positive and optimistic about the child's future(24). More specifically, the team is expected to develop an action plan. The plan is to consist of a set of prioritized goals for the child, a list of supports, services and recommendations for each goal, and a list of service personnel or agencies to be responsible for implementing the various components of the plan. The planning process is intended to be consensual, with team members reaching agreement on strategies, approaches and interventions, and ways of avoiding duplication of services.

As I suggested above, it seems unlikely in child abuse cases that teachers will be included as team members in this planning stage. In fact, teachers may be very reluctant to do so in any case, given the difficulties associated with dealing with the child and parent after they have made a child abuse referral. However, two key issues should be considered at this stage. First of all, if teachers, children and parents could be brought together in a consensual planning environment, this type of arrangement might hold some solid potential for reducing teachers' fears and uncertainties. Second, since teachers are among the few professionals who may be expected to work with the child before, during, and after the referral, whether or not they are including in the team planning stage, they should be considered key service providers. Again, though, where teachers are specifically named in the ISSP document, it is generally in cases where children are deemed to need special education services, such as speech therapy, and so on. Almost no attention is given to teachers as service providers in terms of their expertise with dealing with children who are in other kinds of distress.

(iv) Implementation of the service plan: After the meeting, individual team members with responsibility for implementing the ISSP are expected to

engage in a number of tasks, the first of which is to complete the necessary paperwork. According to the document, this formalizes each team member's action plan and ensures that the identified objectives are met. Interestingly, teachers are mentioned in this section of the document which recommends, for example, that "School board office personnel, *usually the special education teacher* [author's emphasis] and relevant classroom/subject teacher(s), get together to complete the teaching portion of the ISSP ..." (26). While the document is unclear about teachers' role in cases where they are not official members of the team, it does indicate that if the ISSP includes an area for which additional expertise is necessary, the team members, in writing up the ISSP, should "include the relevant person" or recommend "resource materials to help write this portion of the ISSP." (27). Thus, presumably, teachers could be called upon at this point to become service providers. However, this is not made clear in the document, nor is there any mention of how this might work in cases of child abuse.

Following the development of the ISSP, the team is expected to meet again to draw up a schedule for the interventions, and, once implemented, to meet again twice annually to review and monitor the child's progress. Interestingly, teachers are mentioned as a special case in this section of the document in reference to the scheduling of meetings, for it is noted that "a convenient arrangement for some schools is to schedule meetings to coincide with the normal parent-teacher interviews avoiding the need for parental travel to multiple meetings" (29). This is a puzzling statement, especially coming near the end of the document. Nowhere else is it suggested that teachers could play such a key role.

In this paper I have considered the Integrated Services Management Approach only from the perspective of teachers' role in responding to child abuse. Further analysis of the model should include the perspectives of other professionals as well as other difficulties e.g., health issues, related to children "at risk." Nevertheless, this preliminary work holds particular significance for teachers and researchers concerned about the problem of child abuse. Specifically, teachers need to recognize the features of the new model which may act as systemic barriers to responding to abused children, and to begin questioning aspects of the new policy which do not seem to work well for them or the children they are trying to protect. At the same time, researchers need to be concerned with how policy revisions which appear to be neutral (on paper) may serve (in practice) to screen out cases in ways that reinforce the old idea that child abuse is a marginal social problem.

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TEACHER STRESS IN ONE SCHOOL DISTRICT OF NEWFOUNDLAND AND LABRADOR: A PILOT STUDY

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Across the country in all types of occupations people are working harder, longer than ever and with less job security. Radio, television and newspapers report that job related back pain, headaches, depression, heart disease, and burnout are on the rise. A recent national survey of Canadian employees found that almost half experienced a "great deal" of stress at work, a quarter of them to the point of it making them sick (Globe and Mail, May 17,2000). Workplace stress is the most common form of stress according to The Heart and Stroke Foundation. In their annual Report Card on Canadian Health, released February 02, 2000, the Foundation found that "close to half of all adults age 30 and over are overwhelmed by either their jobs, families or finances". "These results should serve as a wake up call for all Canadians given that one in two adult Canadians report being stressed on a frequent basis. We now know that stress, particularly in the workplace, wreaks havoc on the circulatory system and can contribute to a heart attack or worse" (Dr. Rob Nolan as cited in The Telegram, February 13, 2000).

Stress has been said to be the worst health problem teachers have to contend with (Robert Sylwester as cited in R.C. Newell, 1979; Wisniewski and Gargiulo, 1997). The physiological responses to long-term stress are many; elevated blood pressure and other circulatory problems contributing to heart attack, headaches, weight loss, and lethargy are but some. Psychological responses to stress may manifest themselves as depression, nervousness, anxiety, psychosomatic complaints, emotional exhaustion and sleep disturbances.

Frequent and prolonged periods of stress may produce feelings of emotional exhaustion, a reduction in personal accomplishment, and a sense of professional failure and contribute to a condition often referred to as "burnout". When stress reaches the burnout level, energies are directed to basic survival; getting through the day becomes first priority.

A time-work study of Nova Scotia teachers (1999) found that the average work week of teachers was 50 hours. Eighty percent of teachers surveyed felt rushed every day, 67% reported they cut back on sleep to gain time, and 70% worried about the lack of time for family and friends. They reported high stressors to be: coping with changing job demands, increased paper work, increased work-related meetings and developing, implementing, reviewing and evaluating Individual Student Support Plans (ISSPs).

While there is some degree of strain (the result of stress) in all occupational settings, the level of stress and strain among teachers is not a new concern (Kelly and Berthelsen, 1995; Kryiacou and Sutcliffe, 1978). Hunter wrote "air traffic control, surgery and teaching are probably three of the most potentially stressful occupations in the world...in them people are responsible for functioning in learned patterns yet must also possess on-their-feet, high-speed thinking and decision-making skills to handle the unexpected situations triggered by variance of humans and the caprice of nature" (Hunter, 1977, p. 122).

Selye, a pioneer in the study of stress, described stress as "the rate at which we live at any moment...anything pleasant or unpleasant that speeds up the intensity of life causes a temporary increase in stress" (Selye, 1974, p.2). "Occupational stress arises from a discrepancy between the teacher's work needs, values, and expectations and the failure of the work environment to provide occupational rewards, job demands and the capacity of the worker to meet these requirements" (Cooper, 1981, p.175)

Stress is a developmental process beginning in the pre-professional phase of student teaching. During the first five years of teaching a slow but steady increase in emotional exhaustion is reported. Further, the cumulative effects of stress influence a teacher's commitment to remain in the profession. Teachers who work with emotionally/behaviourally disturbed students are at a high risk of leaving the classroom, with attrition rates approximately six times that of other special educators (Wisniewski and Gargiulo, 1997).

The stress level of teachers in Newfoundland and Labrador has not been studied since the early 1980's when Kendell investigated stress factors and levels of stress as perceived by regular classroom teachers. The most stressful issues reported at that time were:

- time management
- parent/teacher relations
- intrapersonal conflicts

(Kendell, S.E., 1983)

Conversations with teachers and with staff at Newfoundland and Labrador Teachers' Association over the past year indicated stress is a growing problem and a concern that should be investigated. Accordingly, a pilot study was conducted in the spring of 2000 to develop methods for examining the levels of teacher stress and to determine and compare the levels of stress in male and female teachers in elementary, junior and senior high schools.

Subjects and Procedure

One hundred and ninety-eight teachers in one Newfoundland and Labrador school district were surveyed to obtain their report of occupational stresses, strains and coping behaviour using S.H. Osipow's (1998) Occupational Stress Inventory (OSI-R). One hundred teachers responded which constitutes a 51% response rate. The sample was composed of primary-elementary, junior high and senior high schools in both rural and urban areas. Participants ranged in age from 27-54 years, the mean age being 41 years.

Surveys were delivered to 14 schools in April 2000 and Principals were asked to distribute these to every second teacher on staff. Participants were informed in a cover letter that this was a pilot study to determine the level of stress among teachers. It was stated clearly that this questionnaire was anonymous and that there was no way in which individuals or schools could be identified. This cover letter, instructions for completion and a stamped, self-addressed return envelope were included with each survey. One follow up letter addressed to all teachers in each

school reminded teachers to complete the survey. The surveys were analysed using the Statistical Package for Social Sciences (SPSS).

Measures

The Osipow (1998) Stress Inventory Revised Edition (OSI-R) was self-administered by the teachers. The OSI-R contains 140 statements about a person's work or personal life and comprises three separate scales: occupational stress (ORQ), personal strain (PSQ), and coping resources (PRQ). Each question in the scale is based on a five-point Likert scale ranging from rarely or never true (1) to true most of the time (5).

The ORQ, measuring the amount of stress stemming from the participant's work environment, has six subscales of ten items each (Role Overload, Role Insufficiency, Role Ambiguity, Role Boundary, Responsibility, and Physical Environment). According to Osipow (1988), Role Overload measures the degree to which the demands of the job exceed the resources (personal and institutional). Role Insufficiency measures the degree to which a teacher's training, education, skills, and experience are appropriate to his/her work. Role Ambiguity measures the degree to which a teacher feels clear about priorities, expectations, and evaluation standards. Role Boundaries measures the degree to which a teacher experiences conflicting role demands and loyalties at work. Responsibility measures the level of responsibility a teacher feels for his/her own performance and the well-being of his/her colleagues. Physical Environment measures whether a teacher is exposed to extreme physical conditions.

The PSQ includes four subscales of 10 items each. Occupational stressors exhibit themselves as vocational, physical, interpersonal, and psychological strain. Osipow (1998) states that vocational strain measures the extent to which a participant has problems in work quality or output. Attitudes to work are also measured. Psychological strain measures the degree of psychological adjustment and/or mood problems a teacher reports. Interpersonal strain measures the degree to which interpersonal relationships are disrupted. Physical strain measures poor self-care habits and physical illness ailments.

The PRQ, a measure of coping, contains four subscales of 10 items each (Recreation, Self-Care, Social Support, and Rational/Cognitive Coping). Osipow developed this section to measure the coping mechanisms used by a participant (in this case, teacher). Recreation measures the degree to which a teacher involves him/herself in regular recreational activities such as sports and hobbies and the amount of pleasure and relaxation gained from these activities. Self-care measures the degree to which a teacher takes care of his health (diet, exercise and sleep). Social supports measure the degree of support a teacher feels around him from family, friends, and peers. Rational/Cognitive Coping measures the degree of cognitive skills possessed by a teacher and how he/she uses them to deal with work-related stresses. Osipow includes organizing work-loads, setting priorities, and the ability to recognize and then attempt to solve problems.

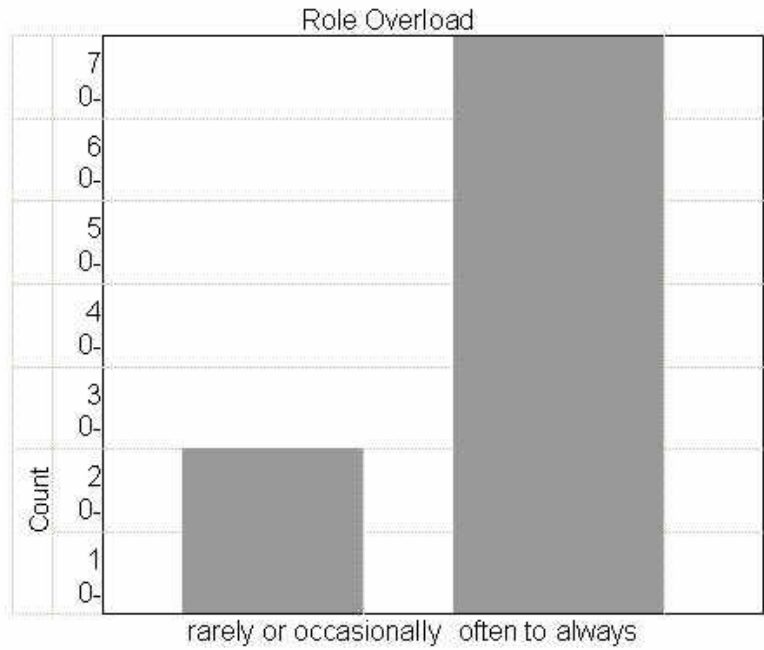
Here are some selected samples of items:

- "I am expected to do more work than is reasonable" (role overload);

- "Lately, I have been feeling anxious" (psychological strain);
- "If I need help at work I know who to approach" (social support).

Results

The purpose of this pilot study was to assess the level of stress among teachers in one school district. The results supported the hypothesis that teachers are feeling a high level of stress due to their occupation and highlight serious concerns. The greatest stressor was found to be Role Overload. As shown in Diagram 1, 74%



of teachers feel stress due to role overload often to most of the time; 26% rarely or occasionally.

Diagram 1

Ninety-five percent of the teachers described their job responsibilities as increasing (Q2) yet 74% felt they did not have the resources they need (RQ5). Table 1 outlines the stress experienced because of this role overload.

Table 1: Percentage of Teachers Responding to the Individual Items Related to Role Overload

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
Q1: At work I am asked to do too many different tasks in too little time.	2	28	30	23	17
Q2: I feel that my job responsibilities are increasing.	0	5	12	28	55
Q3: I am expected to perform tasks on my job for which I have never been trained.	12	29	31	16	12
Q4: I have to take work home with me.	0	5	7	6	82
RQ5: I do not have the resources I need to get my job done.	6	20	29	38	7
RQ6: I am not good at my job.	55	41	4	0	0
Q7: I work under tight deadlines.	1	13	26	35	25
Q8: I wish that I had more help to deal with the demands placed upon my at work.	3	16	27	35	19
Q9: My job requires me to work in several equally important areas at once.	7.1	13.3	22.4	29.6	27.6
Q10: I am expected to do more work than is reasonable.	8	27	26	29	10

Note: Hereafter, questions with R in front indicate that they were recoded.

The vocational strain caused by this stress is measured in attitudes toward work and the extent to which the individual is having problems in work quality or output. As can be seen in Table 2, 31% of the teachers feel they are not able to get much work done, (Q1), 29% dread going to work lately, (Q2), 46% do not find work interesting or exciting, (Q8), and 38% cannot concentrate on the things they need to at work (Q9).

Table 2: Percentage of Teachers Responding to the Individual Items Related to Vocational Strain Construct

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
Q1: I don't seem to be able to get much done at work.	36.4	32.3	25.3	3	3
Q2: Lately, I dread going to work.	45.5	25.3	16.2	7.1	6.1
Q3: I am bored with my work.	52.5	26.3	12.1	5.1	4
Q4: I find myself getting behind in my work lately.	24.2	44.4	12.1	12.1	7.1
Q6: The quality of my work is not good.	39.4	42.4	12.1	4	2
Q7: Recently I have been absent from work.	74.7	14.1	8.1	1	2
Q8: I don't find my work interesting and/or exciting.	18.4	35.7	22.4	15.3	8.2
Q9: I cannot concentrate on the things I need to at work.	19.2	42.4	18.2	12.1	8.1
Q10: I make errors or mistakes in my work.	43.4	50.5	4	1	1

Note: Question 5 was dropped from the scale because it was not applicable.

Some interesting, yet disturbing discoveries came to light in the Role Ambiguity domain (Appendix A). Fifty-eight percent of the teachers said that they are rarely or only occasionally provided with useful feedback about their performance by their administration and 29% do not know the basis on which they are evaluated. Many of the teachers surveyed clearly felt unsure of where they fit in the local educational system, are not clear who is 'captaining the ship', and feel considerable conflict between what they are expected to do and what they think is right or proper (see Appendix A, Role Boundary). They feel the amount of work expected of them is unreasonable while at the same time feeling a high level of responsibility and worry about meeting these job responsibilities (Appendix A, Responsibility). According to Wisniewsk and Gargiulo (1997), when performance expectations are established for teachers but relevant resources are not provided, a degree of uncertainty is experienced by these teachers. "This uncertainty becomes an important source of anxiety and stress that ultimately influences a teacher's commitment to the school and profession."

The physical working environment can add to or help decrease one's stress level. In this case, (Table 3), teachers report they are working in high noise levels, high levels of dust, temperature extremes, and bright lights. Added to this, one-in-ten feel that their job as a teacher is physically dangerous. Is it any wonder, given these

all these facts, that , as discussed earlier, 29% reported dreading going to work lately?

Table 3: Percentage of Teachers Responding to the Individual Items Related to Physical Environment

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q51: In my job I am exposed to high levels of noise.	20	21	18	19	22
Q53: In my job I am exposed to high levels of dust.	27	20	19	8	26
Q54: In my job I am exposed to temperature extremes.	36	17	21	11	15
Q55: In my job I am exposed to bright light.	47	10	17	17	9
Q56: My job is physically dangerous.	72	18	5	3	2
Q57: I have an erratic work schedule.	55	21	11	8	5
Q58: I work all by myself.	49	15	20	9	7
Q59: In my job I am exposed to unpleasant odours.	53	30	5	9	3

The interpersonal strain (Table 4) caused by this occupational stress is apparent as teachers report lately doing things by themselves instead of with others and finding that lately their relationships are not good. Forty-four percent indicated that recently they find they need time to themselves to work out their problems. Of great concern are those 14% (or 1 in 7) who state that they have been withdrawing from people lately.

Table 4: Percentage of Teachers Responding to the Individual Items Related to Interpersonal Strain

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q21: I wish I had more time to spend with close friends.	4.1	20.4	18.4	31.6	25.5
Q22: I often quarrel with the person closest to me.	36.7	44.9	9.2	7.1	2
Q23: I often argue with friends.	72.4	18.4	7.1	1	1
Q25: Lately I do things by myself instead of with other people.	26.5	38.8	14.3	13.3	7.1
Q27: Lately I find my relationships aren't good.	26.5	32.7	33.7	4.1	3.1
Q28: I find that I need time to myself to work out my problems.	18.4	37.8	14.3	19.4	10.2
Q29: Lately I am worried about how others at work view me.	45.9	33.7	13.3	4.1	3.1
Q30: I have been withdrawing from people lately.	50	35.7	9.2	3.1	2

Forty-four percent of the respondents feel tense and 34% report having difficulty falling asleep. Fifty-six percent of respondents feel unwell much or most of the time! (Refer to Appendix A, Physical Strain).

Considering the above statistics, indicating feelings of stress and strain due to a heavy workload in a physically unhealthy environment, without the support or resources they feel they need, it is easy to understand why 79% of these teachers rarely go to a movie, theatre or concert. They have not the time or the mental or physical energy required. Worrisome are the 16% who report using excessive amounts of alcohol and the 39% who rarely get the sleep they feel they need (see Appendix A Self Care).

The results of this pilot study of one school district support Kyriacou's definition of teacher stress as "the experience by a teacher of unpleasant emotions, such as tension, frustration, anger and depression resulting from aspects of his work as a teacher" and demonstrate that teacher stress is a serious problem in this province. This problem must be attended to if we want to improve working conditions for teachers and ensure our students a quality education. The solutions will not be simple but perhaps preventing the stress which leads to teacher burnout is one of our biggest challenges for the future of education in Newfoundland and Labrador.

**Appendix A
Role Overload**

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
Q1: At work I am asked to do too many different tasks in too little time.	2	28	30	23	17
Q2: I feel that my job responsibilities are increasing.	0	5	12	28	55
Q3: I am expected to perform tasks on my job for which I have never been trained.	12	29	31	16	12
Q4: I have to take work home with me.	0	5	7	6	82
RQ5: I do not have the resources I need to get my job done.	6	20	29	38	7
RQ6: I am not good at my job.	55	41	4	0	0
Q7: I work under tight deadlines.	1	13	26	35	25
Q8: I wish that I had more help to deal with the demands placed upon my at work.	3	16	27	35	19
Q9: My job requires me to work in several equally important areas at once.	7.1	13.3	22.4	29.6	27.6
Q10: I am expected to do more work than is reasonable.	8	27	26	29	10

Role Insufficiency

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q11: My career is progressing about as I hoped it would.	7	24	25	22	22
Q12: My job fits my skills and interests.	1	10	18	40	31
Q13: I am bored with my job.	7	1	12	28	52
Q14: I feel I have enough responsibility in my job.	0	3	19	20	58
Q15: My talents are being used in my job.	1	11	21	41	26
Q16: My job has a good future.	11	26	27	20	16
Q17: I am able to satisfy my needs for success and recognition in my job.	12	23	29	28	7
Q18: I don't feel over qualified.	2	9	18	31	40
Q19: I learn new skills in my work.	13	28	32	15	12
Q20: I don't have to perform tasks below my ability.	6	7	19	41	27

Role Ambiguity

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q21: My supervisor provides me with useful feedback about my performance.	26	32	22	10	10
Q22: It is clear to me what I have to do to get ahead.	11	21	26	26	16
Q23: I am certain about what I am supposed to accomplish.	2	5	11	33	49
Q24: When faced with several tasks I know which should be done first.	2	3	14	45	36
Q25: I know where to begin a new product when it is assigned to me.	1	8	7	53	31
Q26: My supervisor asks for one thing but really wants another.	3	4	10	20	63
Q27: I understand what is acceptable personal behaviour in my job (e.g., dress, interpersonal relations, etc.)	3	1	5	17	74
Q28: The priorities of my job are clear to me.	1	3	19	35	42
Q29: I have a clear understanding of how my boss wants me to spend my time.	4	6	28	29	33
Q30: I know the basis on which I am evaluated.	11	18	21	24	26

Role Boundary

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q31: I feel conflict between what my employer expects me to do and what I think is right or proper..	40	31	16	8	5
Q32: I feel caught between factions at work.	39	39	14	7	1
Q33: I have more than one person telling me what to do.	51	34	8	6	1
RQ34: I don't know where I fit in my organization.	27	40	27	4	2
RQ35: I don't feel good about the work I do.	32	35	20	10	3
Q36: My supervisors have conflicting ideas about what I should be doing.	57	25	12	5	1
RQ38: It is not clear who really runs things where I work.	30	30	11	17	12
Q39: I have divided loyalties on my job..	46	29	14	8	3

Note: Questions 37 and 40 were dropped from the scale because they were not applicable.

Responsibility

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q41: I deal with more people during the day than I prefer.	32	27	15	8	18
Q42: I spend time concerned with the problems others at work bring to me.	26	37	19	13	5
Q43: I am responsible for the welfare of subordinates.	45	20	16	6	13
Q44: People on-the-job look to me for leadership.	13	28	27	17	15
Q45: I have on-the-job responsibility for the activities of others.	39	14	11	16	20
Q46: I worry about whether the people who work for/with me will get things done properly.	35	30	18	12	5
Q47: My job requires me to make important decisions.	7	9	28	25	31
Q48: If I make a mistake in my work, the consequences for others can be pretty bad.	23	29	18	18	12
Q49: I worry about meeting my job responsibilities.	21	29	23	18	9

Physical Environment

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q51: On my job I am exposed to high levels of noise.	20	21	18	19	22
Q53: On my job I am exposed to high levels of dust	27	20	19	8	26
Q54: On my job I am exposed to temperature extremes.	36	17	21	11	15
Q55: On my job I am exposed to bright light.	47	10	17	17	9
Q56: My job is physically dangerous.	72	18	5	3	2
Q57: I have an erratic work schedule.	55	21	11	8	5
Q58: I work all by myself.	49	15	20	9	7
Q59: On my job I am exposed to unpleasant odours	53	30	5	9	3

Note: Questions 37 and 40 were dropped from the scale because they were not applicable.

Vocational Strain

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q1: I don't seem to be able to get much done at work.	36.4	32.3	25.3	3	3
Q2: Lately, I dread going to work.	45.5	25.3	16.2	7.1	6.1
Q3: I am bored with my work.	52.5	26.3	12.1	5.1	4
Q4: I find myself getting behind in my work lately.	24.2	44.4	12.1	12.1	7.1
Q6: The quality of my work is not good.	39.4	42.4	12.1	4	2
Q7: Recently I have been absent from work.	74.7	14.1	8.1	1	2
Q8: I don't find my work interesting and/or exciting.	18.4	35.7	22.4	15.3	8.2
Q9: I cannot concentrate on the things I need to at work.	19.2	42.4	18.2	12.1	8.1
Q10: I make errors or mistakes in my work.	43.4	50.5	4	1	1

Note: Question 5 was dropped from the scale because it was not applicable.

Psychological Strain

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q11: Lately I am easily irritated	20.2	40.4	20.2	9.1	10.1
Q12: Lately I have been depressed.	47.5	27.3	17.2	4	4
Q13: Lately I have been feeling anxious.	35.4	33.3	17.2	10.1	4
Q14: I have been unhappy lately.	13.1	28.3	25.3	28.3	5.1
Q15: So many thoughts run through my head at night that I have trouble falling asleep.	36.4	28.3	14.1	14.1	7.1
Q16: Lately I respond badly in situations that normally wouldn't bother me.	46.5	30.3	12.1	9.1	2
Q17: I find myself complaining about little things.	30.3	37.4	17.2	12.1	3
Q18: Lately I have been worrying.	35.4	25.3	22.2	13.1	4
Q19: I don't have a good sense of humour.	32.3	35.4	23.2	7.1	2
Q20: Things aren't going as they should.	14.1	22.2	41.4	18.2	4

Interpersonal Strain

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q21: I wish I had more time to spend with close friends.	4.1	20.4	18.4	31.6	25.5
Q22: I often quarrel with the person closest to me.	36.7	44.9	9.2	7.1	2
Q23: I often argue with friends.	72.4	18.4	7.1	1	1
Q25: Lately I do things by myself instead of with other people.	26.5	38.8	14.3	13.3	7.1
Q27: Lately I find my relationships aren't good.	26.5	32.7	33.7	4.1	3.1
Q28: I find that I need time to myself to work out my problems.	18.4	37.8	14.3	19.4	10.2
Q29: Lately I am worried about how others at work view me.	45.9	33.7	13.3	4.1	3.1
Q30: I have been withdrawing from people lately.	50	35.7	9.2	3.1	2

Physical Strain

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q31: I have unplanned weight gains.	52	23.5	10.2	8.2	6.1
Q32: My eating habits are erratic.	49	21.4	16.3	5.1	8.2
Q33: I find myself drinking a lot lately.	81.6	9.2	8.2	1	0
Q34: Lately I have been tired.	11.2	23.5	25.5	14.3	25.5
Q35: I have been feeling tense.	23.5	32.7	21.4	13.3	9.2
Q36: I have trouble falling asleep.	40.8	25.5	19.4	4.1	10.2
Q37: I have aches and pains I cannot explain.	50	21.4	9.2	8.2	11.2
Q38: I eat the wrong foods.	32	33	20.6	7.2	7.2
Q39: I don't feel well.	23.9	20.6	32	16.5	7.2
Q40: I have lots of energy.	6.2	19.6	24.7	26.8	22.7

Recreation

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q1: When I need a vacation I take one.	55.6	27.3	7.1	8.1	2
Q2: I am able to do what I want to do in my free time.	27.3	34.3	15	15.2	8.1
Q3: On the weekends I spend time doing the things I enjoy most.	9.1	45.5	23	18.2	4
Q4: I watch TV often.	15.2	10.1	22	32.3	20.2
Q5: A lot of my free time is spent attending performances (e.g., sporting events, theatre, movies, concerts, etc.).	39.4	39.4	11	2	8.1
Q6: I spend a lot of my free time in participant activities (e.g., sports, music, painting, woodworking, sewing, etc.).	32.3	33.3	11	16.2	7.1
Q7: I set aside time to do the things I really enjoy.	17.2	45.5	17	14.1	6.1
Q8: When I'm relaxing I don't think about work.	10.1	15.2	31	25.3	18.2
Q9: I spend enough time in recreational activities to satisfy my needs.	35.4	25.3	22	13.1	4
Q10: I spend a lot of my free time on hobbies (e.g., collections of various kinds, etc.).	42.4	37.4	17	3	0

Self-Care

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q11: I am careful about my diet (e.g., eating regularly, moderately, and with good nutrition in mind).	12.1	22.2	25	21.2	19.2
Q12: I get regular physical check-ups.	29.3	16.2	14	17.2	23.2
Q13: I avoid excessive use of alcohol.	7.1	9.1	8.1	17.2	58.6
Q14: I exercise regularly (at least 20 minutes three times a week).	25.3	20.2	18	8.1	28.3
Q15: I practice "relaxation techniques".	67.7	20.2	8.1	2	2
Q16: I get the sleep I need.	17.2	22.2	18	26.3	16.2
Q17: I avoid eating or drinking things I know are unhealthy (e.g., coffee, tea, cigarettes, etc.).	25.3	25.3	18	21.2	10.1
Q18: I engage in meditation.	81.8	10.1	4	3	1
Q19: I practice deep breathing exercises a few minutes several times each day.	82.8	10.1	5.1	2	0
Q20: I floss my teeth regularly.	27.3	18.2	19	16.2	19.2

Social Support

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q21: There is at least one person important to me who values me.	0	5.1	5.1	8.1	81.8
Q22: I have help with tasks around the house.	8.1	14.1	15.2	20.2	42.4
Q23: I have help with the important things that have to be done.	6.1	17.2	20.2	23.2	33.3
Q24: There is at least one sympathetic person with whom I can discuss my concerns.	3	8.1	8.1	22.2	58.6
Q25: There is at least one sympathetic person with whom I can discuss my work problems.	3	8.1	12.1	18.2	58.6
Q26: I feel I have at least one good friend I can count on.	2	5.1	10.1	14.1	68.7
Q27: I feel loved.	3	6.1	6.1	16.2	68.7
Q28: There is a person with whom I feel really close.	2	5.1	9.1	18.2	65.7
Q29: I have a circle of friends who value me.	4.1	13.3	13.3	27.6	41.8
Q30: If I need help at work, I know who to approach.	4	8.1	16.2	27.3	44.4

Rational/Cognitive

	Rarely or Never	Occasionally	Often	Usually	Most of the Time
	%	%	%	%	%
Q31: I am able to put my job out of my mind when I go home.	25.3	18.2	24	20.2	12.1
Q32: I feel that there are other jobs I could do besides my current one.	12.1	21.2	19	19.2	28.3
Q33: I periodically reexamine or reorganize my work style and schedule.	12.1	33.3	31	18.2	5.1
Q34: I can establish priorities for the use of my priorities.	3	13.1	31	18.2	17.2
Q35: Once they are set, I am able to stick to my priorities.	2	18.2	27	31.3	21.2
Q36: I have techniques to help avoid being distracted.	14.1	24.2	27	28.3	6.1
Q37: I can identify important elements of problems I encounter.	0	8.1	28	43.4	20.2
Q38: When faced with a problem I use a systematic approach.	1	15.2	42	26.3	15.2
Q39: When faced with the need to make a decision I try to think through the consequences of choices I might make.	0	8.1	15	43.4	33.3
Q40: I try to keep aware of important ways I behave and things I do.	1	1	27	33.3	37.4

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**YES, VIRGINIA, THERE IS A TEACHER SHORTAGE
AND IT MAY GET A WHOLE LOT WORSE!**

A Personal Reflection on a Current Issue

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Statistics can be used to reveal or conceal the reality of any given situation. While it may be true that statistics do not lie, the selective use of statistical data can mask the truth and lull an unsuspecting audience into thinking all is well, when in fact serious issues are in need of urgent attention.

Education is a prime example where statistics can be used in this manner. Take, for example, the matter of pupil-teacher ratio (PTR). According to Department of Education the official PTR for the province is 13.9 (Education Statistics, 2000-2001). This number is derived by simply dividing the total number of full time students (87,438) by the total number of full time equivalent teachers (6,283). One might be led to believe that this PTR of 13.9 was an indicator in some way of the actual learning and teaching conditions in the province's schools and classrooms. The fact is that there are very few classrooms with just 14 students. My own children, for example, have never been in a class of less than thirty; many of their classes over the years have had more than thirty-five. The statistic is accurate but it does not lead to an understanding of the actual learning environments in our schools.

Statistics can also be used to show that there isn't a shortage of teachers. All one has to do is to add up the total number of certified or credentialed teachers and compare that with the total number of available teaching positions and one can "prove" a teacher shortage doesn't exist. However, the reality is somewhat different, especially if you live in a rural community. There is, for example, a very real shortage of math, science, French (core and especially immersion) and special education teachers province wide. With the exception of District Ten (Avalon East), a predominately urban board, all other school boards (predominately rural) are finding it increasingly difficult to find qualified teachers to fill positions in these discipline areas.

Dr. Dave Dibbon, of the Faculty of Education, MUN, has produced a comprehensive report on the situation in Newfoundland and Labrador entitled, *Teacher Demand, Supply, and Retention*⁽¹⁾ (2001). A very interesting section of that report offers some recent comments of district personnel on the problems they are having filling teaching positions in their local schools:

District 1: "[T]here are more high school vacancies than there are applicants coming forward."

District 2: "There have been no applications for two French positions, and the interviewee felt that the district would have trouble filling even 50% of the four vacant guidance positions. This person noted that the situation has gotten worse."

District 5: "The shortage of teachers is becoming more pronounced. There are no new applicants for the positions of special education, and it is "a waste of

time" to advertise for educational psychologists and speech pathology units."

District 6: "Concerns about getting qualified teachers in the specialty areas of guidance, mathematics, science, and French."

District 7: "[S]pecial education was a problem area. They were also experiencing a shortage of applications for high school mathematics, science and technology teachers - "Basically there are no applications", claimed one of the representatives."

District 8: "[T]he administrators acknowledged that the demand for teachers in the areas of high school mathematics and science has increased over the past year and they are worried about being able to attract prospective teachers to the area.

District 9: "[T]here is a concern that the number of qualified applicants for the specialty positions of special education, chemistry, physics, French and French Immersion is declining rapidly."

These comments were made at recent "Job Fair" by school district officials held in May of 2000 at Memorial University.

Perhaps the clearest indicator that there is a serious problem that, in the short term at least, is going to intensify, is the fact that even the Avalon East District is starting to notice significant differences in the available applicants for particular situations. If the metropolitan area of St. John's is starting to have difficulty finding qualified teachers, what hope for the more rural and remote areas of the province?

Other signs that a teacher shortage exists include the increasing difficulty schools have in finding substitute teachers, the increased reliance on under qualified "emergency supply" individuals to fill teaching positions, and the increased use of teachers teaching outside their areas of specialization. Most recently, the government has rescinded the regulations that prohibited retired teachers from "double dipping:" collecting their pension and being hired for a vacant teaching position. If a school board can demonstrate they cannot find a qualified teacher, they can hire a retired teacher and that teacher can continue to receive their full pension as well as their salary.

Attracting and, especially, retaining qualified teachers has always been a challenge for rural schools. The more remote and isolated the community the greater these challenges have been. In the past, new teachers would often begin their careers in small rural schools. For many, this experience was used, intentionally, as a stepping stone to attaining a teaching position in a larger school and/or more urban community.

Although most came with the intention of leaving, sometimes they discovered something or someone that enticed them to stay. While this was not ideal, it did provide rural communities, even fairly remote ones, with a steady supply of qualified teachers.

This all changed as the current teacher shortage began to develop. As expected, the first signs of the problem manifested itself in those rural districts responsible for the more remote and isolated schools. New teachers, especially those in particular disciplines discovered that they had more options in terms of where to begin their careers.

In addition, as the teacher shortage intensified, a domino effect started to occur which saw a migration of many experienced teachers making the move from remote communities to more centralized ones and from rural areas in to more urban ones. As one would expect, it wasn't too long before the supply of substitute teachers also started to diminish and, in rural places, all but disappear. Today, it is difficult, on occasion, finding a substitute even in St. John's. (I was told recently that a principal might have to make up to fifty calls on occasion to find a substitute teacher.) Although rural educators have been ringing the alarm bells on this issue for some time, only when the urban areas began to experience a problem, has the issue of a teacher shortage become a provincial issue. Even now some appear to be in denial.

Why has a teacher shortage developed? That is a complex question to try and answer. One part of the answer lies in the fact that there are fewer young people choosing to enter the profession. An indicator of this is the decrease in the number of qualified applicants to teacher education institutions. (A fact that has its own implications for quality of the teacher force in the future.)

A second reason lies in the fact that most, if not all veteran teachers are choosing to retire as soon as they qualify for their pension benefits. Some even take an early retirement.

A third reason is the alarming high attrition rate for new teachers entering the profession. We lose too many new teachers after only a few years of service. What is disturbing about this is that these young people have chosen education as their preferred profession; they should be the foundation for the future of the system. Yet, as one American researcher notes, 30% of new teachers leave the profession within five years of entering it.

There are several contributing factors to this overall situation. One is the comparatively low salaries offered to teachers in general. Salaries have not kept pace with other occupations. Hence, university graduates, in mathematics and science, in particular, can often make significantly more money in other fields. This is compounded in this province by the fact that our salary scales are among the lowest in the country. This results in our losing many of recent graduates to other places. Other provinces and other countries have been actively recruiting Faculty of Education graduates for some time. They are impressed with the quality of our new minted teachers; and our graduates are attracted to the high salary scales as well as other inducements.

A second factor is working conditions. Teachers are finding their working conditions increasingly intolerable and a source of tremendous stress. An indication of this can be seen in the results of a number of recent research studies that report a majority of teachers would chose an improvement in working conditions over an increase in salary as a way to make their jobs more satisfying. This fact alone speaks volumes about the conditions of our children's current learning environments.

A final factor is the low esteem teachers are generally accorded in our society and by their employers. Teachers do not feel that their work is valued, their many contributions to the school and community acknowledged, or their knowledge and experience recognized. Their professional expertise and understanding are rarely consulted and their informed views carry little weight with educational leaders and decision makers.

Many are extremely frustrated by being denied the opportunity to take part in public discourse on important education matters. Ironically, those who have the most knowledge of what works and what doesn't in the schools and classroom are denied a public education voice. This silencing of the teachers is not in the interest of quality public education and ultimately the common good of all.

Is it any wonder, that, as Dave Dibbon reports, 50% of veteran teachers in this province would not recommend teaching as a profession to young people.

Reversing the Tide

If we are going to reverse the trend of an increasing teacher shortage and ensure all students, regardless of where they live, have access to fully qualified, dedicated professional teachers a number of changes have to happen.

First and foremost, we have to start valuing the teachers we currently have in the system. These are experienced and qualified professionals. We need to value them as people and respect their knowledge and expertise. Acknowledge their many contributions to the education and development of our children.

We have to listen to what they have to say about their working environment; remember their working environment is our children's learning environment. Take seriously their concerns about teaching and learning matters; they know from direct experience what is working and what is not.

We have to pay teachers a competitive wage. A society can make no greater investment in its future than in education and the key to effective system is qualified teachers. If we want our children taught by the best and brightest, as they should be, we have to be willing to offer attractive financial incentives to prospective candidates.

We have to provide new teachers with much more support as they begin their careers. Incredibly, many schools still follow the traditional practice of assigning new teachers the most challenging teaching assignments. They are then left, in many instances, to sink or swim on their own with little guidance or advice as to how to proceed.

Yes, there are some "natural born" teachers. However, most new teachers would greatly benefit from the mentoring and guidance of a caring and dedicated veteran teacher. Given the complexities of today's classroom and ever increasing demands placed on schools, this initiative needs more than the traditional lip-service often given to such ideas.

The teachers currently in the system, both veterans and rookies, are our front line recruiters for the next generation of teachers. Unless they start recommending teaching as a viable profession, the current shortage will only worsen.

In this province teaching has often been a family vocation, with young people following their parents, older siblings and other relatives into the classroom. Many of us know of families with three and four generations of teachers. We also know of families where four or five siblings have all entered the profession. That is not happening to the same degree any more.

To deal with specific shortages in some subject areas and the increasing difficulty of getting teachers to go to the more remote schools, some direct and immediate actions are required. At a time when so many students are graduating with very high levels of debt, financial incentives could be used to induce math and science candidates, as well as other needed discipline areas, to enter the teaching profession and to take positions in rural schools. In return for a commitment of time to be spent in a rural school, some proportion of a student loan could be forgiven.

Apparently, we have a surplus (at the moment) of English and Social Studies teachers and to some degree primary and elementary teachers. Some of these teachers may be interested in returning to school and obtaining additional qualifications in those areas where there is a shortage. Providing them with some form of financial support in return for a commitment to teach in an area where there is a need might be another way of responding to the current situation.

An interesting long term solution for rural schools and communities is the notion of "growing your own" teachers. The suggestion here is to try and identify potential rural teachers from among students attending rural high schools. These would be young people who have the academic potential but who also have an attachment to rural values and life styles. Such individuals could be offered various forms of financial assistance to attend university with the commitment to return to a rural community to teach.

As noted earlier, because the situation was not anticipated, districts have been forced to hire under-qualified "emergency supply" teachers and retired teachers as temporary or stop gap solutions to the shortage of teachers. This is hardly an ideal situation and it is unfair to the students now in school. These temporary responses may give the education system time to deal with the problem. However, for the students in school now, these temporary solutions are the permanent condition of their schooling. They don't get another chance. So while the system will survive and recover, the education of individual students may be compromised.

The recent Ministerial Panel on Education commented: "Teachers...exert a more significant influence on educational quality than does any other aspect of schooling" (Supporting Learning, 2001, p. 50). Perhaps the important lesson to be learned from the present predicament is not to take our teachers for granted. To do so is to put educational quality at risk.

1. This report can accessed at Dave's web page:
<http://www.ucs.mun.ca/~ddibbon/>

THE BACKGROUND TO THE ROYAL COMMISSION ON EDUCATION

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Royal Commissions are popularly supposed to be a device of government for delaying or avoiding crucial decisions of policy. Even if there is some truth in this, their importance should not be minimised. Whether or not Commissions inspire action, they provide a valuable repository of facts on particular issues and a revealing guide to the ideological currents of the time.

Our Children Our Future, chaired by Dr. Leonard Williams and published in March 1992, is the second Royal Commission on Education in Newfoundland. The first, chaired by Dr. Philip Warren, reported in 1967-68, some twenty years after Newfoundland voted to enter Confederation and exchange the relative poverty of a centuries-old fishing community for the greater prosperity and security of the Canadian consumer and welfare society. Inspired by dissatisfaction with anomalies and deficiencies within the denominational education system (Anglican, Roman Catholic, United Church and Salvation Army) inherited from pre-Confederation days, the Report centred on the enrichment of education and the streamlining and rationalisation of the structure.⁽¹⁾ The Commission was followed by the amalgamation of the Protestant churches into a single educational denomination, the secularisation of the Department of Education, and the recognition as a denomination of the Pentecostal Assemblies.⁽²⁾

Twenty-five years have elapsed since the Warren Report was published; this is probably the minimum time in which economic, social and cultural changes in a community manifest themselves sufficiently clearly for at least some tentative observations to be made about society. Among the most important changes in Newfoundland have been the decline of the birthrate and the increase in urbanisation. The former slowed down after the post-war and post-Confederation baby boom -- from the 2% of 1960-61 to the virtually zero increase of the late 1980s⁽³⁾ -- and the total fertility rate dropped from 4.6 in 1966 to 1.5 in 1988, one of the lowest in the world; this was largely due to the doubling of female participation in the labour force, progressive industrialisation and increasing urbanisation.⁽⁴⁾

Since Confederation a significant fraction of the population has, in fact, moved into the larger towns and cities. Between 1951 and 1976, the proportion of the population living in urban communities increased from 26.9% to 39.9%.⁽⁵⁾ In the last decade the urban population increased by 4.5% and today 51.5% of the population lives in urban areas. St. John's, the capital, increased in size by 11% between 1981 and 1991, and four other large centres by 5%-20%. Conversely, 13 communities with 2,000 or fewer inhabitants declined in population between 1981 and 1986.⁽⁶⁾

Urban expansion fed the growth of suburbs. In two of the larger suburban areas of St. John's -- the Goulds and Mount Pearl -- the population increase has been 14.7% (between 1981 and 1986) and 435% (between 1966 and 1991) respectively.⁽⁷⁾ These and other suburbs are largely occupied by white-collar workers of various kinds. The number of clerical, sales and service workers in Newfoundland increased by 100% between 1971 and 1989,⁽⁸⁾ and they now form 69% of the employed labour

force.⁽⁹⁾ Social indicators suggest the adoption of middle-class life-styles geared to a consumer society by this relatively affluent and educated sector of the population. Between 1966 and 1989, retail sales of luxury or semi-luxury items - furniture, appliances and hardware, jewellery, pharmaceuticals and cosmetics rose by 900%-2,000%, far ahead of the sales of necessities.⁽¹⁰⁾ Sale of imported wines escalated by over 1,000% between 1972 and 1992.⁽¹¹⁾ The number of motor vehicles sold in 1989 was more than twice that of 1965.⁽¹²⁾

It is no exaggeration to say that the outlook and way of life of the pre-Confederation era - localised, frugal, god-fearing, socially conservative - has all but disappeared in the urban centres, and has also undergone some changes in the rural outposts.⁽¹³⁾ Further indicators of the advance of modernity are the number of divorces: 6,195 in 1986, compared with a mere 47 in 1945, and the growth of single-parent families to nearly 16,000, 11% of all families.⁽¹⁴⁾ The burgeoning of activity in art, music, literature and drama in the last two decades, and the formation of social action groups - the women's movement, organisations for peace and social justice, the environmental movement, white-collar unionism, and ad hoc protest factions of various kinds, most virtually unknown before the '70s, is testimony to the transformation of Newfoundland society.

It is always difficult to connect changes in social structure with the movement of popular opinion or to determine the part that the social consciousness of participants plays in determining the actual course of events. There is certainly a process of interaction, and despite possible countervailing pressures of an individualist orientation - the media, political propaganda, religious beliefs, etc., the structural component generally has the greater weight in influencing the opinions and consciousness of groups and classes.⁽¹⁵⁾

This has been recognised in the correlation between life in a city and the decline in religious belief.⁽¹⁶⁾ In Newfoundland this has largely taken the form of a more critical attitude to the denominational educational system, influenced to some extent by recent disclosures of child abuse by some of the Catholic clergy.⁽¹⁷⁾ In 1976, 50% of respondents in a public opinion poll were in favour of a single public educational system. Similar surveys in 1979 and 1986 recorded 56% in favour of a non-denominational system of public education; five years later a poll in February 1991 found this figure had increased to 67%.⁽¹⁸⁾

The writing was obviously on the wall before the Royal Commission's own survey, carried out in September 1991, revealed that 79% of the populace was in favour of a single school system for all children.⁽¹⁹⁾ The Commission's survey showed that large majorities - from 74% to 87% were in favour of dismantling many aspects of the system, from denominational busing to discrimination against teachers, from supporting the election of school boards to the teaching of all religions in schools. An analysis of the answers given by supporters of the system led the Commission to conclude that for many the attachment was "in name only."⁽²⁰⁾

The various surveys also demonstrated that support for the educational status quo was strongest among older people in rural areas, and that those most critical were younger people with post-secondary education in and around the capital, St. John's⁽²¹⁾ -- in other words the suburbanites previously analysed. Many of them are graduates of Memorial University -- which granted over 38,000 degrees between

1950 and 1988⁽²²⁾ -- and have taken the opportunity to widen their outlook by travel. The number of passports issued to Newfoundlanders increased from 2,049 in 1968 to 9,897 in 1990.⁽²³⁾

To the increasingly sceptical attitudes towards the denominational system was added, from the mid-1980s onwards, a volume of criticism of other aspects of education.⁽²⁴⁾ Despite the post-Confederation transformation of the system - from one consisting largely of one-room schools staffed by under-qualified teachers to the present-day North American style system which, as we have seen, has helped to bring about substantial social improvements - the quality of schooling in Newfoundland still falls below the Canadian level in several areas. The province has the lowest median years of schooling and highest level of illiteracy; post-secondary enrolment, as a percentage of the 18-24 age-group, is far below the Canadian average, as is the percentage of the population with a university degree, and Newfoundland fares badly in the Canadian Test of Basic Skills.⁽²⁵⁾

There is thus much scope for legitimate criticism of the province's educational performance, and by and large the "service class" of the newly-educated generation has provided a fertile soil for the growth of attitudes conducive to the production of a searching series of studies in the six or seven years preceding the Royal Commission on Education.

The first and perhaps the most influential of these critiques was *Education for Self-Reliance*, a supplementary volume to *Building On Our Strengths*, a Royal Commission on Employment and Unemployment which reported in 1986, *Education for Self-Reliance* posited "a growing mismatch between the kind of secondary and post-secondary education system that has evolved and the kind of society Newfoundland is becoming."⁽²⁶⁾ Post-Confederation schooling, the Report continued, was modelled on the North American system and geared to the growth of an urban-industrial society, with a largely academic secondary system leading to Memorial University and membership of a new middle-class of professionals, politicians and public servants, with the College of Trades and Technology and district vocational schools catering for manual workers.⁽²⁷⁾

The system, the Report argued, in short, was geared neither to the needs and lifestyles of the people of the outports, nor to the demands of the "post-industrial society" allegedly now in being. The whole Report, in fact, was suffused with the concept of education as an economic investment, derived from the human capital theory originating in the early 1980s in the USA. The theory rests on the supposition that the higher the level of a country's education, the greater the degree of economic growth.⁽²⁸⁾

Two government-mandated documents followed *Education for Self-Reliance*. The first, *Focussing Our Future*, was concerned with the Faculty of Education at Memorial. Responding to the alleged concern of "various groups" that the education program at the university no longer met the "needs of the province," the Report asserted that the administrative structure of the Faculty prevented it from functioning with the necessary efficiency to respond to changing social conditions.⁽²⁹⁾ The second, *Towards an Achieving Society*, a task force on Mathematics and Science Education, suggested remedies for the poor performance of Memorial students in Mathematics and the low participation rates in science programs, and argued that "a

high level of competence in science and technology is a key element in economic growth, and crucial to the ability of the province, and indeed the nation, to compete economically".⁽³⁰⁾ Finally, a report issued by the Economic Council of Newfoundland and Labrador in March 1990, entitled *Education and Labour Market Training*, stressed the contribution of education to economic development and deplored the general and persistently low level of Newfoundland education compared with that of Canada.⁽³¹⁾ All these documents emphasised the connection of education with economic growth, *Focusing Our Future* obliquely,⁽³²⁾ the others directly.⁽³³⁾ Both Conservative and Liberal governments of Newfoundland, influenced by publications of national business-academic organisations on the need for hi-tech education as the saviour of the economy,⁽³⁴⁾ were thus supporting an ideology that was to influence the work of the Royal Commission on Education.

The occasion of the Commission was the election of the Liberal government in 1989. Aware of the depression of the economy - a virtually extinct fishery, declining transfer payments from Ottawa, earned income only 60% of the Canadian level and Gross Domestic Product 63% that of Canada⁽³⁵⁾ - and of a critical public and institutional opinion which demanded change and improvement in both the economy and the educational system, the government felt the need for planning documents which would chart the path for the last decade of the century. The Education Commission was the first, mandated in August 1990 and reporting in March 1992, with the ostensible purpose of seeking ways of making better use of resources in a period of "fiscal restraint" and declining school enrolment,⁽³⁶⁾ which, consequent on the declining birthrate, had fallen from a high of 163,000 in 1971-72 to 125,000 in 1991-92.⁽³⁷⁾ The second document was *Change and Challenge*, a "strategic economic plan" of the Provincial government, which envisaged future prosperity in the creation of a skilled, innovative and adaptive workforce educated in scientific, mathematical, electronic and computer skills.

The concentration of attention on this type of curriculum, and on the fostering of competitive "enterprise" attitudes, to the neglect of the humanist-academic side, may have been influenced by the rapid growth of the electronic, telecommunication, information and business-service sector of the economy - by the beginning of the '90s consisting of over 400 companies employing some 20% of the service labour force.⁽³⁸⁾ The government was also undoubtedly influenced by the most powerful of the many lobby groups - the business community, spearheaded by the St. John's Board of Trade, entirely in favour of "entrepreneurial" type of education set out in *Change and Challenge*, and desirous of radically changing the way education is delivered by the denominational system.⁽³⁹⁾

There are, however, other strands of opinion on the present status and future direction of education in the province. The Newfoundland Teachers' Association, in a document entitled *Exploring New Pathways*, issued in 1986, urged the Faculty of Education to provide a sufficient number and range of specialised teachers in music, the languages, the arts, and computer technology.⁽⁴⁰⁾ In a submission to the Royal Commission, the NTA argued that an acceptable educational system should provide literacy and numeracy skills, opportunities for creative thinking and problem solving and the enhancement of communication and life-enhancement skills -- in short, a world-class program with local relevance, but a wide perspective, particularly in the fields of the arts, music and sport.⁽⁴¹⁾

The Newfoundland and Labrador Home and School Federation, which by and large speaks for parents, also has a position on education which is fundamentally different from that of the supporters of hi-tech, "enterprise" education. The Federation advocates improved teacher education, especially in specialist areas; core courses in English, mathematics, the sciences, history and social studies; improved library and other resources; an extended school year and measures to improve student interest and class attendance; the community use of schools, and the rationalisation and adaptation of the denominational system. Above all, the Federation would like to see the role of parents within the system -- at present minimal -- greatly expanded. Parents should elect school boards, have a voice in decision-making, audit school performance and evaluate curricula, and have a voice in rewarding improved performance by schools and teachers by the use of discretionary funds.⁽⁴²⁾

With regard to public opinion in general, a task force on educational finance, which reported in 1989, carried out a public opinion survey on the function of the school. Between 87% and 95% of respondents felt that teaching mathematics and reading was the most important function of schools; that schools should teach attitudes of cooperation, tolerance and good citizenship while preparing pupils for university; colleges and the labour market, and for life in a technological world. Only 58% considered that the school should teach basic moral and religious principles.⁽⁴³⁾

There thus existed two bodies of opinion: on the one hand the business community, government and a sector of the academic world -- who wished to forge an education system based on the new technologies of electronics, telecommunications, information services and computers, with an emphasis on a mathematical-scientific curriculum and the inculcation of competitive, entrepreneurial attitudes. On the other hand teachers, parents and the public at large saw the function of schools as the providers of a broadened and improved academic-humanist curriculum with emphasis on cooperation, citizenship and multicultural values, with increased parental participation in the educational process.

Both groupings are critical in various ways and to a varying extent of the denominational system. The business community see it as an irrelevant barrier to hi-tech education and greater productivity; the teachers' want a unified system with the churches confined to education in religion and morality; the great majority of the public take a similar view.

Both these ideological positions find expression in the Report of the Royal Commission, which stresses both the need for skills for young people in order to function in the global market place, and also recognises the need of a broader vision of a rich and varied curriculum, and increased parental involvement in the process of schooling.⁽⁴⁴⁾ The weight which it gives to each has been shown; the wisdom of its choice is a matter of debate.

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3. Historical Statistics of Newfoundland and Labrador (hereafter HSNL), Vol. II (vi), 1990, Table A-1, p. 5.
4. Department of Education, Newfoundland and Labrador, Toward 2000. Trends Report 2: Elementary-Secondary Projections (St. John's 1990), pp. 8-12. The fertility rate is the average number of children born per woman.
5. Royal Commission on Employment and Unemployment Education Report: Education for Self-Reliance (St. John's 1986), p. 4. Urban is defined as communities greater than 5,000 people.
6. Calculated from data supplied by Statistics Canada and the Newfoundland Statistics Agency.
7. Calculated from data supplied by Statistics Canada and Mount Pearl City Council.
8. HSNL, Vol. II(vi), Table C-4, p. 41.
9. Government of Newfoundland and Labrador, Change and Challenge: A Strategic Economic Plan for Newfoundland and Labrador (St. John's 1992), Chart 5, p. 42.
10. HSNL, Vol. II(vi), Table E-4, p. 66.
11. Calculated from data supplied by Newfoundland Liquor Corporation.
12. HSNL, Vol. II(vi), Table T-2, p. 215.
13. Marilyn Porter, "A Tangly Bunch: The Political Culture of Outport Women in Newfoundland", unpublished typescript, Memorial University, 1982.
14. HSNL, Vol. II(vi), Table A-4, p. 8; Table A-10, p. 18.
15. Cf. Margaret A. Coulson and D.S. Riddell, *Approaching Sociology: A Critical Introduction* (London 1970), esp. Ch. 5.
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17. M. Harris, *Unholy Orders: Tragedy at Mount Cashel* (New York 1990).
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19. *Our Children Our Future*. Royal Commission of Inquiry into the Delivery of Programs and Services in Primary, Elementary, Secondary Education (St. John's 1992), Table 5.8, p. 90.
20. *Ibid.*, p. 93; p. 95.

21. Graesser, "Public Opinion and Denominational Education," loc. cit., pp. 202-204.
22. HSNL, Vol. II(vi), Table E-4, p. 66.
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24. Cf. eg. Evening Telegram, 19 November 1987, reporting a public meeting on education.
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NEWFOUNDLAND HUMOR AS A SURVIVAL STRATEGY

Gordon Ralph

The purpose of this paper is to investigate the basis of Newfoundland humor from an historical and cultural perspective to assess whether a claim to uniqueness is justifiable, and, as well, to evaluate the impact of recent socio-political movements on the future of Newfoundland humor. All provinces and all peoples claim to possess some regional, cultural or ethnic diversity as an important part of their identity definition. In the 1980s and 1990s there was an increase in Canadian regionalism, reflected in the strength of two new regional political parties and the failures of two proposed constitutional accords to compromise centralizing and de-centralizing tendencies. All provinces see themselves as unique, and they may be, but one may be just a little more so? It is the belief of Herbert Lench Pottle that: "...the peculiarities of the Newfoundland character today have a logical, meaningful and indeed inevitable linkage with all of Newfoundland's yesterdays" (Pottle, 1983: 10).

Though Newfoundland was the first province visited by Europeans, it was the last permanently settled and the last to enter Canada in 1949. This province was always viewed as a colonial possession first by the French, then by the British and now by the Canadians (this relationship is certainly under question with the failure of the fish stocks). "All the while our cousins on the continental mainland were organizing themselves into communities, raising their families, choosing their governments, we Newfoundlanders were battling for the primitive right to settle at all – outlaws in fact on alien soil" (Pottle, 1954:11). From the very beginning, survival in Newfoundland was a struggle: a struggle against temporality; a struggle against the fishing admirals who came to exploit; a struggle against each other, in the absence of law and order and during the winter months, and a struggle to find food and firewood to maintain life. This unique and austere environment became the setting for the evolution of Newfoundland humor.

Cyril Poole as well locates much of the Newfoundland character in an adaptive response to the precarious weather: "Because we have not been able linguistically to slay our enemies, fog and rain, sleet and snow, we must each day go forth and do battle with them. And the battle has moulded our character" (Poole, 1982: 43). For Richard Gwyn the Newfoundland character was "forged ... out of hereditary and environment. Newfoundlanders are proud and sentimental, tough and impractical." They are a people who "rejected the dynamism and tyranny of the Protestant ethic for a humanism which placed people above things and the spiritual above the material" (Gwyn, 1970: 62). James Overton as well feels that: "It is a culture that has developed organically in isolation and it is the environment (especially the sea) that has been one of the key forces which has moulded the Newfoundland character" (Overton, 1988: 11).

In 1994, on C.B.C.'s Cross Country Check-up, Rex Murphy was in conversation with an Editor of "The Globe and Mail," when the latter stated: "There is no doubt that Newfoundland has a distinct culture." Later in the same program a Mr. Parsons phoned in from Nova Scotia to comment that ... "he left the fishery for education. He would like to return. The issue is not just economic. There is a cultural uniqueness here (Nfld)" (C.B.C., March 13, 1994). The difference between Newfoundland and the

other Atlantic Provinces also appears to be the basis of methodological decisions when conducting Sociological Research: "...researchers sometimes divide Newfoundland from the rest of Atlantic Canada..." (Baer, Grabb and Johnston, 1993: 16).

Newfoundland is the only province where the majority of the residents live on an island in the middle of the Atlantic and combined with the Labrador Peninsula are the eastern most points in Canada. Demographically, the province is the most religiously homogeneous (with the exception of Quebec), it has the lowest rate of persons speaking the two official languages, and has the highest rate of births in Canada within its own province (Hillier, 1991: 23, 22, and 27). The vast majority of the population can trace an ancestry to either the south of England or Ireland with a smaller number of immigrants coming from Scotland (Mathews, Kearley, Dwyer 1982: 65) (see appendix 1). The uniqueness of the culture and its strong ties with the past can be appreciated when one realizes that the province has produced two editions of The Dictionary of Newfoundland English. The first edition contains 624 pages of unique Newfoundland expressions while the second edition adds to the first and presents 770 pages of unique expressions (Story, Kirwin and Widdowson 1982, 1990). The physical location, the uniform roots, the unique preservation of historical language were all melded by the continuous austerity of the environment and provided the setting for the evolution of Newfoundland humor:

The stage was bountifully set where they could laugh with relish at themselves and with resonance at one another.

The natural habitats of these manifold forms of humor were such hives as one another's homes, merchant's stores, stage heads, the squid - jigging ground, at 'times' (local suppers and sales), launching and hauling up boats, mummering, lodges, lumber camps... It is not much of an exaggeration to say that where two or three are gathered together, they are likely as not to be swapping yarns. (Pottle 1983:13)

As Newfoundland and Labrador humor appears to have evolved from the precarious conditions of the lives of the people, it would be considered functional for survival. The removal of this adaptive mechanism posing a threat to the stability of the people. The relationship between humor and the conditions of ones existence is not peculiar to the people of Newfoundland and Labrador. Lawrence W. Levine reviews the book **On the Real Side** and states:

"Humor allows us to discuss virtually everything, no matter how taboo. Subjects like incest, sexual performance, prejudice, class feeling, even intense anger toward those on whom we are emotionally or materially dependent, can be expressed openly and freely once they become part of humorous expression. This is undoubtedly why many of those who have experienced the most consistent oppression - blacks, Jews, and Irish - have such a highly developed sense of humor. (Levine, New York Times, February 27, 1994: 3)

Though the cause of the oppression of the Newfoundlander and Labradorian can be linked to the environment and economic uncertainty rather than the social structure, the effect on the evolution of the humor is very similar. This fact would be

supported by the French philosopher Montesquieu (1689 - 1755) who Cyril Poole (1982) finds a source of inspiration:

“...the strength of passions and the clarity of thought are largely determined by climate. . . . cold air ‘constringes the extremities of the fibres’, while ‘warm air relaxes and lengthens the extremities of the external fibres of the body’...in cold climates people are more courageous, bolder, less suspicious, less cunning, and more open and frank. ...our (Newfoundlanders) spirits are set in motion only by such strong stimuli as ‘hunting, travelling, war and wine.’ ‘the bravery of those in cold climates has enabled them to maintain their liberties.’” (Poole, 1982: 48-49)

Herbert Pottle reinforces this point when he acclaims: “Traditionally, in the light of the adverse weather conditions of Newfoundland history, humour has been both an individual and a collective means of enabling life to be tolerable” (Pottle, 1982:14).

Though the second major source of humor (economic uncertainty) has improved, relative to the province’s extremely humble beginnings, the source of this humor has shifted from the local merchant to the political patronage of governments:

This rather sudden somersault of condition - the turnover of traditional initiative to political handout - has not been lost on Newfoundland humor, compounded mostly of satire, which has been enjoying a roaring trade, the politicians being both suppliers and customers. (Pottle, 1982:15)

Though Pottle made this comment over two decades ago, its current validity is still without question as we reflect on the recent successes of two of Newfoundland’s comedy troupes. “This hour has 22 Minutes” was awarded The Golden Gate Award for 1993 in San Francisco which received participation from over 1200 entries from 51 countries. This was the largest film festival in the world and their award was in the Comedy Category. Also, “Codco” was awarded two Geminis awards for 1993: Best Writing of a Variety Program or Series and Best Performance in a Comedy (C.B.C. Files, St. John’s, NF). Both groups tend to emphasize political or cultural incongruities or combinations of both. These are only two of the more prominent comedy groups; there are many others: Buddy Waissisname and the other fellows, Rex Murphy, Ray Guy, Snook, Al Cluston, Joe Mullins, Ross Goldsworthy, and Mixed Nuts - all performing throughout the province on different occasions.

The evolution of the humor on this tiny province can be attributed to a number of factors, already mentioned; but another significant influence is the absence of any significant censorship. As soon as a story hits the news, local comedians are guaranteed to be spreading wit, usually by word of mouth, within a matter of maybe hours and certainly days. Child abuse; homosexuality discovered in public washrooms; the Bobbits; Waco, Texas Immigration Irregularities; and anything else can be the subject of fresh humor. This is usually prompted by: “Got either fresh one?” or “Any new ones on the go?” or “I haven’t heard a story in ages?” The latter is a reminder of the oral tradition which was once dominant in the culture and is still present. No subject is too sacred or according to Herbert Pottle: “There seems to be

no area of life too intimate for the advances of repressed humor." Pottle illustrates this point by recounting the traditional story about the baby born with no ears and nobody wanted to mention this point to the parents for fear of offending them until Levi (the grandfather of the child) came to visit. Levi avoided all mention of the baby's ears but continued to comment on the child's very fine eyesight. At one point the mother said, "Why are you asking about his eyes?"

"Well," sputtered Levi, "his eyesight better be good because, poor little crater, he'll never be able to wear glasses." (Pottle, 1982:28)

The reader might appreciate a 'fresh one': Clyde Wells had an accident the other day; he was out for a walk and was hit by a fishing boat (late night party, Churchill Falls, April 21, 1994, 2 a.m.).

There is no topic too sacred to be ridiculed through humor; however, some may argue that they have lived on the island for a number of years and have not experienced uncensored humor. If this be a retort, the speaker has removed himself/herself from the inner catacombs of the humor tunnels. Much of Newfoundland's raw humor is potentially offensive, and if an individual were to show the slightest signs of offense or dismay at a mild linguistic nuance then they are removed from the list of those who would otherwise be entertained. The day-to-day interactions which form the context for the advance of the wit are not intended to offend and hence, an individual who responds adversely is immediately denied access:

It is quite safe to say that when Newfoundlanders get into a huddle, a humorous story is much more likely than not what brings them together and keeps them so... Their common ground is so firm and so redoubtable that anyone who cannot share the same premises feels like an outsider. (Pottle, 1982: 30)

Much of Newfoundland's humor is pointed at Newfoundlanders themselves, but they are also prepared to turn a phrase at the expense of minorities, women, men, children, dogs, cats, clergymen, businessmen and sometimes even politicians. But the teller does not believe, nor wishes to convey, some deep social commentary and certainly does not wish to be accused of some anti-democratic intention which did not exist: "Unlike the poisoned barb of satire and the killing point of wit, humor is healing. It is not only wholesome, but recreative and rejuvenating" (Shalit, 1987: 2). The Newfoundlander does not believe that the Newfoundlander is stupid, blacks are inferior, Jews are cheap, women are unequal to men or that all politicians are dishonest. But they are aware of the existence of these stereotypes and this notion becomes one of the bases of the humor. Always, the joke remains a joke, whose *raison d'être* is pure entertainment void of a significant social commentary.

Robert Stebbins identifies four types of humor. These are consensus, control, conflict, and comic relief (Stebbins, 1990: 47-49). The humor of the Province of Newfoundland and Labrador should be classified as consensus humor creating feelings of friendliness and good cheer, and comic relief or release from a tense situation (See Pottle, above). Control humor, intended to annoy; and conflict humor, an act of aggression have no place within context of Newfoundland wit.

This point is shared by Martin and Baksh who conducted an extensive empirical study of Atlantic Canadian School Humor. They referred to Damico (1980:133) who discovered through her sociometric study of adolescent class clowns that they can release tensions within the classroom and increase a sense of group cohesion among the students (Martin and Baksh 1995:14). They also referred to Hill (1988:20-24) who listed eight functions of humor. Her sixth she classifies as "appeasement function of humor" which makes light of an otherwise serious issue and the seventh is a "coping mechanism" through which students share their personal problems (Martin and Baksh 1995:19). Both of these functions are related to the way humor is used in the province of Newfoundland and Labrador.

It is difficult to separate humor and culture. Woods (1983:114) found that students used humor to test the water in developing their own culture. Woods also found that joking forms a cultural bond between teacher and student (Martin and Baksh 1995:24,21). In school and out of school it appears as though sharing one's sense of humor is sharing one's culture.

The function and nature of Newfoundland humor is not always clearly understood by those who are not completely immersed in the culture of the province. There are occasional attacks against which the province must fortify itself. These attacks come from individuals who have never lived in Newfoundland and Labrador and encounter the culture for the first time, or from individuals who did live in the province and have lived 'up along' (1) for many years and feel they must protect the province from the perceived dangers of traditional stereotypes. The format which the latter expression approximates is a hybrid combination of Newfoundland roots with upper Canadian self-consciousness.

On November 10, 1993, a sports reporter for the Gander Beacon presented an editorial which heavily criticized a local entertainer. The comedian was speaking at the annual Fireman's Ball and the female reporter, originally from Nova Scotia, had only spent a short time in Gander, Newfoundland. She called Mr. Ross Goldsworthy a racist and extremely irresponsible. Her article was entitled: "appalled, dismayed and disgusted." The very next week the paper was inundated with letters to the editor in defense of Mr. Goldsworthy, he received 30 to 40 phone calls at home and hundreds of supporting comments on the streets of Gander. There was not one note of support for the journalist, Angela MacIsaac. A typical letter written in support of Mr. Goldsworthy was presented by Janet Samson who said: "I know the jokes that were told and I know that these jokes were made to poke fun at the naivety of Newfoundlanders. After all, if we can't laugh at ourselves, who can we laugh at. Ms. MacIsaac if you didn't get the joke, you should have asked for an explanation before printing your so called commentary" (Gander Beacon, November 10 and 17, 1993).

In April, 1993, Mr. Harry Brown, a retired C.B.C. broadcaster, originally from Newfoundland, spoke on C.B.C. television against "Snook" (Peter Soucy), a popular commentator on the C.B.C. who performs in the guise of street local from St. John's. Mr. Browne said: "He perpetuates the stereotype. He tries to spend five minutes of my time telling me how stupid I am. And convincing any potential investors that his original assessment of Newfoundland was correct. If he were black or female, he would be fired" (C.B.C., Here and Now, April, 1993).

On April 8, 1993, Rex Murphy a commentator for C.B.C responded to Harry Browne's remarks and provided a caustic attack on Mr. Brown and full support for "Snook". "Snook" himself responded and reminded Mr. Brown of the many comedians this province has produced in the past; in "Snook's" words: "come on Harry bye, lighten up!" There were no commentaries in support of Mr. Brown (C.B.C., Here and Now, April, 1993).

Later in April, a Toronto woman, Lillian Elaine, originally from Newfoundland, aired her disgust with a Toronto newspaper which ran an ad for a computer course to be taught in many languages - one of which was Newfie. She felt it made her embarrassed as there was no such language as Newfie. This prompted C.B.C. to ask people on the streets of Newfoundland what they thought of the term Newfie and the comments of Ms. Elaine. Of the 27 people interviewed, four were against the term, 20 found no fault with the term (many felt honored by the term) and three were against the term because they preferred to be called Labradorians (C.B.C., Here and Now, April, 1993).

These situations reflect the current clashes which are beginning to surface as the definition of reality, historically enjoyed by Newfoundlanders, begins to collide with the dominant definition of reality which is prevalent throughout much of Canada. These incidents reflect to a degree the Politically Correct definition of acceptability, dominant in some circles of the non-Newfoundland Canadian culture and its apparent antithesis which is more prevalent in Newfoundland. According to Maclean's . . . "a new, rapidly unfolding moral order, it is considered unacceptable for a white person to be critical of minority groups.... seemingly disparaging references to color, sex or sexual preference be banned" (Maclean's, May 27, 1991:40). Much of the humor of the Province of Newfoundland and Labrador, contains references to sex, sexual practises and sometimes to racial groups; however, the brunt of most jokes is the Newfoundlander. Is this acceptable? Especially when "Ethnographic research is based on the premise that what becomes defined as humor is subjective" (Martin and Baksh 1995:38).

At the University of Pennsylvania, Dr. Murray Dolfman, a successful lawyer and popular part time lecturer, was suspended for asking an Afro-American to read twice a section from the 13th Amendment dealing with enslavement; the students and administration felt the student was being singled out.

At Harvard, a bitter controversy developed over the desires of gays and lesbians to express their sexuality, and the rights of heterosexuals to express their attitudes toward homosexuality.

At Stanford University, Rudy Fuentes, co-founder of MeCha, a student multicultural organization, was intimidated, threatened and encircled. He was called Politically Incorrect for not supporting the faction of the organization which wished to become more militant over multiculturalism.

At Penn State University, Nancy Stumhofer, fought to have a reputable painting of a naked woman removed from the music room she was required to use. Her claim was that the painting constituted harassment. The administration complied.

At the University of Washington, Seattle, body builder Peter Schaub found himself in a bitter controversy when he decided to enrol in Women's Studies 200. He contradicted the instructors who he found were promoting lesbianism and male hatred while teaching women how to be sexually independent. At one point in the course, the belief that families would be better without males, was advanced. The dean promised to give him credit for the course without completing the required assignments as long as he removed himself from the class (Pack, "Campus Culture Wars", 1993).

Professor Graydon Snyder, a 63 year old tenured professor at the Chicago Theologian Seminary, has filed a lawsuit against his school's disciplinary board. He was placed on probation and required to undergo psychological therapy for making a reference to the Talmud, the Jewish Book of Laws, where it states that a man is not liable to 'indemnify her for indignity unless it was intentionally caused.' In the theoretical scenario, a man fell from a roof and accidentally inserted his penis (Globe and Mail, March 1994).

These American incidents do not relate directly to the context of Newfoundland's outlandish humor. The two have never met on the same playing field. Many Canadian academics feel that this movement has strongly penetrated Canada, with the zero tolerance movement sweeping Ontario (C.B.C., Morning Side, February 3, 1994). Harry Browne, Lillian Elaine, and Angela MacLissac may be examples of others yet to come. James Overton states:

The assumption of a common culture and character and the argument that this needs to be defended against outside destructive forces has a number of political implications. The search for and the embrace of Newfoundland culture in many places goes hand in hand with a rejection of all that is held to be alien to the Newfoundland essence.... it is this character that makes it difficult for Canadians to accept politicians such as John Crosbie and Brian Peckford.... an expression of the Newfoundland soul that is just a little too ethnic for central Canadians to accept. (Overton, 1988: 14-15)

While the "Zero tolerance" movement in Ontario has recently been satirized in Saturday Night magazine, the reader is sometimes left to ponder on the degree of exaggeration used for satirical purposes. Though fulfilling an important criteria for good humor - reflection creates apprehension (Frazer, "Saturday Night", April, 1994: 10 and 74).

While many fear that the Politically Correct movement may be a new form of McCarthyism (MacLean's, 1991: 45) or puritanism (MacLean's, 1991: 41), it becomes obvious that society cannot exist for too long without some form of control. The Temperance Society was established to protect society from hedonistic, demonic urges. Piloted primarily by responsible ladies, it attempted to guarantee that society would reach the highest ideals of religious fundamentalism. With the secularization of religion and the subsequent erosion of the Temperance Society, the Politically Correct movement provides society with a new means of control. Piloted by young academics, this new movement aspires to create a society which fulfils the highest ideals of democracy. Perhaps, the new movement will have as much effect on Newfoundland and Labrador as its predecessor:

As a result of dedicated temperance work, imports dropped from 277,808 gallons of liquor in 1838 to 94,268 in 1847; nine years later the total was up to 256,361 gallons. In 1858 the Total Abstinence and Benefit Society was founded; and in 1883 the Newfoundland Brewing Company. The Temperance League was rushed into the breach in 1872; twenty years later the number of saloons in St. John's had increased to fifty-eight. (Poole, 1982: 16)

At this juncture in history it appears as though the Politically Correct (PC) movement may have had as much effect on Newfoundland and Labrador as the prior restrictive order. However, academics are worried that this new movement may create intellectual rigidity as it seems to be based more on harassment and intimidation, rather than open debate (MacLean's, 1991: 45). One of the assumptions of this new movement is that humor is a reflection of a particular attitude on the part of the teller and the telling transfers this attitude to others. There is no room for an alternative possibility – that humor may have a life of its own void of any significant social commentary. While the PC movement may be attempting to protect minorities from oppression, it may be evolving toward its own self-contradiction by imposing a preordained definition of reality on a new context. Deluze and Foucault both feel “the intellectual is no longer commissioned to play the role of advisor to the masses and critic of ideological content, but rather to become one capable of providing instruments of analysis... Jean-Francois Lyotard takes this position even a step further by adamantly declaring the death of those intellectuals whose aim it is to speak on behalf of humanity in the name of an abstract and moralistic truth... For Lyotard, there is no universal subject capable of putting forth a new concept of the world” (Kritzman, 1988: xii). “Discourses dominant in a historical period and geographical location determine what counts as true, important, or relevant, what gets spoken and what remains unsaid” (Cherryholmes, 1988: 35). Here Foucault is reminding us that context remains the basis of truth and acceptability.

Barry Adam recently analyzed new social movements and found that much of the analysis of new social movements suffers from either too much or too little attention given to a Marxian perspective. It becomes difficult to conceptualize Newfoundland humor as some new anti-state response to economic imperialism. The Newfoundland culture is only new to those who have yet to encounter it, but what it does share with other ‘new movements’ is “the right to be ourselves without being crushed by the apparatuses of power, violence, and propaganda” (Adam, 1993: 324). Adam sees ‘how people come to identify themselves’ as basic to new social movements.

In recent years, Newfoundlanders have become conscious of the fact that they have a different culture which must be preserved. Many Newfoundlanders are beginning to question the impact which Confederation may have had on the Newfoundland culture (C.B.C., Here and Now, April 7, 1994): “Academics have begun to write copiously about the Newfoundland soul and character and about cultural revival, and there has been the development of what F.L. Jackson terms “Newfcult in the arts” (Overton, 1988: 6).

Throughout this report there has been an assumption that the humor of the province is completely uniform; however, given the geographic isolation of coastal

regions – variety exists. The writer of this report has found one particular joke which he has told over 100 times and discovered that all people from Newfoundland and Labrador laughed; however, only one third of non-natives enjoyed this joke. (Note: There is no attempt at legitimate scientific connections in these assumptions). The joke is about a Newfoundlander from the island portion who was in a field with a bunch of sheep. He would grab a sheep, put it up to an apple tree, give the sheep a bite and put it down. He was doing this with all the sheep when a mainlander (a person who is not a native of the province) came by and said, "Sir, it's none of my business, but you'd save a lot of time if you climbed the tree, shook it and let the apples fall and then the sheep could eat whenever they wanted." The Newfoundlander pondered for a few seconds and replied: "Bye, what's time to a sheep." One of the important aspects of this culture is the all-pervasive and spontaneous humor, as Peter Newman recently states:

Great art, really great art, whatever its format, must be guided by an invisible hand: the spontaneous blossoming of humanity caught in a moment's creative impulse. That's even more true of great people, like Newfoundlanders. Spontaneity is their middle name." (Newman, Maclean's, 1994: 45)

The PC movement stands as the antithesis of spontaneity and hence of Newfoundland culture. Allan Dershowitz comment on the effect this movement will have on the academic community: "We will see far worse teaching as teachers will have to think about every term, every illustration" (Pack, Campus Culture Wars, 1993). The possibility of offence will serve as an inhibiting force in even face-to-face interactions and pose a threat to the spontaneity of the people and a threat to the culture.

The Newfoundland culture evolved from the precarious circumstances of the lives of the people. The element of humor was functional for their adaptation in the face of physical and economic uncertainty. It is a humor which is intended to provide consensus and relief but not control and conflict (Stebbins). As Newman states: "To be a Newfie is to be a survivor. That great spirit is in jeopardy. They are about to become an endangered species" (Newman, MacLean's, 1994: 45). While Newman is primarily referring to the devastating impact that the failure of the fishery is having and will have on the culture of the island, the essential assumption is identical. One threat is economic – the other ideological. The construction of knowledge is derived from experience itself. As Foucault said: "How can the subject tell the truth about itself?" (Kritzman, 1988: 38). How can a Newfoundland academic whose avocation is stand-up comedy accurately analyze the relationship between Newfoundland culture and the Politically Correct movement? How does someone who has never lived in Newfoundland interpret it? Economics and ideology must work for the preservation of this culture!

- (1) The value of any culture ultimately depends not on good books or great art, but on the passage of people's seed from one generation to the next, on their link to the soil and the sea. The Newfoundlanders' life force is expressed less in words than in deeds – in the compassion and humor they feel for one another when there is nothing else available to share. That's what is really at stake in Newfoundland these days. And that's why

Canadians who don't live on the Rock should not begrudge the relatively modest tax burden to keep our most vibrant culture alive and kicking. (Newman, MacLean's, 1994: 45). The expression used for Canadians who are not from Newfoundland. They live physically up and along from Newfoundland.

(INSERT DIAGRAM)

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THE "NEW" MORNING WATCH

**Terry Piper, Dean
Faculty of Education**

Those of us who came of age in the sixties to the strains of The Times They Are A 'Changin' could not have predicted the enormity nor the pervasiveness of those changes, especially in education.

We've seen trends come and go. We've accepted an increasingly heavy burden thrust on us by a society whose greater concern about equality and justice often fails to "trickle down" to minorities and children, and, especially, to minority children. We've adjusted as governments got bigger and more intrusive in education and then adjusted again as they've "downsized." We've learned to do more with less and, more recently, less with less. On the whole, though, most of us can say with confidence, that we are doing a better job of educating children than we were thirty or forty years ago. That the media and government might have different views is the subject for another column. What all this means is that for the past three decades or so, we have engaged in a major rethinking of the entire educational enterprise. In recent years, that thinking has been complicated and enriched by the impact of the technological revolution.

Because of technological advances, our pedagogical capabilities are growing at a dizzying rate of speed. We can now see the potential for educational change of a magnitude that is unprecedented, at least since the invention of the printing press. Never before have we had such a wealth amount of information so readily available so quickly. Whether we can reshape educational practice to take advantage of what we now have and what we will soon have available remains to be seen, but I believe that we can. Members of the Faculty of Education believe that we can, and in the past two years have taken many steps to ensure that our students are exposed to best current practice using computer-based technologies.

A little over a year ago, we opened a new 48-seat Pentium laboratory in the Faculty of Education, and when this laboratory is not filled with students working on course assignments or "surfing" in the way that our generation browsed the library stacks, it is populated by faculty members who are rethinking their delivery options and redesigning their courses to take advantage of the fact that students can now learn 30% more in 30% less time. Realizing that both those numbers will likely get larger, we are cognizant of the need to keep learning and growing. A few months ago, we opened a state-of-the-art Science and Technology Laboratory, another facility that we needed in order to provide our students the kind of education they need to be effective teachers in the next century.

In January, Dr. Ken Stevens will join the Faculty as the first holder of the Chair in TeleLearning, funded in large part by Industry Canada. A specialist in rural and small schools, Dr. Stevens will help to focus the Faculty's research efforts on the impact of technology on schooling in Newfoundland and Labrador. Individual members of the Faculty are experimenting with using the Internet for course delivery, and as a Faculty, we are working toward the goal of having some degree of web page support for every course offered in the Faculty by January of 1998.

Indeed, the times they still are a 'changin', and The Morning Watch is changing with them. As evidence, we mount our first issue of the "virtual" Morning Watch. This new way of producing and delivering The Morning Watch, however, signals no less commitment to the journal and its readers. Educational technology should be neutral. It is a tool - an instrument and not an agent. The editors of The Morning Watch and members of the Faculty of Education remain the agents of change but hope to use the instruments as effectively as possible. With this issue, then, comes change but with that change we also continue a well-established tradition. We hope that our new format will permit faster and wider dissemination and allow for more direct interaction with our readers.

Cultural Diversity and Education: Interface Issues

**David F. Philpott, Wayne C. Nesbit,
Mildred F. Cahill , and Gary H. Jeffery**

EDITORS' INTRODUCTION

*Our colleagues in the Faculty of Education have just published a monograph, **Cultural Diversity and Education: Interface Issues**. St. John's: Memorial University of Newfoundland, 2004. ISBN 0-888901-382-9. The monograph describes the results of their research and its significance for cultural diversity in education generally, and for Labrador Innu education in particular. They agreed to share their findings with larger audience locally and globally. The editors of the *Morning Watch* are happy to select the material from their monograph for presentation in this journal. The editors decided to select the "Forward" and "Editor's Comments" written by Drs. Philpott and Nesbit, respectively. These two pieces provide introduction to their research project. Secondly, the editors have selected the titles of eight papers included in the monograph, along with the abstract provided by the authors for each of the papers. It is hoped that the presentation made below in this particular format will be helpful to all those who are interested in cultural diversity in education, but especially to students enrolled in the newly instituted Ph.D. program in our Faculty (Amarjit Singh, Ishmael J. Baksh, George Hache).*

FOREWORD

The Innu of Labrador have survived for over 6,000 years as a nomadic people living along the eastern shores of Quebec and Labrador. Formerly known as the Naskapi-Montagnais Indians, the Innu lived in small, clan-like groups that followed the caribou herd migrations and enjoyed a stable, cooperative family life. Their relationship with the land was as solid as their relationship with one another -- interacting, learning and working together for the common good of the group. As with many of Canada's aboriginal peoples, their transition from a traditional nomadic lifestyle to a more static contemporary community lifestyle paralleled the emergence of the fur trade industry. In the 1950s a number of Innu families settled near the trading post at Northwest River. This settlement eventually developed into the current community of Sheshatshiu and its members formed the Sheshatshiu Band.

Further north, the Mushuau Innu settled under government policy in the community of Davis Inlet. This second community formed the Mushuau Band and moved to the new community of Natuashish in 2002. As was the case with other First Nations groups across Canada, both Labrador band councils embarked upon the long process of lobbying federal and provincial governments for greater management of their lands and greater control over their lives.

The process of gaining self-management was prompted by the systemic social struggles experienced by the Innu, as documented by contemporary media coverage. In recent years there has been a dramatic increase in attention given to the Innu, certainly from a perspective of their struggles with substance abuse, violence and alarmingly high rates of suicide. Arising from this has been a directed focus on the outcomes of the educational systems in these communities and the failure to produce no more than a handful of graduates during the past decade. With alarmingly low

attendance, high teacher turn over, and mounting criticism of a curriculum described as culturally insensitive, the Innu have been both clear and highly vocal in calling for control of their children's future. Central to the discussion surrounding self-management and land claim settlement has been a sense of urgency concerning the educational needs of their children. The Innu have long recognized the link between improved educational opportunity, within a context of traditional language and culture, and enhanced ability for self-management in shaping the future.

This need to address existing educational issues so as to enhance future opportunities was recognized and facilitated in the fall of 2002 when The Department of Indian and Northern Affairs Canada (INAC), the Labrador School Board (LSB) and The Interim Innu Educational Authority (INEK) agreed to conduct a major educational assessment. The project's goal was the documentation of the educational needs of Innu children so as to establish a baseline for improved program delivery. I accepted the role of Principal Researcher and immediately began the process of assembling a team of academic colleagues to assist with what has likely become the most comprehensive assessment project on First Nations children in Canada's history.

My extensive background in the field of educational assessment, framed by my experience in the area of teacher education related to culturally defined inclusive education, serves as an academic and pragmatic backdrop for my role in the assessment project. Dr. Wayne Nesbit was eager to become involved with the project, bringing a strong background in special education and comprehensive experience in educational program development for children defined as exceptional throughout Newfoundland and Labrador. Next to join the team was Dr. Mildred Cahill who is internationally recognized in the area of career development in rural communities. Her perspective strengthened the team by forging a link between current need and future opportunities. Finally, child psychologist Dr. Gary Jeffery was invited to join the project, bringing years of experience in the areas of assessment, child development and social cognition. This team from Memorial University, characterized by a pragmatic disposition toward improving program development and service delivery, initiated a process of identifying and documenting the needs of Innu children.

This monograph provides the theoretical background for this project, contextualizing the rationale for methodologies and research approaches. The monograph does not reference the project's database; rather, it articulates an extensive global literature review that the research team conducted in its quest to identify "best assessment practices" vis-à-vis such a culturally distinct group of children. In keeping with ethical assessment practices, the results of the assessment project are considered confidential, and as such, will be released to the project stakeholders only.

Our arduous task was facilitated by a spirit of collaboration that was at times overwhelming. It was clear from the start that each of the three main stakeholders were sincerely interested in Innu education and were motivated to obtain accurate assessment information. They offered untold support and collaboration. Discourse and meetings were defined by open dialogue, frank debate, honest answers and an eagerness to collaborate. The Innu welcomed us into their communities and spoke with great candour about their struggles. The Labrador School Board was equally frank in discussing its challenge to provide educational opportunities. We enjoyed full

access to information and resources, which allowed us to complete the project on time and within budget guidelines. The staff of INAC were equally supportive and open, setting high expectations for the project while at the same time displaying a willingness to help the team meet these expectations. It is our hope that the degree of cooperation, the commonality of goals and the eagerness to help which characterized this project foreshadows the establishment of a more child-centered model of culturally appropriate education for Innu youth.

Finally, on a more personal level, it must be noted that this monograph is a reflection of the spirit of collaboration that was as evident on our own team as it was among the stakeholders. Particular acknowledgment must be given to Dr. Nesbit, who as Editor, worked tirelessly and diligently to guide the writing of these papers so as to ensure that the knowledge acquired in the development of this monograph could be shared with other educators.

David Philpott, EdD
Principal Researcher

EDITOR'S COMMENT

The series of articles which comprise this monograph provide a philosophical and theoretical context for the Labrador Innu Educational Research Project which commenced February 2003. The articles reflect the thinking of the research team, members of the Faculty of Education at Memorial University of Newfoundland. In addition to contextualizing the team's current research thrust, the monograph is intended to extend and enrich the current literature vis-à-vis First Nations issues.

It is important to acknowledge the contribution of Dr. Barbara Burnaby, an expert on First Nations education and the attendant linguistic implications. As an established authority, her submission to this monograph is valued and much appreciated.

Completion of this monograph owes much to the diligence and commitment of Juanita Hennessey and Ellen White, graduate students in the Faculty of Education at Memorial University. As research assistants their contribution has been exemplary.

On a personal note, the opportunity to serve as Editor has been an exciting growth experience.

W.C. Nesbit, PhD
Editor

TITLES OF ARTICLES AND ABSTRACTS

Supporting Learner Diversity in Aboriginal Schools The Emergence of a Cultural Paradigm of Inclusion

David Philpott, Wayne Nesbit, Mildred Cahill, & Gary Jeffery

Abstract

This paper explores the struggle to accommodate exceptional learners in Aboriginal schools through a discussion of the cultural appropriateness of contemporary models of service delivery. Canada is witnessing dramatic population growth among Aboriginal children at a time when local band councils are assuming greater autonomy for the education of their children. Paralleling these changes is a growing concern for appropriate approaches to accommodate learner diversity, with Aboriginal schools struggling with how best to provide care to students with suspected/identified exceptionalities. Aboriginal leaders and educators are looking towards contemporary practice for direction and are discovering an on-going debate between supporters of inclusive classrooms and schools, and those who hold to more traditional special education models. This paper presents this debate and articulates emergent themes as a guide to Aboriginal leaders in developing their own model of student support services. The authors posit that while lessons from both paradigms are essential, inclusion is a core cultural value of Aboriginal culture and is already well entrenched in many Aboriginal schools. In fact, existing models of cultural-based education, while still in their infancy, offer powerful lessons on the role of community in accommodating and embracing differences in our youth. What emerges is a reciprocity of insights between Aboriginal and western leaders, where each offers the other powerful lessons on how best to accommodate learners through the establishment of a cultural paradigm of inclusion.

FROM THE ROOTS UP: CAREER COUNSELLING IN FIRST NATIONS COMMUNITIES

Mildred Cahill, Wayne Nesbit, David Philpott, Gary Jeffery

Abstract

Career counselling in First Nations communities is a unique multilayered process which requires a high degree of sensitivity and inclusiveness. In contrast to the superimposition of established western mainstream practice, counselling aboriginal clients is a process that involves an appreciation of the many facets of diversity -- cultural values, aspirations, language, beliefs, traditions and practices. It is a process that relies heavily on the art of listening and involves strategic linkages with elders and co-facilitators from within the aboriginal community. This paper explores career counselling within the context of cultural diversity and presents pragmatic suggestions to guide the key elements of the process.

LINGUISTIC AND CULTURAL EVOLUTION IN AN UNYIELDING ENVIRONMENT

Barbara Burnaby

Abstract

The Innu of Labrador stand out among Canadian Amerindian groups in that they are likely the group most recently to come into intense, sustained contact with Euro-Canadians. They demonstrate very high maintenance of their traditional language (Innu-aimun), and their history of administrative relations with the federal and provincial governments is unique in Canada as a result of the terms of Newfoundland and Labrador's confederation with Canada in 1949. Currently, the Innu of Sheshatshiu, Labrador, and of its sister community, Natuashish, are undergoing major changes in that (1) negotiations are underway for the Innu to gain significantly more control than they have at present over their governance, and (2) plans for the opening of a large new mine promise an unprecedented increase in opportunities for employment for the Innu and others in Labrador. These events invite an examination of the current situation in these communities (with a focus here on Sheshatshiu) for implications regarding language and literacy developments in the context of broader community circumstances. In this paper, several centuries of history of the Innu are reviewed with a focus on language, literacy, culture and relations with Euro-Canadians. Following this, contemporary linguistic, educational and economic data are outlined and a brief comparison is drawn with data from the Innus' neighbours in Labrador, the Inuit. Discussion of this background material centres on the relevance and implications of a theoretical and practical model of indigenous language maintenance and revival for action at the present time as the administrative structure and economic opportunities of the communities change.

EDUCATIONAL ASSESSMENT OF FIRST NATIONS STUDENTS: A REVIEW OF THE LITERATURE

David Philpott, Wayne Nesbit, Mildred Cahill & Gary Jeffery

Abstract

There has been significant focus placed on the development of appropriate models of educational assessment that respect both the socio-cultural background and native languages of Canada's growing population of First Nations learners. As local band councils assume self-government and management of their own schools, the global paradigm of school reform has placed greater emphasis on accountability measures within an inclusive model of education. The authors conducted a poll of First Nations schools in which they explored current practice in assessing learner diversity. The results show that despite significant literature cautioning against the use of quantitative instruments, most schools continue to rely on standardized assessment in attempting to identify the needs of their students. The survey also identified that First Nations educators are calling for direction and support in this area. The authors offer direction with this process by reviewing the literature on culturally appropriate assessment and providing an argument for the establishment of a model of assessment that balances qualitative with quantitative approaches which results in a model of clinical teaching. Such an approach complements a culturally defined

model of inclusive education where the goal of assessment is not diagnosed difference but rather an opportunity to creatively enhance learning through adapted instruction that facilitates individual success. The paper concludes with a brief review of Nunavut's draft policy on assessment as an example of how contemporary assessment can complement culturally appropriate models of education.

FETAL ALCOHOL SYNDROME IN FIRST NATIONS COMMUNITIES Educational Facets

Wayne Nesbit, David Philpott, Gary Jeffery & Mildred Cahill

Behold, thou shalt conceive and bear a son; and now drink no wine nor strong drink... Judges 13:7

The Bible

Abstract

Fetal Alcohol Syndrome (FAS) is a critical issue in Canadian society and in Canadian schools. This is particularly the case in First Nations communities where the reported incidence is higher than in the general population. It is an arduous journey which individuals and communities must pursue to effectively confront alcoholism and its dire effects. Hope is provided by the fact that FAS is not genetically transmitted. This paper details the nature of the syndrome and considers the role of various jurisdictions and agencies in countering this destructive entity. First Nations communities are perceived as having a major role in achieving solutions.

UNDERSTANDING THE IMPORTANCE OF CULTURE IN CAREER DEVELOPMENT

Mildred Cahill, David Philpott, Wayne Nesbit, Gary Jeffery

Abstract

Career development theory has gone through dramatic changes over the past fifty years. It has evolved from a simplistic concept linked to the selection of a career - held to be appropriate for all individuals in society -- to a multidimensional concept that embraces a holistic perspective linked to individual development across one's life-span. As well, it has moved from a "one size fits all" theoretical framework to one that acknowledges and values numerous integral facets such as culture, ethnicity, geographic preference, labor market shifts and gender. Cultural homogeneity within the population -- assumed in a number of earlier theories -- is now perceived as a myth. Specifically, career development theorists and researchers must find ways to work with practitioners to (a) translate existent theories into practice; (b) develop differential models of practice that are contextualized to meet the needs of different target groups; (c) explore partnerships and collaborative efforts to work together; (d) seek new and innovative means to understand, reach and assist client groups; and (e) work together to influence the shaping of social policies that lead to improvement in the quality of people's lives. This paper discusses the changes in career development within the context of relevance to aboriginal culture.

**PERVASIVE ISSUES IN FIRST NATIONS RESEARCH – HISTORICAL
AND CONTEMPORARY DIMENSIONS**

Wayne Nesbit, David Philpott, Mildred Cahill, & Gary Jeffery

Abstract

The paper describes the cultural context surrounding research in First Nations communities. It examines a series of issues which must be addressed in a sensitive and realistic manner if research in this area is to be considered informed and credible. The writers, in attempting to assist the Innu of Labrador in shaping the process of educational self-management, have identified and explored historical and contemporary literature related to the following issues: the construction of knowledge, culturally responsive instruction, ability/achievement assessment, clarity of vision concerning education, and language.

Teacher Demand in Newfoundland and Labrador

**Dr. David Dibbon
Memorial University of Newfoundland**

Abstract

This paper focuses on human resource issues associated with teacher demand in the Canadian province of Newfoundland and Labrador. It will be of interest to education policy makers, leaders and scholars concerned about the quantity and quality of the education labour supply. The results will provide evidence that there is a high demand for teachers in the rural and remote areas of the province and that there is a high degree of variation in the demand for teachers from one area of specialization to another but there is no overall shortage of teachers. Major social, political and economic trends and forces that are converging to influence teacher supply and demand are also identified.

Introduction

In a linear and stable world projecting accurate supply and demand numbers would not be a difficult task. But, early in the 21st century we find ourselves living in a complex and volatile society, where the pace of change is so rapid that it is difficult to predict its consequences or its future direction. For example, who could have successfully predicted the number of teachers who would opt for early retirement packages that have become popular in recent years, or the impact that the collapse of the cod fishery would have on the province's population?

Today there are many forces, both internal and external to the education environment, that are converging to make the task of predicting teacher demand a challenging one. There are three main factors that are driving these changes in Newfoundland and Labrador. First, the trend towards globalization has made many educators more mobile than ever before and emerging technologies are changing the nature of the workplace and the classroom. Second, the past decade has been a turbulent one for people in the education sector as increased calls for accountability, educational reform initiatives and policy changes by the provincial government have resulted in many disruptions to the work life of teachers and administrators, and third, a decrease in population, caused by unusually low fertility rates and high rates of out migration, has placed downward pressure on the student population in the province. Based on a more extensive study reported elsewhere (Dibbon and Sheppard, 2001), this paper will show how forces external to the local environment are making the task of predicting teacher demand an increasingly complex one. It will also examine teacher demand by looking closely at issues related to local geography as well as areas of subject specialization.

Methodology

The study reported in this paper employed a mixed methods approach towards data collection. A mixed methods approach takes advantage of numerous methodologies that enhance the validity of inferences from the phenomenon being studied and helps uncover new dimensions or paradigms. Face-to-face interviews,

focused group interviews, survey questionnaires, a detailed review of the local, national and international literature, and an extensive examination of statistical data sources that provided information on the distribution and composition of the province's population was undertaken. For example, Statistics Canada Reports, the Educational Staff Records^[1] (ESR'S) and Annual General Returns^[2] (AGR's) from the Department of Education (1990-2000) were examined to determine the nature of current demographic trends in the general population as well as for school-aged children.

Also, the nature and extent of present and future demands of school districts in the province were identified and assessed. The focus was on identifying the human resource issues associated with staffing schools and classrooms with qualified teachers. To help identify the issues that were pertinent to school districts, a *Human Resources Issues Survey* was developed and pilot-tested. The survey inquired about such things as trends and priorities in human resource development, areas of growth, areas of oversupply, identification of critical skills for the future, and a description of strategies used to attract teachers. Face-to-face interviews were conducted with the 10 out of the 11 Directors of Education and Chairpersons of the School Boards, in the spring of 2000. The interviews were all recorded, transcribed, coded and analyzed using the constant comparative method (Strauss and Corbin, 1990). Also, as most of the teacher hiring in this province occurs between April and August, a follow-up telephone interview was conducted with each of the Assistant Directors of Personnel (N = 11) in the fall of 2000, to inquire about the nature of the difficulties that districts experienced in filling vacant positions for that school year.

Reports from the field indicated that some jurisdictions were experiencing difficulties obtaining the services of substitute teachers during the fall semester. To investigate this phenomenon a *Substitute Teacher Availability Instrument* was developed and utilized to survey school administrators in each of the school districts. A stratified sample that included 30% of the schools in each district was selected and responses were generated from 103 of the 115 schools contacted.

Factors Affecting Teacher Demand: The Local Context

The matter of teacher demand is a complex issue and it increases in complexity when you consider how it varies by grade, subject area, gender, district, location and population. More so than ever before, we are living in an interconnected world, and to fully understand the nature of the teacher labour market it is no longer adequate to view the situation solely from a local perspective. To understand the nature of teacher demand in today's global marketplace, decision-makers and policy-makers must understand what is happening in other markets, and the potential for these markets to influence local ones. While, his paper does not provide a summary of the situation in other provinces and countries, readers interested in those details are referred to the larger report upon which this paper is based (Dibbon and Sheppard, 2001). This paper examines teacher demand in Newfoundland and Labrador within the context of a fast-changing global society where the forces of globalization, demographic shifts, wide-scale educational reform and local policy initiatives have converged to influence the education labour market.

Globalization

Globalization, a word that could not be found in the dictionary a dozen years ago is now one of the most charged issues of the day and is arguably the driving force behind societal and economic change. It is facilitated by and a facilitator of the new technologies that are constantly transforming the workplace, and just about every other aspect of society. These new technologies are moving Newfoundlanders from a traditional resource-based economy to a knowledge-based economy where workers require highly specialized skills. These skills are in demand around the world and so-called knowledge workers have a wide choice as to where they want to work, and many are opting for higher-paying jobs in other jurisdictions.

How does this affect the demand for teachers in Newfoundland and Labrador? The answer is two-fold. First, the trend towards globalization has opened up new markets and career opportunities that were previously unavailable, and as a result the population has become somewhat more mobile. This situation has created a demand situation in some Canadian jurisdictions that has set in motion a domino effect that has the potential to upset the supply and demand equation in all parts of the country, including Newfoundland and Labrador. For example, interviews with officials from large school districts in southern Ontario, southern Alberta and southern British Columbia that are in high growth areas indicate that they are experiencing a shortage of teachers because they are being raided by American school districts that are able to offer more competitive compensation packages. In order to cope with increasing student enrolments (primarily due to increased emigration) and the cross-border raiders, these school districts are forced to look to other jurisdictions as well. Typically, they recruit teachers from the northern parts of Canada and also from provinces where the teacher compensation package is not as attractive as their own (e.g. Newfoundland). Consequently, when a school district loses teachers and they do not have the capacity in their teacher education programs to replenish the loss, they recruit new, existing and retired teachers from other locations. It is common to see school districts from Ontario, British Columbia, Nunavut and the Northwest Territories recruiting teachers in the province of Newfoundland. Because these districts are guaranteeing jobs and providing attractive compensation packages, there are concerns about the province's capacity to meet the need for new teachers in this province.

Second, changes in the workplace have also resulted in changes to the school curriculum. These changes in the curriculum have placed an increased focus on mathematics, science and technology and subsequently an increased demand for qualified teachers in these areas. But, because individuals trained in the areas of mathematics, sciences and technology are in high demand in industry (Brown-Peters, 2001), and because the compensation package is usually better than it is in the school system, many "would be" teachers are now bypassing teacher education programs and opting for careers in industry rather than the classroom (Stracker, 1991). As a result of these career choices, there are fewer graduates available to the school system, resulting in shortages of teachers in these key areas.

Policy

Crocker (2000) noted that in the province of Newfoundland policy changes to the teacher allocation formula have had a profound effect on the number of teachers

employed in the province. Following a number of years of instability in teacher allocations resulting from ad hoc adjustments to the teacher allocation formula, a Ministerial panel was appointed by the Minister of Education, in 1999 with a mandate to consider issues of program delivery and particularly the implications for teacher allocations. The teacher allocation policy refers to the way that teachers are allocated to school districts by the Department of Education and a new allocation formula developed and implemented by government resulted in an increase of about 350 positions in the 2000-2001 school year. In another shift in policy, in February of 2001, the premier of the province announced in the legislature that there would be no teacher lay-offs for the coming school year. This move allowed the school boards to retain a total of 212 teaching units that were scheduled to be removed from the system.

Also, adjustments to the pension plan have changed the retirement patterns of teachers throughout the province. In the mid 1990's, amid uncertainty surrounding the long-term prospects of their pension plan and severance package, hundreds of teachers who were in their late 40's and early 50's, and who under normal circumstances may have remained teaching for additional years in order to top-up their pension, began to retire at a record rate. Reaching full pension eligibility certainly spurred the exodus but the turbulent, uncertain and conflict-laden environment being experienced at the time also contributed to the decision to "get out" as soon as possible.

Demographics

Often mistaken as a branch of mathematics or science, demography is a discipline that focuses on the study of human populations and how they change over time (Foote, 1996). In 1798, when the English economist Thomas Malthus published his "Essay on the Principle of Population", it marked the beginning of an era where population trends would be used as a tool to help forecast the future. Today, few societal institutions are unaffected by population change, and in the education community policy makers use demographic information to foresee adjustments that may be needed in our education system in order to meet the needs of changing student and teacher populations.

Population Trends

While the population continues to grow in many parts of the under-developed world, the population in the richer more developed countries has started to slow. Canada is an example of such a country. While the Canadian population has enjoyed a steady growth since statistics were first kept at the beginning of Confederation in 1867, the rate of population growth in Canada is slowing down (Kincora Research, 1998). The province of Newfoundland, on the other hand, enjoyed slow but continuous growth from the mid 1850's until Confederation in 1949 (Kincora Research, 1998). Following Confederation, population growth accelerated until it peaked at just over 580,000 in 1993. In the ten years since 1993, the population has decreased by almost ten percentage points to 531,595 people (Newfoundland Statistics Agency, 2003).

While out migration is a major contributor to the population decline, it is the current unusually low fertility rate that is causing this negative growth in the

population. Fertility refers to reproductive performance, and the fertility rate is the number of live births per 1000 females between the ages of 15 years and 49 years, in one year. The ages of 15-49 are the ages that demographers use as a standard to measure total fertility rates. Since school populations are tied to the number of births, a close examination of fertility rates can provide an indication of the number of children that are likely to enter primary school when they reach the appropriate age.

In Newfoundland and Labrador, the fertility rate has dropped steadily from its peak of 5.9 children per woman in 1957 (Kincora Research, 1998) to 1.15 in the year 2001 (Newfoundland and Labrador Center for Health Information, 2002). Considering that the replacement level is 2.11 births per woman (in the child bearing years) the Newfoundland population appears destined to decline for many years to come.

Obviously, a decline in fertility rates results in a decline in the number of live births. In 1971 there were just over 12,500 live births in the province (Kincora Research, 1998), which accounted for 2.35 percent of the total population. In the year 2001 there were less than 5000 live births, which equals less than one percent of our current population (Newfoundland Statistics Agency, 2003). When the number of births drops below the replacement level (2.11), the age of the people in the community begins to increase (see Figure 4) - a phenomenon observed by all those who are familiar with rural Newfoundland communities. And, as everyone knows, an aging community doesn't need as many schools or educators as a youthful one.

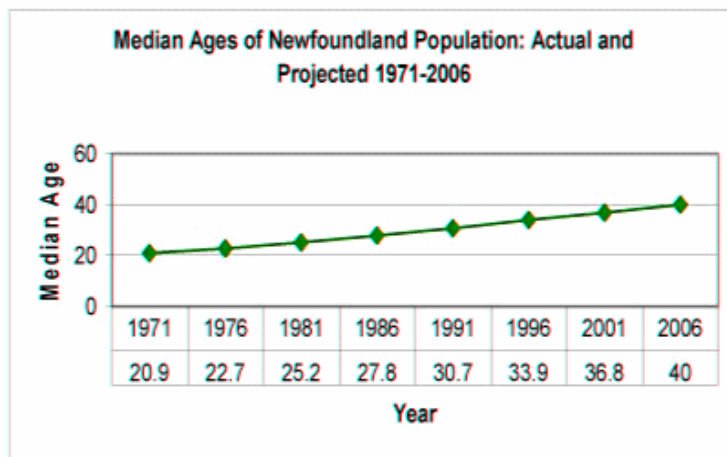


Figure 1: Median Ages of Newfoundland Population: Actual and Projected^[3]

While there is some evidence that the population decline is slowing, there are still high numbers of Newfoundlanders migrating to locations outside the province (see Table 1). During the past few years, the high emigration rates have been offset by higher than normal immigration rates and they have momentarily slowed the population decline. However, there is no fundamental or statistical evidence to

suggest that the decline in the number of births will reverse itself soon, if ever. The implication, of course, is that the general population is likely to continue to decline for many years to come, and as a direct result the population of school-aged children will decline as well. When combined with an aging society, a decline in the school-aged population will certainly soften the overall demand for teachers.

Table 1: Components of Population Growth 1997-2000^[4]

Component	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002
Births	5245	4899	5060	4804	4689
Deaths	4340	4095	4188	4282	4420
Inter-provincial In Migration	7392	7995	8400	7499	11694
Inter-provincial Out Migration	16882	13690	12663	11992	14204
Net Inter-provincial Migration	-9490	-5695	-4263	-4493	-2510
Immigration	421	378	425	450	417
Total Emigration	324	344	365	382	402
Net Non-permanent Residents	-288	452	313	-158	5
Net International Migration	-191	486	373	-90	20

Student Enrollment Trends

In the province of Newfoundland the youth population is expected to drop considerably over the coming years. A decline in the number of live births coupled with high rates of out-migration (see Table 1) means the school-aged population in Newfoundland and Labrador is declining at a precipitous rate. A comparison of the live birth numbers with the numbers entering kindergarten five years later shows a drop in numbers, as high rates of out-migration have tended to significantly reduce the size of the cohort entering school (see Table 2). This report confirms trends identified in earlier reports by Crocker (1998, 2000) and the Ministerial Panel on Education (2000) that have

Table 2: Student Enrolment :Actual and Projected 1990-2011

	Births [6]	Survival rate birth to [7]	K	1	2	3	4	5	6	7	8	9	10	11	12	12+	Special Educ.	Total
1985-86	8500	0.992																
1986-87	8100	0.987																
1987-88	7769	0.982																
1988-89	7487	0.992																
1989-90	7762	0.961																
1990-91	7604	0.981	8435	8843	9116	9127	9254	9288	9696	9870	10577	10591	10629	10035	8975	1708	885	127029
1991-92	7166	0.951	7994	8558	8813	9034	9092	9220	9308	9863	9863	10442	10752	10112	9481	1864	737	125133
1992-93	6918	0.936	7630	8053	8473	8746	9012	9045	9183	9430	9777	9750	10418	9989	9310	2192	764	121772
1993-94	6421	0.911	7431	7693	7840	8403	8657	8931	9007	9227	9406	9639	9757	9850	9329	2290	713	118273
1994-95	6339	0.917	7568	7431	7581	7846	8242	8664	8827	8943	9250	9211	9574	9221	9196	1762	694	114010
1995-96	5847	0.934	7465	7510	7273	7441	7639	8264	8434	8793	9072	9060	9101	9136	8493	2182	593	110456
1996-97	5542	0.941	6822	7436	7317	7128	7299	7664	8069	8416	8808	8844	8874	8565	8479	1693	791	106205
1997-98	5250	0.931	6478	6721	7263	7141	6932	7300	7444	7963	8531	8560	8693	8378	8040	1452	712	101608
1998-99	4842	0.941	5855	6492	6568	7119	7015	7010	7159	7512	8100	8384	8617	8352	7918	1300		97401
1999-00	4724	0.931	5817	5912	6400	6588	7123	7012	6871	7211	7479	8044	8297	8140	7822	1241		93957
2000-01	4461	0.941	5466	5766	5810	6290	6480	7108	6951	6869	7395	7540	8035	7932	7523	1002		90167
2001-02	4300	0.941	5215	5417	5668	5711	6189	6467	7044	6951	7048	7454	7532	7681	7329	963		86669
2002-03	4300	0.941	4888	5168	5325	5572	5620	6177	6409	7044	7132	7104	7447	7201	7097	938		83122
2003-04	4200	0.941	4556	4844	5080	5234	5483	5609	6121	6409	7227	7189	7097	7119	6654	908		79530
2004-05	4200	0.941	4398	4515	4762	4994	5150	5472	5559	6121	6576	7285	7182	6785	6578	852		76229
2005-06	4100	0.941	4198	4358	4438	4681	4914	5140	5423	5559	6280	6629	7278	6866	6269	842		72875
2006-07	4000	0.941	4046	4160	4284	4363	4606	4904	5094	5423	5704	6330	6622	6958	6344	802		69640
2007-08	4000	0.941	4046	4010	4089	4211	4293	4597	4860	5094	5564	5750	6324	6331	6429	812		66410
2008-09	3900	0.941	3952	4010	3942	4019	4144	4284	4556	4860	5226	5609	5744	6046	5850	823		63065
2009-10	3800	0.941	3952	3916	3942	3875	3955	4136	4245	4556	4986	5268	5603	5491	5587	749		60261
2010-11	3800	0.941	3858	3916	3849	3875	3813	3947	4099	4245	4674	5026	5263	5356	5074	715		57710
ratios [8]			0.941	0.991	0.983	0.983	0.984	0.998	0.9911		1.026	1.008	0.999	0.956	0.924	0.128		

pointed to a continuous decrease in student population. Unfortunately, as the data from this study confirms, the projected numbers continue to get lower. In 1998 Crocker projected a student population of 58,655 in the school year 2010-2011 and last year the Ministerial Panel on Education projected 58,600. Projections^[5] completed for this study place the student population at 57,710 (see Table 2).

In spite of the severity of this trend there is little likelihood that the trend will reverse itself soon. We have already established a fertility rate amongst the lowest in the world, a continuous decline in the number of live births and high rates of out-migration, and since the last wave of immigrants from Ireland in the late 18th century the province has not been a major recipient of immigrants. From the period 1956 to 1993 Statistics Canada^[9] reports that Newfoundland has consistently captured only around three percent of immigrants to Canada and that it is evident that many of the immigrants to Newfoundland stay for a relatively brief period before moving to larger population centres in Canada.

Teacher Retirement Trends

One of the best indicators of demand is the number of teachers who are eligible for retirement. A close look at the age distribution of the teachers in Newfoundland and Labrador shows large cohorts that are currently between the ages of 45 to 49 (Education Statistics 2000-2001, p. 63). Many of the teachers who would have been in the 50 plus category have recently retired; taking advantage of newly negotiated early retirement options. Assuming that there are no changes in the retirement options available to teachers, and teachers continue to opt for retirement as soon as they are eligible for a full pension, over 40 percent (2,789) of the current teacher population will be eligible for retirement over the next decade (Education Statistics 2000-2001, p. 63). There is no way of predicting the exact number that will retire and data concerning the exact number that will have reached full pension eligibility is difficult to access. However, data from Education Statistics 2000-2001 indicates that just over 2,400 teachers have 20 or more years of teaching experience (p. 62) – all of these individuals will be eligible for a full pension within the next ten years. Therefore, it is reasonable to assume that approximately 2,500 teachers will retire over the coming decade, especially since the trend these days is for teachers to retire as soon as they reach full pension eligibility.

With these older cohorts being considerably larger than the cohorts between the ages of 20-29 and 30-39 (Educational Statistics 2000-2001, p. 63) it would seem logical to assume that the future demand for teachers will increase above recent levels in order to replace the larger cohort that retires. But, in Newfoundland and Labrador, unlike in many other parts of the country, the general population is decreasing annually and student enrolments are paralleling this general trend. If this trend continues, and at this time there is no reason to think that it will not, then the overall demand for teachers in this province will not be as pronounced as if the population were more stable. The model used by the Ministerial Panel on the Delivery of Education (2000), projects that the number of teachers will have dropped from the current 6,300 to around 5,000 by the 2005-06 school year and to around 4,000 by the year 2010-2011. With approximately 2,500 teachers eligible to retire during that time period it is obvious that the overall demand for new teachers will not be high.

Measures of Teacher Demand

Perhaps the single best measure of teacher demand is to listen to the reports and views of the practitioners who are working in the schools and school districts on a day-to-day basis. It was known from the beginning of the research that it would not be enough to simply look at the demographics, and it was imperative that educators in the field be given a chance to describe their experiences. In sharp contrast to what one might expect after examining the demographic data, there was widespread concern expressed by the Directors of Education and the Assistant Directors of Personnel that there were some serious shortages developing, particularly in rural and remote regions of the province (e.g. Labrador coast, the northern peninsula and the south coast), and in certain subject areas (e.g. administration, guidance, mathematics, chemistry, physics, special education and French). One of the clearest points to emerge from this phase of the research is that the demand for teachers varies from one area of specialization to another, as well as from one location to another. Many of these administrators expressed concern that they were experiencing serious difficulties staffing their schools with qualified teachers and they were concerned that the situation was deteriorating rather than improving. This comment by one of the director's summed up the view of most.

I can recall people coming in very heavily qualified in certain disciplines. It wasn't unusual to see a real strong Chemistry major applying for a job with 10-15 courses in Chemistry or a real strong Math or a real strong Physics kind of person. My sense is, we're not seeing the same number of these heavily qualified....applying for the profession. I don't know if we're losing them to other fields but we're not getting that depth of scholarship in a given area like Chemistry, for example, or Math and that's a real worry for me. We still have it in English or Literature because there seems to be more of those but I don't see it on the Science side. I don't see them coming in and that worries me.

Comments like this one led the investigators to examine teacher demand by looking at the areas of specialization as well as local geography.

Areas of Specializations

Due to the eclectic nature of teaching assignments, the fact that teaching assignments change from year to year, and the manner in which the data is currently collected, it is difficult to predict precisely what the teacher demand will be in a particular subject areas for a given period of time. Also, categorizing educators in terms of what they teach is not an easy task because most teachers teach more than one subject, or take on some administrative tasks (e.g. administrative appointment, department head, guidance, etc.) in addition to teaching. Therefore, the number of teachers who teach a particular subject, for example English, is a much larger number than the number of the teachers who are primarily English teachers. The former may teach only one class of English; the latter may teach only English. Nevertheless, by looking at the number of teachers who have in excess of 25 years teaching experience and who are assigned subject teaching duties in the secondary school system (where the demand appears to be highest), we can get an indication of the subjects where the demand might exist in the coming years.

There are a significant number of teachers currently teaching in the areas of mathematics (N = 680), science (N = 580), English (N= 720), French (N=123) and social studies (N =627) who are scheduled to retire within the next five years. Obviously, with the province's declining enrolments there will not be a need to replace all of these teachers. However, there will certainly be jobs for some new teachers. There is evidence to show that replacing teachers in the areas of language arts and social studies will not be a problem because the vast majority of prospective teachers enrolled in the Faculty of Education, and teachers who are in the substitute teacher pool, have training in those areas (Dibbon and Sheppard, 2001). The numbers do seem to support the belief though that there will be difficulties in the areas of mathematics and science, simply because there does not exist a pool of teachers who are qualified in those areas waiting to enter the profession (Dibbon and Sheppard, 2001). Nor are there large numbers of students with training in these areas entering the Faculty of Education. An analysis of the enrolment figures for the Faculty of Education for the 2000-2001 academic year shows less than a dozen applicants in the area of mathematics and less than 50 in the sciences (Final Report Admissions Committee 2001).

There were also a number of concerns expressed about the ability to meet the demand for teachers required in the post-degree areas of school administration, special education and guidance. While many are trained in the areas of administration and special education indications are that this is not a position that they desire to work in at this time (Dibbon and Sheppard, 2001). In these instances the issue is not one of a lack of supply but one where the job itself is unattractive.

School Administration

There was considerable concern expressed about the number and quality of applicants for administrative positions. Representatives for each of the districts indicated that an inadequate compensation package combined with the increased responsibilities of the job (e.g. dealing with school councils) was a deterrent and prevented many potentially strong candidates from even applying. Directors referred to instances where teachers had told them directly that the job just wasn't worth the hassle for the little extra compensation. They also referred to administrative vacancies that couldn't be filled because there were no suitable applicants, and in rural areas of the province some Directors indicated that they had to approach teachers directly and ask them to accept an administrative appointment on a trial basis.

Administrators, in particular, are a concern of mine because in the past summer we advertised some administrative postings that say 10 years ago you would have had 15-20 teachers competing for, and this past summer we had to pick up the phone and call people - we never had to do that before.

Since school administrators typically advance to the position through the route of classroom teacher, it is difficult to imagine that there is a supply problem. In 1999 there were just over 6,200 teachers employed in the province. This is a fairly large pool from which to develop and nurture future administrators, however, at the present time there are few teachers who aspire to be school administrators and as a result the demand is not being met.

With over half (334 out of 594) of the current school administrators eligible for retirement in the next ten years (Educational Statistics, 2001), school districts must be assured that they will have an adequate pool of applicants from which to choose future school administrators. Until recently there has not been a problem attracting well-qualified administrators, but at this time it appears as if quality is a very real concern. Fortunately for districts, this is one area where they have the capacity to intervene and solve their own problems. At this time, districts need leadership development programs to identify and develop future leaders by linking them with mentors and providing opportunities for them to practice and refine their leadership skills. Only by investing in this sort of training and development can districts be confident of an adequate pool from which to choose.

The other major issue is providing an adequate compensation package for administrators^[10]. Changing the package to one that will assist in attracting the best candidates is another issue, one that has implications for collective bargaining and cannot be solved solely by the employer. In any event if the position is no longer attractive to teachers because of influences such as increased time commitments, and a poor remuneration package, then the stakeholders must work collectively to find a solution to what appears to be problem with workload more so than supply.

With high numbers of current principals eligible to retire within the next decade there will be a high demand for school administrators. An analysis of the Educational Staff Records for the 1999-2000 school year revealed that there were 214 teachers currently employed in the school system who expressed an interest in working in school administration sometime within the next two years and another 178 teachers indicated they were interested in beginning a graduate degree in educational administration sometime in the next five years. There is no way of knowing anything about the quality of these candidates or the conditions under which they will allow themselves to compete for a school administrator position. However, we can assume that there will be a fairly consistent pool of candidates from which to hire administrators, if the situation is right.

Special Education

The area of special education is another area that deserves considerable attention at this time. Reports from the field indicate that the attrition rates for special education teachers are higher than for all other teachers. In fact, many of the district office personnel feel that special education is becoming a gateway degree for many teachers wanting to gain access to other positions in the school system. Since special education is a post-degree program, the teachers who graduate with this qualification also hold other qualifications. Consequently, they use the special education degree to procure their initial appointment and then within a couple of years transfer to a regular classroom position. Under normal circumstances this would not be an undesirable situation. However, at this point in time there are not enough qualified special education teachers waiting to replace them.

One thing I am finding is that special education teachers, especially the ones dealing with severely challenged children are becoming burned out. . . . There are a number of special education teachers. . . . who really would welcome an opportunity, and are seeking an opportunity to move out into the so-called regular stream. Now that

creates a situation in our district because we are saying to these people we have a supply issue, so we can't let you go out. You have to stay [in the special education class] and that is not a good situation (Director of Education).

According to the Education Statistics Report for the school year 1999-2000 there were approximately 900 positions in the school system that required a special education qualification. However, an analysis of the Education Staff Records for the same year indicates that there were only 700 teachers with a special education degree. Since we know from the interviews with the Director's that not all of these teachers are teaching special education, it is obvious that well over 200 teachers are currently teaching special education without the required qualifications. Many of these are working to complete their special education degree; some are people who managed to get a job before they finished their program and others have enrolled in the special education program as one of the conditions of employment. Any way you shape it, there are too many teachers teaching special education without a full knowledge of the area. This in itself indicates that there is a high demand for teachers with special education qualifications, and if current trends continue then the demand will continue to exceed the supply for special education teachers. This appears to be an area of opportunity for new teachers if they are mobile and willing to relocate. Of course, not all of them are – this is one of the reasons there are still qualified special education teachers in the substitute teacher pool.

Guidance

Many of the directors and assistant directors identified guidance as an area where shortages were beginning to emerge. With a recent change in policy that makes it possible for a school district to reduce their ratio of guidance counselors to students from 1:1000 to 1:500 the demand for guidance counselors could increase substantially over the next couple of years. Therefore guidance could also be an area of opportunity for teachers who are considering graduate studies. Analysis of the Educational Staff Records for the 1999-2000 school year indicated that there were approximately 300 teachers who indicated that they intended to begin a graduate program in guidance within the next five years. If the Faculty of Education is prepared to admit these people into their program it should help to alleviate any shortage in that area.

Geographical Areas

It has become increasingly clear in recent years that schools in certain parts of the province, notably rural and remote regions, are experiencing much greater difficulty in attracting qualified applicants for teaching positions. For example, in some areas of coastal Labrador, there were still positions unfilled at the beginning of this school year (2000-2001) and it is common practice to receive only one or two qualified applicants for many positions in remote communities. In contrast, a similar position in one of the more urban areas of the province could attract well over 200 applicants. The situation in the remote areas of the province is becoming more and more critical and the provincial government has just recently announced an additional \$5,000 income supplement, similar to one approved for nurses, for teachers in isolated coastal Labrador communities.

The difficulty of attracting teachers to rural and remote communities is not restricted just to Labrador. There were numerous reports of schools located within a one or two hour drive from a major urban center experiencing similar difficulties, especially for the subject areas where the demand is high. However, for the most part the situation in the larger urban centers is not nearly as acute. It is well known in Newfoundland that many teachers gravitate towards the urban centers and once they get a full-time position in these communities they usually stay for a while.

Traditionally in Newfoundland and Labrador, many teachers would take an initial teaching assignment in one of the rural or remote areas of the province in order to gain teaching experience, as positions in the urban centres usually went to teachers with more experience. Sometimes these teachers would stay in the rural community for their whole career and others would leave after one or two years. In any event, under this scenario it was possible to staff these schools with qualified teachers, even if the turnover was high. Today, because of other opportunities in or near urban communities in the province and new opportunities that appear to be more economically competitive in other regions of the country and the world in general, new teachers aren't as willing to follow the same career patterns. As a result, it is becoming increasingly difficult to attract teachers to rural and remote regions of the province, especially on the Labrador coast and small communities along the northern peninsula and the south coast. Also, as more of the teachers with a specialization in the areas of high demand (e.g. mathematics, chemistry etc.) reach retirement age, the situation is likely to worsen.

Substitute Teacher Availability

Since not all schools in the province have access to a large pool from which to draw substitute teachers, there are varying degrees of difficulty in filling these positions. When asked if they experienced much difficulty finding substitute teachers to fill in for their regular teachers on a day-to-day basis, over 50% of the administrators indicated getting a substitute is a challenge every now and then and over 20% indicated that it is a problem frequently or all of the time. Only 25 % of respondents indicated that it was not a problem in their school.

When type of community was used to distinguish the pattern of responses, it was clear that finding a substitute teacher was more challenging in rural parts of the province as 80% of rural schools indicated that they experienced difficulties at least "every now and then". While acknowledging that some urban schools do experience difficulties obtaining substitutes, only 9% of the 34 urban schools indicated that difficulty in getting a substitute was experienced "frequently". In fact, 91% of 34 urban responses were in either the "every now and then" or "hardly ever" categories.

The analysis also showed that some regions of the province experienced more difficulty than others when it came to retaining the services of a substitute teacher. Administrators in Districts One and Two and parts of Four and Five experienced much greater difficulty finding substitutes than their counterparts in other districts. In fact, 83% of the schools in District One and 55% of the schools in District Two report difficulty "all the time" or "frequently". No one in either of these two districts indicated that locating a substitute was "hardly ever a difficulty".

With the exception of certain parts of District Four and Five, the other districts do not appear to be experiencing the same degree of difficulties as District One and District Two. This is not to indicate that no problems exist in the other districts, only the problem does not appear to be quite as severe. The comment by one administrator that "the scarcity of substitute teachers is a very serious matter for the schools that face the problem" reflects the opinions expressed by many who were interviewed.

Conclusion

The truth behind the reputed shortage of teachers is that there is no overall teacher shortage in the province of Newfoundland at the current time, and if the current trends in the number of live births, the total fertility rate, the number of children entering school, and out-migration don't reverse themselves soon - then an overall shortage is not likely to develop in the near future. Unfortunately, there is very little reason to think that these trends will reverse themselves or even level off in the near future. With fewer children entering school and projections that show the student population will decrease in excess of 30% over the next decade, the teaching population is also likely to decrease proportionally, unless there are policy changes by the government. Even with high numbers of teachers scheduled to retire over the next decade, if the Faculty of Education continues to graduate teachers at the current rates, these new teachers combined with those in the substitute teacher pool will be sufficient to meet future demand.

But, we cannot become complacent just because the numbers indicate there will be enough bodies to sit at the teacher's desks. To ensure a teaching force of quality, which has to be the overriding goal of policy-makers, it is not acceptable to have teachers teaching students in areas for which they are not fully qualified. However, unless the Faculty of Education can attract students who have degrees in the areas of highest demand there will be a problem supplying teachers with these specialties. Similarly, unless rural districts and communities can make life in a small community attractive for new teachers then their difficulties attracting and retaining new teachers to these locations are likely to persist. Rural communities attempting to attract and retain other professionals, particularly those in the health care sector, are also facing this challenge.

Achieving a balance in the areas of specialization and recruiting qualified teachers to work in rural and remote communities are very real problems - problems that probably won't be solved if policy-makers continue to act within the parameters of existing legislation. More radical solutions are therefore required. These solutions are likely to be expensive and may well prove to be unpopular with many groups within the political and education community in the province. Without a doubt, they will include a consideration of how young people can best learn in the absence of traditional classroom teaching.

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ENDNOTES

- [1] The Educational Staff Records is a statistical data base on teachers that is maintained and updated every 3-4 years by the Department of Education.
- [2] The AGR is annual report that schools and districts file with the Department of Education.
- [3] Source: Kincora Research, 1998.
- [4] Source: Newfoundland Statistics Agency, 2003.
- [5] These projections were done by the author and are based upon estimates of the number of live births that Statistics Canada is projecting for the province up to 2006.
- [6] Source up to 2000: Newfoundland and Labrador Center for Health Information 2001, and Newfoundland Statistics Agency 2001. After 2000, Statistics Canada catalogue no. 91-520.
- [7] Survival for 2001–2010 were set by the author.
- [8] The ratios used to calculate survival rates between grades were the actual rates for the 2000-2001 school year.
- [9] Source: Statistics Canada, Catalogue No. 91-520.
- [10] Since this report was completed Government and the NLTA have negotiated a new collective agreement and some of the concerns expressed have been addressed. This may make the position more attractive for some candidates.

**PRACTISING "CULTURAL WORK" AND "ROVING" LEADERSHIP
IN A DOWNSIZING ACADEMIC INSTITUTION**

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How do we make sense of downsizing? How should we make sense of downsizing? How do individuals actually experience downsizing? How should one experience downsizing? How is downsizing being managed? How should it be managed?

A way to answer these questions is to make sense of downsizing and of experiences people have had as a result of downsizing. There are many approaches to sense-making in respect to downsizing. One device is to orient oneself through learning to participate in the on-going conversations (discourses) that are taking place on the subject of downsizing in certain national and international cultural circles, while at the same time being able to participate in many other conversations which provide a much larger context in which downsizing takes place.

Such other conversations which provide a larger context for the sense-making of downsizing are conversations about the spread of Western capitalist modernity across cultures and nations. Yet other related discourses are on post-modernity, globalization and internationalization of all aspects of our life. Still other related conversations are on organizational change, organizational culture, organizational learning, organizational management and leadership.

Sense-making is a complex process but at the very least it can guide us to interpret these discourses as they relate to downsizing. Moreover, it can enable us to reach certain levels of personal and collective understanding about the interrelationship that may exist among various on-going discourses, e.g., between modernity and globalization.

If we can make sense of downsizing through participation in various on-going conversations, then we also need to ask questions about what consequences this form of participation has on one's daily experience as a citizen and as an employee in a downsized/ing organization. Weick (1995) is helpful here. He points out that "sense-making is about authoring as well as interpretation, creation as well as discovering" (p. 8). Sense-making is "a process in which individuals develop cognitive maps of their environment" (Ring and Rands, 1989, p. 342). And "people make sense of things by seeing a world on which they already imposed what they believe" (Weick, 1995, p. 15). Sense-making involves both individual and social activities.

Following the above line of thinking, I believe that participation and sense-making empower individuals and organizations during the downsizing process and enable them to enhance each other's well-being. The downsizing context also creates opportunities for individuals to function as a " transformational " leader and " cultural worker " in an organization. In this paper, therefore, I (1) reflect on what it means to take on these roles in an academic unit in a middle-sized university which has

experienced and is still experiencing the process of downsizing, and (2) describe the language used by many of the participants in their attempt to function as leaders and cultural workers in different situations within the university setting.

Focus on Individual Level Change

Even though the author reasons that being able to participate in various conversations related to downsizing would stir up one's consciousness which, in turn, should deepen one's understanding about downsizing, it is beyond the scope of this paper to offer various on-going conversations on the topics mentioned previously. It is not difficult to visualize how discussion of other related discourses would enable individuals to reach new levels of understanding, and that this new understanding could guide individuals about how to experience and manage downsizing at the personal and collective levels.

To be sure, organizational change can be analysed at various levels - individual, institutional, cultural and social structural level. Participants in the life of an academic organization in their various roles such as managers, leaders, staff and faculty members, must decide at what level change needs to be sought in their organization, because once this is decided, strategies for change can be designed, implemented and evaluated.

This paper reflects on an attempt to bringing about change at the level of the individual because the author's interest lies in encouraging individuals in a downsized/ing academic unit in the university setting to become cultural workers and democratic leaders, and through these roles learn to engage in a cultural practice that infuses hope in the downsizing situation typified by feelings of despair. Thus, as the author sees it, being a cultural worker and a hopeful leader first of all means talking (using language) about downsizing and related issues in certain ways. Using language in a certain way enables cultural workers and leaders to create a conversational context (condition) in which individuals may feel empowered and decide to adopt an outlook which leads them to believe that there is a life after downsizing. This means that both the downsized organization and the individuals in it can meet the new challenges effectively. In this way, almost all participants perhaps can extend helping hands to co-workers to overcome whatever negative feelings they might have toward a downsized/ing organization and become creative employees in the organizational setting.

Moreover, the author's experience in several downsized/ing institutions of higher learning has led him to focus on the individual level of change. Working in and being associated with those institutions for over thirty years, the author has come to observe that each individual can be a "manager", a "leader" and a "cultural worker" in different contexts in the everyday life of a complex organization, and that if each person chooses to function as a cultural worker, then she/he defines himself/herself as having tremendous power. Once the person perceives herself/himself to be empowered, she/he develops an appropriate self-image, which in turn moves the individual to act in ways which empower others. This seems to be in line with the research of Bolman and Deal (1994), who found that leadership can be exercised from anywhere and that it is not synonymous with positions people hold in an organization. Depree's (1989) idea of roving leadership is also helpful here. He describes how this concept can provide a key element in the day-to-day expression of

the participatory process. The concept of roving leadership points out that "no one person is the 'expert' at everything" (p. 46).

Managing Change As Cultural Work and Practice

Managing change is a cultural work involving cultural practices and the use of whatever cultural resources (capital) are available to individuals in their immediate environment as they go through the routines and rhythms of daily lives in a downsized organization. Thus, it is through cultural and pedagogical practices operating at various sites in the organizational structure that cultural workers are most able to influence the management of organizational change by providing timely and appropriate leadership.

The qualities of managerial leadership from the framework of cultural work includes the ability of cultural workers to (a) establish empowering relationships with others in a downsized/ing organization, (b) take the pedagogical and political dimensions of cultural work seriously, (c) self-consciously engage in cultural work at various sites within a downsized organization, and (d) enhance the well-being of the co-workers and the organization as a whole.

The central message of this paper is that taking the role of cultural workers enables individuals to develop unique and specific orientations toward understanding organizational change and organizational cultures. And their particular orientations toward downsizing, when coupled with their managerial leadership qualities, play a crucial role in enhancing the well-being of the remaining labour force in a downsized organization, as well as the well-being of the whole organization. The author further develop these ideas and reflects on them . Based on his observations, he then describes the language used by various cultural workers in different sites in an academic organization which has been drastically downsized during the last six or so years. This is done by focusing on the literature which deals with management qualities of leadership. A discussion on paradigms in organization theory and the concept of cultural workers are also provided to make a point that the notion of cultural worker is yet to be incorporated into organizational theory. Another point is that management and leadership should be seen as cultural work involving pedagogical practices.

Having made these general comments regarding organizational theory and the notion of cultural worker, the paper identifies four management qualities of leadership. These are: (1) ability to work as cultural worker, (2) ability to engage in empowering relationships with others, (3) desiring to engage in cultural work, and (4) having skills to enhance the well-being of the organization and the people working in it. These qualities are given meaning by way of providing discussion of on-going discourses on (a) cultural work, cultural workers, sites, cultural practices and the pedagogical dimensions of cultural work, (b) well-being, (c) the notion of empowerment, empowering relationships, and well-being, and (d) experiencing and functioning as cultural workers in a downsized/ing organization.

Paradigms in Organizational Studies

The concept of cultural workers, as described in the previous section, has not yet been explicitly incorporated in the sense-making process of how complex

organizations and people in their function. To be sure, attributes associated with the concept of a cultural worker do appear in the literature on organization, but they are discussed in relation to well entrenched concepts in the organization theory. However, it is clear that until not long ago the dominant organizational theories have often used positivism as the major paradigm. Other paradigms such as interpretivism, criticism, postmodernism, feminism, cultural studies and other new perspectives are of recent import in organization studies. Aronowitz and Giroux (1995) and Giroux (1988, 1993) articulate the concept of the cultural worker by providing a critique of positivism.

In organizational theories, it appears that the conceptualization of the notion of cultural worker has much in common with the thinking of writers like Argyris (1982), Argyris and Schon (1974), Senge (1990) and others whose work has been reviewed herein. These and other authors conceptualize organizations as learning organizations and discuss organizational cultures. Combining insights gained from the work of these writers with that of Giroux's, it can be said that a cultural worker is a critical and reflective practitioner who is always engaged in learning activities. Argyris (1982) and Argyris and Schon (1972) talk about the role of a reflective practitioner in the organization, and they provide insights concerning the gap between espoused theory and theory-in-use. Schon's (1983) theory of reflection-in-action helps us comprehend how we may come to know our theories-in-use. He explains,

"Our knowing is ordinarily tacit, implicit in our patterns of action and in our feelings for the stuff with which we are dealing. It seems right to say that our knowing is in our action" (p. 49).

Learning new options available to us and seeking feedback should help us in closing the gap between what we believe and what we do. If leaders need to be reflective practitioners, then their work essentially involves continuously learning from others and teaching others. In other words, what they say and do has pedagogical implications. Their actions can be seen as involving various forms of pedagogical and cultural practices at different sites.

Thus, it seems that certain forms of leadership processes - such as transformational, dialectic and democratic - cannot be separated from pedagogical practices and cultural work.

Similarly, various perspectives on organizations - such as a cultural, a political, a theatrical or a brain perspective - provide a great many insights which seem similar to that found in the discussion of cultural work, practice and pedagogy:

For example, within a cultural perspective on leadership... what the leader stands for and communicates to others is considered important. The object of leadership is the stirring of human consciousness, the interpretation and enhancement of meanings, the articulation of key cultural strands and the linking of organizational members to them (Sergiovani, 1984, p. 8).

Giroux, in different ways, explains that cultural politics is concerned with the production and representation of meanings and with the analysis of practices that are involved in their production. Because power is unequally distributed in different

spheres of society, power relations are often contested. People as cultural workers and in various leadership roles contest asymmetrical power relations through engaging in various textual, verbal, and visual practices which result in a form of cultural production. Pedagogy understood this way is deeply involved in the construction and organization of knowledge, desires, values, and social practices.

Giroux points out that to some extent all men and women are intellectuals and cultural workers, but not all of them function in society as cultural workers. Aronowitz and Giroux (1985) analyze the social function of educators as cultural workers/intellectuals by using four categories: (1) transformative intellectuals, (2) critical intellectuals, (3) accommodating intellectuals, and (4) hegemonic intellectuals. These they claim, are ideal-type categories. The function of transformative intellectuals/cultural workers, according to them, is to create conditions in society whereby new values and beliefs can be produced.

The discussion of the "prototype" by Senge (1990) in his book, *The Fifth Discipline: The Art and Practice of the Learning Organization*, provides many insights for people to function as cultural workers in organizations. Senge (1990) talks about openness, shared vision, participative openness and reflective openness, openness and complexity, the spirit of openness, freedom, localness, the illusion of "being in control", control without "controlling", and forgiveness. And he talks about imbalance between work and family and how personal mastery and learning can flourish at work and at home. He talks about individual's and organization's roles in overcoming this conflict between work and family.

He discusses many other things. We find his discussion of the "prototype" more relevant to the concept of a cultural worker. This is so because many assumptions which guide cultural workers' practices are akin to assumptions guiding individuals in the learning organizations.

(a) The Concepts of Cultural Worker and Related Concepts

Traditionally, the concept of "cultural worker" has been associated with the works of artists, writers, and media producers. The concept also refers to the social categories of "intellectuals" and "intelligentia", and their functions in society.

There have been many formulations of these social categories but the focus here is limited to the function of "cultural workers" in the downsized organization. However, even this limited focus requires a brief discussion of the concept and other related concepts to fully relish the implications of this concept for the understanding and experiencing of downsizing. Therefore, we expand on the concept of cultural worker, and in doing so draw mainly upon works of Aronowitz and Giroux (1985) and Giroux (1988).

Working in the areas of critical pedagogy and cultural studies, these writers have developed the concept of educators as intellectuals. Recently, Giroux (1993) has extended his notion of teachers as intellectuals and, in doing so, he talks about educators as cultural workers. Giroux (1993:5) extends the concept and practice of cultural work by including educators and other professionals and by emphasizing the primacy of the political and the pedagogical. In his words,

The pedagogical dimension of cultural work refers to the process of creating symbolic representations and the practices within which they are engaged. This includes a particular concern with the analysis of textual, aural, and visual representation and how such representations are organized and regulated within particular institutional arrangements. It also addresses how various people engage such representations in the practice of analysis and comprehension.

Further, Giroux says:

The political dimension of cultural work informs this process through a project whose intent is to mobilize knowledge and desires that may lead to minimizing the degree of oppression in people's lives. What is at stake is a political imagery that extends the possibilities for creating new public spheres in which the principles of equality, liberty, and justice became the primary organizing principles for structuring relationships between self and others.

Cultural workers are involved in critical pedagogy which "has borrowed significantly from post-modernism, feminism, literary theory, cultural studies, and psychoanalysis" (Giroux, 1993: 149).

The involvement of cultural workers in the area of pedagogy leads them to engage in various forms of struggle. These struggles are generally directed toward expanding democratic practices in communities and organizations. Grossberg (1994:9) talks about struggles and the relationship between various forms of pedagogy from the cultural studies perspective:

The question of cultural studies is not so much whom we are speaking to (audience) or even for (representation), but whom we are speaking against. And consequently, the resources we need, the strategies we adopt, and the politics we attempt to define must always take into account the particular context in which we are struggling.

Willis (1990: 137) claims that pedagogy is:

Making (not receiving) messages and meaning in your own context and from material you have appropriated is, in essence, a form of education in the broadest sense. It is the specifically developmental part of symbolic work, an education about 'the self' and its relation to the world and to others in it. Where every day symbolic work differs from what is normally thought of as 'education' is that it 'culturally produces' from its own chosen symbolic resources.

Giroux (1993: 160) points out that cultural workers can engage in various forms of pedagogies, depending upon their effective practices, investments, possibility of social mobility and placement at a particular time in socially determined structures. He states that:

Pedagogy is both exhilarating and dangerous. It's one of the few forms of cultural politics that cannot simply be consigned to academia. Its central questions of ideology and politics are how people take up what they take up; that is how they participate in, produce, and challenge particular ways of life. This issue is not simply how people are inserted into particular subject position but also how they create them. To raise that question is automatically to engage the language of specificity, community, diversity, difference, and struggle for public life.

More recently, Giroux (1993: 28-36) has developed a form of pedagogy for cultural workers which he calls border pedagogy - a model based upon notions of border, border crossing, and borderlands. These borders are both physical and cultural. He suggests that in the postmodern world, we need to cross the borders we have created and enter into borderlands created by others in which others feel safe and at home. We should also feel secure enough to let others enter our own borderlands. We have already alluded to the importance of border crossing in the organizational cultures when we reviewed Schein's (1996) work. He states that

we will not learn about the power of culture unless we cross real cultural boundaries (p. 239).

A final point that should be made here is that cultural workers practice pedagogy at various sites. The notions of cultural sites and cultural practices are defined in particular ways in the realm of certain forms of cultural studies and the critical theory.

For example, Simon (1994) explains that a cultural-political site is not an ordinary situation. It is a complex and conflict ridden location where intricate representational forms are worked out and produced. According to Simon (1994: 40),

The notion of 'site' refers... to specific material form with a particular relationship to time and space within which mode of production and distribution of representations are accomplished.

A site is a contested terrain where, according to Simon, "the past is traversed by competing and contradictory constructions." Further, he suggests that:

Cultural workers intending to initiate pedagogies of historical reformation need an understanding of topography on which these struggles are taking place (Simon, 1993: 128).

To struggle at a site means to take into account the specificity of the particular context in which one is located in relationship to others.

There could be many sites of production for a particular struggle. Later we will see how one could function as a cultural worker at different sites in a downsized organization. These sites could be many - informal and formal. It could be a casual conversation with colleagues at lunch, at coffee time, while walking across the street or in the hallway. It could be conversations in formal meetings of various types. It could be a seminar, a forum, a colloquium or a conference setting where various

questions regarding the organization's changing environment are raised, discussed and talked about. It could be conversations during award presenting ceremonies and graduating functions. It could be conversations at social gatherings of one sort or the other. It could be numerous routine, verbal and non-verbal exchanges that take place each day among the employees and the staff of an organization, including for example the times when documents are being signed, letters are being typed and fixed, etc. It could be conversations that take place during in-service consulting seminars and other learning and teaching activities that are routinely carried out in an organization.

These are some of the sites where individuals as cultural workers are involved in defining their own self-images and representing others. Here conditions exist in which issues related to self-identities and identities of others come to the surface. There are opportunities for individuals to learn to recognize their own voices and the voices of others. It is on these sites that one learns the significance of having autonomy and power at one's work place. It is through interactions on such sites that a person learns how to empower others and to develop new shared visions. Here one becomes aware of myths and symbols of organizations in which one works, develops language of hope and other forms of language appropriate to specific tasks at hand and as a cultural worker practices pedagogy. Finally, it is important to remember that cultural workers engage in issues relating to identity, representation, and other such issues with specific forms of consciousness (Giroux, 1993).

(b) The Concept of Well-Being

There are several discourses on individual well-ness and organizational well-ness and how these factors can ameliorate and exacerbate the effects of downsized/ing organizations. One of the managerial qualities of a leadership role is the ability to help organizations and employees improve their well-ness both before and after downsizing.

The key assumptions underlining the concept of well-being are: that individual well-being is always the result of interaction between the "person" and "the environment"; that individuals can take greater control of themselves, if not their environment; that individual well-ness means managing both psychological and physical issues; that being in touch with our personal belief system, feelings and emotions, spiritual life, self-esteem, lifestyles and stress patterns and interpersonal relationships adds to our psychological well-being, and that resistance to illness, energy level and overall "hardiness" adds to our physical well-being. Similarly, informal networks provide the context in which people interpret the world around them, which in turn contributes to peoples' well-being.

The organization itself can be conceived as a "living" entity and thus we can talk about whether the organization is healthy or unhealthy. In a downsizing organization "survivor sickness" is viewed as an unhealthy symptom.

The way an organization functions on both business and personal levels affects its well-being. Thus, understanding the dynamics of individual and organizational well-ness is something managers, leaders and cultural workers cannot ignore.

The quality of interaction among people is crucial for individual and organizational well-being. Senge (1990, p. xiv) is helpful here when he reminds us

that our organizations work the way they work, ultimately, because of how we think and how we interact. Only by changing how we think can we change deeply embedded policies and practices. Only by changing how we interact can we share visions, understandings, and new capacities for coordinated action to be established. This notion is pretty new for most of us. We have a deep tendency to see the changes we need to make as being in our outer world, not in our inner world. It is challenging to think that while we redesign the manifest structures of our organizations, we must also redesign the manifest structures of our organizations, we must also redesign the internal structures of our "mental models" (pp. xiv-xv).

Managers and leaders in the role of cultural workers can manage downsizing in the best possible way by improving the quality of interactions at various sites in the organization. This form of interaction is more likely to improve personal and organizational well-ness, which in turn is more likely to improve personal and organizational effectiveness.

(c) Empowerment, Empowering Relationships and Well-Being

Carlson (1996) explains that

empowerment comes about as a result of involvement but also through a sense of accomplishment, through management in verbal interactions that help persuade and develop some emotional arousal, and through observing change in others (p. 297).

Noer (1993) points out that

no one likes to be directed, organized, coordinated, or controlled. When these things are done 'to' employees, they turn around and do them 'to' someone else. The result is a manipulative, co-dependent work force bonded around everything but good work (p. 130).

Empowerment is about communication with others which is open and honest. This kind of communication is associated with the ideal of participatory management. Labig (1995) states that

participatory management involves employees and supervisors in decision making. It values listening to employees and treating them with respect. It creates adult-to-adult relationships in which trust is built on mutual respect, mutual need, and shared goals and values. Participatory management means moving away from power relationships of one-up-one-down to empowering and open communication (p. 140).

In any hierarchical system empowerment generally means passing on authority and responsibility to people in the lower rank. Thus, in a hierarchical organization, empowerment refers to passing on authority and power to the employees. When this happens, the employees are perceived to experience a sense of ownership and control over their job.

At individual levels power means efficacy. Feeling empowered in this sense means to believe in one's abilities and capabilities to influence circumstances in positive ways. When employees feel empowered they know that their jobs belong to them and that they have much to say about how the job should be done. Knowing this, it is believed, the employees will feel more responsible, show more initiative in their work, get more done, enjoy the work, and feel self-satisfied (Wellins, Byham & Wilson, 1991).

A sense of efficacy is not a fixed entity; it can be developed in individuals. Sources of developing a sense of efficacy include: actual accomplishment, verbal persuasion, emotional arousal, and observation of others (Bandura, 1986).

Being able to be involved in difficult situations created by downsizing enables individuals to discover their abilities. This boosts their confidence in facing new challenges in changing organizations. Being verbally persuaded by a leader in face-to-face, open and honest two-way communication situation plays an important role in reinforcing the perception that downsizing is not the end of life, that there are many things to be done in the new downsized organizational cultures. Sharing the reality of downsizing with employees in a human and honest way and making comments that praise employees and express confidence in them are important in helping followers or employees to build on their positive thoughts.

People learn, negatively or positively, through observing others. When managers and leaders emote the positive, the employees feel empowered about the change process. For example, managers should have no illusion that the workforce in the downsized organization is looking at how the employees who are leaving are being treated by the management. Labig (1993) states:

If the process has been fair, if people have been treated with respect, if senior managers have been open with their feelings and perspectives and have given clear and credible rationales for their decisions, then employees can share their own reactions honestly and reach new levels of empowerment and participation in the new organizations. Old tensions can be overcome and new work partnerships forged. On the other hand, if the downsizing is not done effectively, individuals may descend into a morass of depression, denial, blame, job insecurity, resentment, and confusion to the point of becoming violent (pp. 170-171).

(d) Experiencing Downsized/ing Organization and Functioning As Cultural Workers

A downsized organization provides several sites for people who remain employees of the organization. The author has been part of downsized/ing institutions

of higher education and has observed what people say and do to enhance the well-being of their colleagues, as well as the well-being of the organization.

Thus, while experiencing downsizing in a real life situation, the author has compiled a set of statements by people who attempt to function as cultural workers in downsized/ing institutions. These statements also indicate their orientation toward making sense of organizational change while functioning as cultural workers.

Figure 1.

As cultural workers, it appears that these individuals are consciously interacting with others by taking into consideration certain assumptions as taken for granted or as given realities . These perceived realities or " truths " seem to help them create certain types of self images. These self images appear to make them believe that what they are claiming is geared toward generating hope and new possibilities for both the downsized organizations and the individual working in it. Thus as committed participants they perceive themselves as engaged in changing the environment around them into their own self images (Fig.1).

That is, they seem to be attempting to infuse the following claims in their interaction with others to create a type of interaction context which approximate their self images as leaders and cultural workers:

1. That the present day environment in which many organizations operate is becoming increasingly pluralistic, unsettled, and uncertain.
2. That traditional orientation to leadership and management is being called into question and new ways of seeing are being suggested.
3. That there are differences between those who provide leadership in organizations and those who attempt to manage or administer the organization.
4. That support should be given to the idea that leadership and management roles are equally important.
5. That subjectivity has influence in managing organizations.
6. That problems are not neat little packages that can be clearly delineated and then neatly wrapped in a rational planning process.
7. That there are many means to explain and interpret the multiple layers involved in human action within an organizational context.
8. That in an organization people play different roles and that these roles are not fixed, and that depending on the issue and situation at hand people may shift back and forth.
9. That there is a place for humor in organizations and that there are positive and negative sides to humor.
10. That most discussions of organizations stress right-brain thinking.
11. That emotion and intellect are not separable.
12. That many dualities exist in organizations.
13. That healing dualities can significantly enhance survival of individuals and society.
14. That integration of opposites or dualities, such as reason and emotion, is something we need to learn.

15. That human beings have the capacity to observe-think-do-reflect and that this serves as a very significant model for structuring and examining organizations' functions.
16. That it is very important to process information and to learn from the process.
17. The processing of information and learning from it is crucial to individual development and to the development of organizations.
18. That sometimes persons learn from their individual actions while the overall organization continues to resist change and keeps making errors.
19. That learning depends on how we think, how we think about people, process information, come to think about a situation and these are the consequence of social cognition.
20. That it is possible for social cognition to have different sides to it - women's cognition is different from men's.
21. That women's reality is different from men's reality.
22. That organizations as systems can be addictive and that addiction can be reinforced in subtle ways within organizational contexts.
23. That addictive systems provide all kinds of promises which may provide temporary relief from the daily stresses and strains in the organization.
24. That addictive systems fabricate personality conflicts and seek solution to conflict in simple dualism, i.e., relegate a very complex universe to two simplistic choices.
25. That organizations can unconsciously reinforce employees' addictive behaviors and thus make co-dependent individuals and groups who then avoid confronting the addictive behaviors of others.
26. That addictive organizations can act as addictive substances when they over-emphasize the notion that work can provide a platform for finding one's identity because over identification with work can lead to workaholism - a destructive form of behavior.
27. That spirituality and morality play a significant role in an organization's effective functioning.
28. That addictive organizations and workaholism can lead to loss of spirituality and morality.
29. That addictive organizations often display distorted patterns of communications.
30. That the brain has two sides - the right and the left.
31. That individuals have multiple intelligences.
32. That power struggles are endemic to organizations.
33. That power has negative and positive sides.
34. That the negative side of power is associated with exploitation and dominance, and the positive side enables people to be creative and visionary.

What Do Cultural Workers Do?

What we say depends on our consciousness. Our consciousness creates our culture and the way we see the world. Our world views create our cultural practices.

Cultural workers' world view enables them to engage in varieties of cultural practices at different sites in their downsized organization. Based on my observations, below I list a few things done by people who engage themselves at various sites in a downsized/ing organization, and who see themselves as cultural workers.

1. As cultural workers they wish to facilitate change in an organization.
2. They are engaged in articulating a vision and are committed to creating enthusiasm and support among co-workers and survivors of downsizing.
3. They are engaged in building trust among different occupational groups in the organization, e.g., the academic and non-academic staff.
4. As cultural workers they desire to help encourage persons to think creatively about their organization.
5. As cultural workers they are keen to offer various perspectives on organizations to their colleagues which help them choose an appropriate intervention methodology that matches the organizations' current situation.
6. As cultural workers they participate in multiple performances within the organization and thus are involved in creating multiple meanings within the organization, e.g., organizing various functions and social get-together.
7. As cultural workers they remind their co-workers about the episodic nature of their context and encourage them to adopt or to change their attitudes.
8. As cultural workers they challenge persons in the organization to move away from the status of audience to that of participants in an organization's play.
9. As cultural workers they attempt to create conditions which enable others to understand the traditional themes of honor and vengeance, ambition, power, and love.
10. As cultural workers they approach interaction with the understanding that healing the dualities (e.g. competition - partnership, loose - tight, control - entrepreneurship, action - reflection, business logic - technical logic, change - continuity, flexibility - focus, top-down - bottom - up, etc.) can significantly enhance our survival as individuals.
11. As cultural workers they emphasize integration of individual learning and corporate learning so that the organization can reflect on and modify its behavior.
12. In practice, cultural workers' orientation is that people and organizations grapple with change in a turbulent and unpredictable environment created by the forces of globalization. In this context a capacity to react, reason, emotive, and create is indispensable.
13. In practice, cultural workers view events in a mutually causal way or prefer to think in circles rather than in terms of straight lines.
14. Cultural workers are most interested in the right-brain development in individuals and in the organization, because they appear to believe that the right-brain development allows people to engage in the re-framing process, i.e., enables individuals to generate new observations and new explanations.

15. Cultural workers encourage use of positive power to balance selfish tendencies against a greater social good.
16. Cultural workers expect people in their organization to develop skills and understanding in the areas of agenda setting, network and coalition building, and bargaining and negotiating.
17. Cultural workers want their co-workers to understand the sources of power which include formal authority, control of scarce resources, use of organizational structure, rules and regulations, control of decision processes, control of knowledge and information, control of boundaries, ability to cope with uncertainty; control of technology, interpersonal alliances, networks, and control of 'informal organizations', control of counter organizations, symbolism and the management of meaning, gender and the management of gender relations, structural factors that define the stage of action, and the power one already has.
18. Cultural workers function within the norms of "participative" and "reflective" openness.
19. In their practice, cultural workers assume that there is something more than mere self-interest which motivates people to act; people truly want to be more than themselves, part of the things larger than themselves.
20. Cultural workers do things with others; they prefer building alliances with others.
21. Cultural workers act as reflective practitioners. That means their vision concerns their families, their organizations, and others in the world.
22. Cultural workers contribute to an organization's shared vision and vice-versa.
23. Cultural workers assume that there is something more than mere self-interest which motivates people to act; people truly want to be more than themselves, part of things larger than themselves.
24. Cultural workers are capable of developing a new vocabulary which promotes healthy conflict in an organization's cultural and occupational groups.
25. Cultural workers promote alliances with "hot groups", "managers' lib", team and collaborative work.
26. Cultural workers promote forms of democratic representations and participation that would be responsive to social identities of various cultural groups in an organization.
27. Cultural workers refuse the taken for granted discourses of essentialism and separatism when they refer to self-identity and to the identities of others.
28. Cultural workers are aware of the role that culture, race, class and gender play in the formation of difference and identity.
29. Cultural workers are aware of one's location in hierarchical arrangements of society (stratification) and the relationship of one's location and voice.
30. Cultural workers constantly engage in the process of reinventing and reconstructing new spaces for practicing critical pedagogy in the form of pedagogy of place or location.
31. Cultural workers are interested to know and explain to others how structures of inequalities and injustices can be understood and transformed.
32. Cultural workers are self-conscious and reflective about their own cultural and political locations and the relationship of these with their own voice.
33. Cultural workers are willing to turn tools of dialogue and self-criticism upon their own work.

34. Cultural workers are not content to be in one discourse; they feel more "at home" with multiple and contradictory discourses.
35. Cultural workers are border crossers ; they are involved in "double-loop" learning as opposed to "single-loop" learning. That is, cultural workers' thinking habits and behaviors exclude such needs as to be in control, self-protective, more rational and less emotional and need to minimize choices and risks.
36. Cultural workers are educators and thus are involved in pedagogical practices.
37. Cultural workers are involved in cultural work which involves both production and reproduction of new visions, hope and "imaginary communities".
38. Cultural workers attempt to create discourses of agency and new possibilities.
39. Cultural workers are concerned with moral and ethical aspects of modernity and postmodernity.

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Also see **REFLECTIVE NOTES ON DOWNSIZING AND CHANGE PROCESSES**

**FIRST-SEMESTER UNIVERSITY PERFORMANCE
UNDER A CHANGING SYSTEM OF HIGH SCHOOL GRADING
AND ADMISSION REQUIREMENTS:
DECISION ERRORS AND CUT POINTS**

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Abstract

Because admission to higher education, and particularly to university, remains limited and competitive, the question of admissions policy is a perennial one. Conflicting institutional and societal interests exist in attempting to balance the demand for a highly educated populace against the performance expectations required of those pursuing the highest levels of education.

In Canada, the primary determinant of admission to university is high school grades. In some provinces, these grades consist of a blend of school and external "public" examinations, while in others only school grades are used. A comprehensive system of public examinations existed in Newfoundland until 1994. Since that time, the system has been more unstable, with public examinations being lost in 1994 due to a labour dispute, restored in 1995 and discontinued in 1996. Over the same period, Memorial University has moved from a 60 percent to a 70 percent high school average as the minimum requirement for admission.

This paper examines the question of decision errors and cut points in light of the shifts in grading systems. Basic descriptive data on high school graduates and university admissions are presented, and prediction equations developed corresponding to changes in high school grades and in admissions standards over the period 1993 to 1997. Results show that, although predictive power is fairly high, the presence or absence of public examinations is associated with first-semester success rates for marginal students, and that an increase in university admission average has been largely offset by increases in high school averages in years when there have been no public examinations.

Background

This article is the first in a proposed series of papers examining the effects of changes in a high school grading system and in university admission requirements on first-semester university performance. Until 1994, the province of Newfoundland maintained a comprehensive public examinations system. Final year grades for high school graduation consisted of a 50-50 blend of school and public examination marks. In that year, the public examinations were abandoned at short notice because of a labour dispute. After being restored in 1995, they were again discontinued in 1996, this time because of a dispute over a proposal to have teachers mark the exams during the regular school year instead of in the Summer. Complicating matters even further, the province's only university, Memorial University of Newfoundland, was, during the same period, in the process of phasing in an increase in the minimum admission average from 60 to 70 percent. This process had to be delayed in 1994 when it was judged that reliable grades were not available. In that year, all applicants receiving a minimum of a passing grade (50%) in the last year of high school were

admitted. The new minimum was restored in 1995 and has been in place ever since. This paper presents basic descriptive data and prediction equations for the years 1992 to 1997 when these changes were occurring.

Conceptual Framework

Although universal access to primary and secondary education is now largely taken for granted in most developed societies, admission to higher education has remained competitive. For this reason, the problem of how best to select students for admission to higher education has been a long-standing one. From the perspective of public policy, the issue is whether all students should be given a chance at higher education, even if this means high failure rates, or whether institutions should be selective enough so that only those with a high probability of success should be admitted.

In most jurisdictions, either high school grades or scores on some form of academic aptitude test are the primary determinants of admission. Although institutions have used a variety of other selection devices, such as recommendations, student essays, interviews and the like, as well as scholastic aptitude tests, the research on admissions has consistently shown that high school grades are the best single predictors of success at the post-secondary level, while aptitude tests such as the SAT show moderate but lower predictive value (Jenkins, 1992; Smyth, et. al., 1990; Chase & Jacobs, 1989).

The admissions problem may be conceptualized in terms of errors of false acceptance and false rejection. Because prediction is imperfect, some students who are admitted will fail (false acceptances) and others who are rejected would succeed if given the opportunity (false rejections). Moving the cutoff point up or down will affect the proportion of each type of error. The policy problem is that of determining the cutoff point, taking into account both types of errors. The error rate, of course, depends on the predictive power of the grades being used for admission purposes.

The situation is depicted graphically in Figure 1. The actual data take the form of a scatter diagram, in which each student has a high school and a university average, and can therefore be represented as one point on the graph.

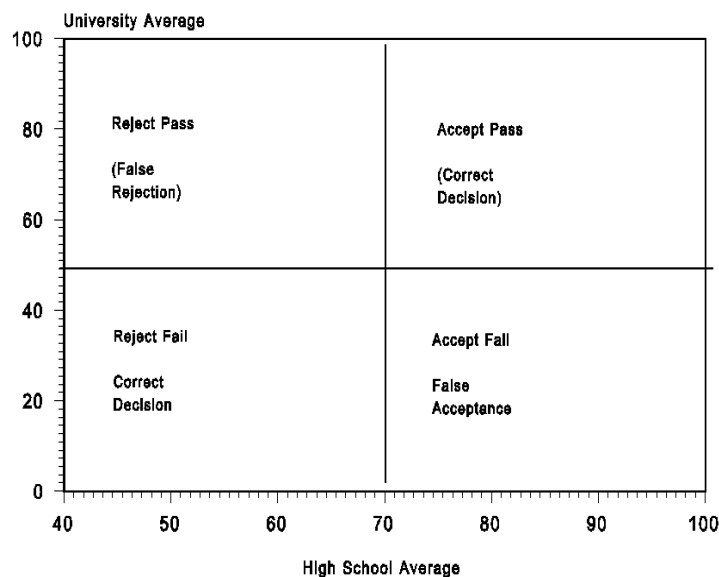


Figure 1
Correct Decisions and Decision Errors

The broadest possible approach to estimating the magnitude of the decision errors involves determining the probabilities that an individual will fall into one of the four quadrants of the decision schematic, given particular values of the high school cutoff value and the university passing value. These probabilities can be found if the correlation between the variables is known and certain statistical assumptions are met. Expectancy tables (Morgan, 1988) or nomographs (Saupe, 1992) may be used for this purpose. However, these are difficult to produce and are less useful in practice than a modified approach involving estimates of the proportions of passes and fails at particular marginal cutoff points which may be contemplated. This is because, given the size of the correlations at hand, the overall proportion of correct decisions is quite high for candidates who are substantially off the marginal values, and hence these candidates are not of particular interest. As an aside, it is noted that it would make an interesting experiment to actually relax admission requirements order to provide direct data on the error probabilities. On the surface, it might appear as if this situation exists here because admission requirements have changed over the period in question, particularly in 1994, when essentially all applicants were admitted. Unfortunately, the changes in admission average are confounded with simultaneous changes in the high school grading system and the two effects cannot be disentangled. Nevertheless, it is possible to estimate from the regression equations probabilities of success for certain hypothetical cut points, and to examine these more directly using cross tabulated data. This is essentially the approach taken here.

Data Base and Analysis Methods

The data base used in this analysis was constructed from the high school certification records of the Department of Education and from the registration system of Memorial University. The underlying population consisted of all students graduating from high schools in the Province of Newfoundland from 1993 to 1997. The relevant sub-population consisted of all those from this source admitted to Memorial University in Fall Semesters during this period. School and public examination grades in thirteen final year high school courses used for computation of university admission average were selected from the high school data base. These were matched with first-semester course grades from university files.

In practice, two common statistical approaches have been taken to the prediction problem. The most common is the development of a simple bivariate regression equation, in which high school average is the independent variable and first-term university average is the dependent variable. Variations on this approach would involve using different composites for both the independent and dependent variables (e.g. specific courses included or excluded in calculating the high school average) or the use of multiple linear regression, in which more than one independent variable (e.g. grades in several high school courses as independent variables) is used in predicting university performance.

Although regression equations are intended to provide optimal predictive power (under the statistical assumptions and rules used), this approach is not the most useful in addressing the essential policy question, namely that of what cutoff point should be used in determining admissions. Typically, a simpler statistical approach, based on cross tabulations, has been used for this purpose. Although the cross-tabulation approach is less powerful overall, it does allow for the direct examination of the success rates of students above and below particular cutoff points which might be contemplated. This is essentially the approach used in the studies leading to the decision in 1991 to increase the minimum required high school average for Memorial University from 60 to 70.

Data representing both of these approaches are presented here. In addition, in accordance with the conceptual model, estimates are presented on the effect of changing the cut point for university admission on the probability of success for students at the margin. Although conceptually plausible, the effects of changing the cut point for university pass is not considered here.

Descriptive Statistics

Table 1 gives provincial high school graduation data for the six years from 1992 to 1997. The number of graduates has been relatively stable, with increased high school participation rates offsetting a general decline in the age groups. The 1994 anomaly reflects the effects of the labour dispute, with students obviously being given the benefit of the doubt in assigning final grades that year. Years without public examinations are clearly distinguished by averages of four to five points higher than for years with public examinations. Considering that grades for public examination years are blended, it should be noted that the difference between average school and public grades is more like eight to ten points.

Table 1
High School Average in Selected Public Examination Courses
1992-1997

Year	No. of Graduates	Graduation Average
1992	7592	64
1993	7549	64
1994	7977	68
1995	7328	64
1996	7479	69
1997	7352	68

University admission data for the same period are presented in Table 2. As is evident from that table, first-year admissions have been stable for the last three years, following a decline from the 1994 peak. The minimum admission average has increased from 60 to 70 in accordance with established policy, with 1994 again being an anomaly. Several offsetting trends are apparent from these data.

Table 2
Basic University Admissions Data
1992-1997

Year	First-year Admissions¹	Minimum Admission Average	Actual Admission Average	First-Semester Average
1992	2834	60	76	59
1993	2705	65	77	61
1994	2889	502	78	59
1995	2372	70	80	63
1996	2353	70	81	62
1997	2350	70	81	61

Notes:

¹New high school graduates only

²Normal admission requirement waived because of teacher strike

First, it should be noted that the number of students admitted has not increased, despite an increase of four to five points in high school grades. This suggests that changes in high school grades have been offset by the increase in the minimum entrance standard. Although it is possible that these are causally linked, there is no way of determining this from the data at hand. Similarly, the overall average of students admitted has increased by about the amount of the increase in high school average, while the average first-semester grade has changed very little.

Overall, it seems likely that the university is admitting students of about the same caliber as in the period before 1994, despite the changes in both the minimum entrance standard and the high school grades themselves. It must be recognized, of course, that the majority of students admitted during the whole period in question have had average grades above the current minimum, and that the only students

seriously affected by all of the changes are those at the margins of both the admission standard and the passing grade in university courses. This leads to the crucial issue, which the remainder of the analysis is designed to address.

Prediction of Success and Decision Errors

Table 3 gives the results of the bivariate regression analysis for the years 1992 to 1997. The correlations in this case are, of course, simple Pearson product-moment correlations. The coefficients of determination represent the proportion of variance of university average predicted by high school average. The standard errors represent the standard deviation of the distribution of university averages around any point predicted by the regression equation.

Table 3
Summary of Bivariate Regressions
High School and First Semester Averages, 1992-1996

Year	Correlation	Coefficient of Determination	Standard Error of Estimate
1992	0.68	0.46	9.85
1993	0.69	0.48	9.17
1994	0.66	0.43	10.8
1995	0.66	0.44	9.86
1996	0.66	0.44	10
1997	0.58	0.34	10.57

The table shows slightly lower correlations and higher standard errors for years with no public examination results. The data for 1997 are particularly notable because this is the first year in which high school averages included no public examination components. (this is because students typically take some of their final year courses while in Grade 11 because of high school schedules). The decrease in the coefficient of determination is of particular concern here because this is the most direct measure of the predictive power of the high school grades.

Given a particular value of the high school cut point, it is possible not only to predict the university average for a student at this point but also to determine the distribution of university averages around the predicted value as a mean, on the assumption of normality (which happens to hold quite well for university but not for high school grades). Once this is done, the proportions of passes and fails can be found by locating where the line representing the university passing grade intersects this distribution. This situation is depicted graphically in Figure 2, for a cut point of 70 using 1996 data. Table 4 shows the general pattern of predicted proportions passing for the years in question for several hypothetical cut points.

(INSERT FIGURE 2)

Figure 2

Proportion Passing for Selected High School Cut Point (70%)

The most obvious point of contrast in this table is between the results for 1992 and 1993 and the more recent results. Clearly a substantial shift in predicted proportion passing occurred after 1993, when the public examinations were first eliminated. This is consistent with the general increase in high school grades, assuming no major shift in university grading practices. A more specific comparison may be made by examining the predicted pass rates for students at the current cut point of 70. This has declined from near 60% in the years with public examinations to an average of about 45% in more recent years.

Table 4
Predicted Proportion Passing for Various High School Cut Points, 1992-1997

Cut Point	1992	1993	1994	1995	1996	1997
60	0.18	0.14	0.13	0.06	0.07	0.11
62	0.24	0.19	0.18	0.11	0.12	0.17
64	0.35	0.29	0.23	0.18	0.16	0.23
66	0.39	0.37	0.32	0.24	0.24	0.28
68	0.5	0.46	0.39	0.34	0.31	0.35
70	0.58	0.59	0.46	0.46	0.42	0.46
72	0.7	0.67	0.58	0.58	0.54	0.58
74	0.76	0.74	0.64	0.7	0.62	0.65

Because the predicted proportions are hypothetical ones, based on the regression equation, and because of the distributional assumptions underlying such estimates, it is instructive to compare the results from this analysis with actual results. This can be done, of course, only for those above the cut points, except for 1994 when there was effectively no cut point. To avoid the problem of distributional assumptions, the comparison uses cross tabulations of high school and university grades.

These data are presented in Table 5. The general pattern revealed by this table is similar to that of Table 4. Again before 1994, the proportion passing at the 70% cut point was more than 60% while the comparable figure since 1994 had declined to less than 50%.

Table 5 also shows the overall proportion of passes for the years in question. As can be seen the move to a 65% admission standard in 1993 was associated with an increase from 79% to 84% in the overall pass rate. 1994 saw a drop back to the 1992 rate of 79%. It is worth noting here that while the 1994 waiver did not result in any substantial influx of students at the lower end of the high school grade scale, those admitted in the low 60's range had a very low probability of success. Imposition of the 70% requirement in 1995 was associated with a substantial improvement in pass rates. Effectively students with less than a 50% probability of succeeding were eliminated that year. Since 1994, with a constant 70% admission standard, the pass rate has continued to decline overall as well as at the specific cut points.

Table 5
Actual Proportion Passing
for Various High School Cut Points, 1992-1997

Cut Point	1992	1993	1994	1995	1996	1997
60	26		7			
62	33		20			
64	37	36	40			
66	54	52	40			
68	59	63	46			
70	67	65	56	55	49	46
72	76	73	62	64	60	55
74	80	80	68	79	68	69
Overall	79	84	79	86	84	82

Discussion

Keeping in mind the difficulties in making causal inferences from correlational data, the observed patterns are reasonably clear. First-semester success rates vary with both admission requirements and changes in the high school grading system. Success rates for any particular cut point are lower for non-public examination years than for years in which public examinations were in place. This is clearly linked to the increases in average high school grades occurring in the years without public examinations. Success rates for the last three years also show a pattern of erosion even in the presence of a constant admission standard. While there appears to have been no general grade inflation other than that associated with the changes in the examination system, the reduced success rates indicate that a given high school grade conveys an increasingly lower probability of university success.

Although the results appear compelling, caution should be used in drawing strict causal conclusions from the data reported here. One alternative to the grade inflation hypothesis is the possibility of a systematic shift in university grading standards. While it is clear that there have been no policy changes at the university level comparable to those affecting high school grades, it is possible that individual professors or departments respond to increased admission standards by a tacit increase in expectation. It is planned, as part of this research project, to pursue this hypothesis through a more comprehensive analysis of university grading, and particularly by following student year-groups through their university careers.

Assuming for the moment stability in the university grading system, what policy implications may be drawn from the results presented here? First, it seems clear that high school grades retain a reasonable level of predictive power, even in the absence of a common measure. Nevertheless, the large standard errors of prediction at the individual level remind us that even with fairly accurate predictability of proportions, attempting to predict success or failure for any individual student is hazardous. This leads to the question of which type of error, false acceptance or false admission, is considered most serious. This, in turn is related to the issue of whether post-secondary education, and university education in particular, should be broadly accessible or open only to the "best" students.

The first position is supported by the view that a modern society requires large numbers of individuals who are educated to the highest possible levels, and by the well known relationship between level of education and individual economic success. The second position finds expression in the annual Maclean's Magazine ratings of universities, in which high admissions standards contribute to positive ratings. Both views can, of course, be accommodated if we assume a university system of two or more "tiers" in which some institutions focus on high selectivity and others on broad access. In the end, in a system of publicly-supported universities, this is a matter of public policy as much as of internal university policy. Nevertheless, it must be recognized that if university education is to have some meaning in terms of knowledge, experience, analytical capabilities or other attributes, an argument can be made that differential inputs should not translate into differential outputs. Under these circumstances, universities which choose to admit on the basis of minimizing errors of false rejection will have to adjust their programs, operate remedial services, or live with higher attrition rates or lower average performance.

The second policy question raised by the data is whether, all things being equal, a university should adjust its entrance standards in response to known changes in the criteria used for admission. Comparing 1993 with 1997 actual results, for example, would lead to the argument that Memorial University should raise its entrance standard by as much as an additional five points in order to achieve the same overall or marginal pass rates obtained in 1993. While it is possible, of course, that this would simply set off another round of high school grade inflation, the overall pattern suggests that the observed grade inflation is more related to the abolition of public examinations than to university admission policy. (School grades themselves have not changed much over the period in question).

One approach that can be taken to this problem is to think of admission standards more directly in terms of probabilities of success than of actual grade averages. A university could decide, for example, to adjust its minimum entrance requirement each year, based on the cut point which would yield a 50% (or some other acceptable) probability of success. While this would have to be done with a one-year time lag, it would have the advantage of removing any systemic incentive towards grade inflation. It would also convey a message as to the "degree of selectivity" being practised by the institution and would make it clear to incoming marginal students what the chances of success really are. In fact, it would be interesting to speculate that this might have the desired side effect of motivating those students who wish to do well to the greater effort required and/or of discouraging those on the margin who are less likely to engage in such effort.

It must be recognized, of course, that in a system with no common measures, high school grades are the product of a large number of individual teacher decisions. One can speculate that in any such system, some teachers will want to ensure that a high proportion of their students are admitted to university or that teachers will believe that their own students are generally better than average, and hence will grade in a manner which helps contribute to a general increase in grades. This, then, leads to the question of differences in grading practices across teachers and schools. This of course is a matter of equity rather than of predictive power of high school grades. Because of the separation of school and public grades, the data base at hand can be used to address the question of equity. This question will be the topic of a subsequent paper in this series.

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NOTES ON OVERSEAS CONSULTING AND PROJECT MANAGEMENT**

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This paper reports on the perceptions of consultants in consulting situations in less industrialized countries (LICs). Twenty-one consultants in the United States and ten consultants in Canada were interviewed in depth. They were asked to describe their experiences and give vignettes pertaining to periods of their consultations overseas and also to respond to a set of specific questions. Most of the Americans had worked in Southeast Asia in the area of public health and medicine, while the Canadians had experience working in Africa, Latin America and Europe in various areas. The responses of these consultants provide us with rich facts and insights into the process of consulting and knowledge of the variables in the consulting situation which may prove useful to project managers in both regions of the world.

Our concern with consulting and project management stems from our understanding of the development process in LICs and from our awareness of the fact that multinational teams engage in Research and Development projects. These teams investigate and resolve problems of local, regional and international concerns in growing numbers every year. We maintain that these two activities - investigating and attempting to find solutions to pressing problems - are facts in global life today. The movement of consultants, advisors, and experts across cultures and nations has increased in recent years and perhaps will continue to increase at a steady rate, although, perhaps, the economic downturn will likely be an adverse factor, at least for 1998-99.

Further we note that project managers do not operate in isolation; their interaction with others is embedded in the contexts of international R and D organizations whose activities, in turn, reflect the totality of international relations at a particular time. This is also the case with consultants and the consulting organizations. Factors such as who seeks consultation, from whom, when, under what conditions, and with what purposes, objectives and goals give specific character to a particular consulting situation. Thus both consultants and project managers interact with others in a specific social situation while performing their respective roles. It is clear to us that the definition of the social situation is often problematic, and that roles of consultants and project managers would be likewise problematic. Further we observe that consultants' interaction with others differs in many ways from the interaction which the project managers experience. One of the differences is that consultants are involved in performing narrower and specialized roles, whereas the project managers' responsibilities are much broader and comprehensive in scope. Therefore, it is our contention that insights and facts provided by consultants can be meaningfully utilized by project managers at various levels of their operations. One can fully appreciate the point being made here by familiarizing oneself with some of the basic ideas underlying symbolic interactionist approach to human behavior or conduct.

The Symbolic Interactionist Approach

Briefly, the symbolic interactionist approach emphasizes the fact that human conduct or behavior is a product of human interaction which always takes place in a social situation. Human beings, through their own acts and interactions with others, either maintain or change the structure of social situations in which they find themselves performing several tasks. Each individual self enters into social situations with certain forms of awareness or social consciousness. The others, too, enter in the situations with their own respective forms of social awareness or consciousness. This implies that human interaction is always purposeful and qualitatively different from interaction among animals. In human beings, social act or behavior is an outcome of complex processes of perceiving, thinking, articulating, interpreting, and forming lines of actions in mind. This means that before and while human beings act they take into account the actions of others in the social situations. Thus, human behavior is not merely a function of those individual psychological qualities which individuals bring into interaction, but function of the interaction itself. Blumer has rightly argued that many social scientists have failed to recognize the significance of interaction by treating it as "a mere forum through which sociological or psychological determinants" result in certain behavior. As opposed to this, he argues that interaction "forms human conduct, instead of being merely a means or a setting for the expression or release of human conduct." And human conduct cannot be comprehended apart from the actual contexts in which it occurs. What interests us here most is the fact that what individuals actually do (in this case the consultants and project managers) in social situations (e.g. consulting or project management situations) and how they do what they do are crucial factors in comprehending human behavior and its social consequence.

Several methods are suggested by scholars to study how people carry out their activities in various social situations. A method suggested by Lofland includes the following four steps:

1. Getting close-up to people actually acting some place in the real world and developing intimate familiarity (with them and their situation),
2. Focusing on and delineating the prime or basic situation the scrutinized people (i.e., those people who are actually acting) are dealing with or confronting,
3. Focusing on and delineating the interactional strategies, tactics, and so on, by means of which scrutinized people (in our case consultants and project managers) are dealing with the situation (e.g., consulting) confronted,
4. Assembling and analyzing an abundance of qualitative episodes into disciplined abstractions about the situation and strategies delineated.

If we decide to follow the above method we will have to be physically present with consultants in their consulting situations in order to comprehend how consultants in various cross-cultural and international situations interact with others, evolve new behaviors, and carry out their roles. Obviously, this style of participation-observation research is time consuming and expensive. Surely, this kind of qualitative research will enhance our understanding of consulting process. However, given the

financial and time constraints all we could do is to try "getting close up to people..." who have actually acted somewhere in the course of their career. In our case these people are, as mentioned earlier, thirty-one consultants who were interviewed in depth in an informal setting.

Social and Democratic Background of the Consultants

The total number of consultants interviewed was thirty-one. Out of this twenty-one were based in an American University and ten were working in a Canadian University. There was only one female in the Canadian sample while there were four females in the American sample. All of them except three females in the American University have an M.D. or Ph.D. in their respective fields. The age range of these consultants was between thirty-nine and seventy years. Most of them were in their late forties. Either by birth or naturalization the nationality of twenty-one consultants in America was American. Similarly the nationality of consultants in the Canadian University was Canadian. The first language of all the consultants was English except for four. A number of them were bilingual or multi-lingual. Most of them were Christian. Only six were of Asian extraction; the rest were White. The consultants in the American sample had spent relatively more years overseas in a cross-cultural situation than the consultants in the Canadian sample. In the American case the range was three to fifteen years while in the Canadian situation the range was one to three years. Only two consultants in the Canadian case had more than fifteen years of experience working in a cross-cultural situation. All of the consultants had secured positions at their respective universities and had published number of articles and reports.

Interview Schedule

All thirty-one consultants were asked to describe their experiences and give vignettes pertaining to periods of their consultation overseas (i.e., what do you think about the consulting situation?). In addition, ten consultants in the Canadian university were asked fifteen more questions (see Appendix A).

The remainder of this paper is concerned with analyzing, classifying, describing the experiences of these consultants, and formulating "working hypotheses" or generalizations which we hope will help project managers (1) in identifying and contracting appropriate consultants, (2) in evaluating their roles in a given situation, (3) in designing needed educational and training programs for consultants, and finally (4) in making project management more effective.

Responses to the open-ended question (What do you think about the consulting situation or what is your perspective of the consulting situation? Please describe your experiences and give vignettes as consultant) are classified into two broad categories:

- A. Conditions under which consulting services are requested.
- B. Problems that are encountered in delivering consulting services.

A. *Conditions under Which Consulting Takes Place*

The analysis of the data informs us that consultations occur under three general conditions. The first condition is that of rapid socio-economic changes at the international level. Forces of change require fundamental restructuring of the existing social and cultural institutions of less industrialized countries (LICs). Put in another way, increasing global interdependency (social, economic, political, cultural and legal) creates a need for obtaining consulting services by the LICs from the ICs. The ICs in turn are interested in delivering these services for various social, political, cultural, and above all economic reasons of their own. Therefore, it is not very surprising to witness growth of huge consulting organizations in the ICs both in the private and the public sectors. These organizations are contracted for delivering varieties of services to LICs by various international agencies such as UNO, WHO, World Bank, to name a few. The consulting services are delivered on short or long term basis. The objective and subjective nature of dependency of LICs on ICs influence the exact mode in which consulting organizations deliver their services.

Secondly, the need for consulting services arises when there is a crises situation of personal and social nature; that is, when those in authority and power come to perceive that something is lacking (e.g., basic knowledge, technical know-how, material resources, legitimizing authority, professional and peer support, etc.) in their situation which is undermining their capacity to mobilize human and natural resources available to them in solving pressing problems that they are facing. These authorities feel this stress manifests a sense of urgency. Their resorting to requesting consulting services is a last minute rescue operation. The expectations of those who request consulting services are that outside consultants will somehow bail them out of a difficult but temporary situation. The consulting organizations and those agencies who contract them are well aware of this condition of their clients and in many cases do not hesitate in taking advantage of this situation for their own benefits. Thus in many cases consultants are hired on ad hoc basis without having any long-term perspectives on their role in a program or project. However, ad hoc recruiting of consultants serves other latent functions of these consulting and donor organizations.

Thirdly, consulting services are sought when there is a bond of "brotherhood" among consultants and consultees. That is, depending upon previous acquaintances and institutional linkages experts at national and international levels seek consultation from each other for professional support and for enhancing one's status, prestige and power in a stratified social order. The point is that there now exists a community of consultants at national and international levels with its own network, culture and sub-cultures, with an interest in creating conditions for growth and survival.

B. *Problems in the Consulting Situation*

Our analysis shows that consultants encounter many problems. Some of the most important problems they identified are classified in these six categories: (1) problems related to purposes, goals, objectives and implications of consulting, (2) problems related to organizations of consulting agencies, (3) problems related to local social structures, (4) problems related to lack of supportive systems, (5) cultural misunderstandings as a problem, and (6) factors contributing to other problems in consulting situations.

1. **Problems Related to Purposes, Goals, Objectives and Implications of Consulting**

In their interviews all consultants indicated that one of the major problems in consulting situations is to clarify purposes, goals and objectives of consultations. Expectations surrounding consulting situations are often not clear to those involved in it. For example, contracting agencies (i.e., donor agencies like FAO, World Bank, etc.), consulting agencies, and the counterparts in the LICs (receiving or requesting party) usually tend to have unrealistic goals which cannot be operationalized under the existing national and international institutional arrangements. In many instances consultants do not understand the language (i.e., the format of proposals, documents, business letters, etc.) in which the counterparts request consulting services. On the other hand clients do not know what sorts of services they should precisely be requesting and therefore expect consultants to perform miracles.

The consultants interviewed pointed out that some provision for rational discourse on the contingent and ultimate ends of consulting is necessary in order to arrive at a common definition of goals, purposes and objectives for which consulting services are requested and offered. Contingent ends are those social goals which are characteristic of a particular historical period. Even when these goals are realized they do not provide the conditions for individual fulfilment. Ultimate ends point to those social conditions which both permit and encourage the fulfilment of individual life. Increase in GNP is a contingent end but the well-being of all human beings in an interdependent world is the ultimate end. Utility is contingent; loving is ultimate. In general, social relationships are contingent when human beings involved become things or objects in the eyes of another, and therefore are subject to exploitation. These relationships are also perceived by many in consulting situations as anti-human, abstract, and alienated. On the other hand ultimate ends are trans-historical, in the sense that they are grounded in attributes of the human species and not in a specific social or cultural forms. Ultimate ends strive to overcome the vast network of historical and socially conditioned conception of reality in order to create conditions in which it becomes possible to transcend alienated social relationships. In the absence of trans-historical ends, consulting services run into the risk of becoming mechanical, positivistic, and alienating because consultants, consultees and project managers are involved in interaction by necessity. That is, they are interacting in order to merely survive rather than to freely and consciously choose creative activities which extend, develop, and realize those social relationships which are non-exploitative and free of distortion. This does not mean that contingent and ultimate ends are mutually exclusive. Indeed, they are dialectically related. What should be then the basic motivation underlying consulting and project management? The answer may lie in the comment of one of the consultants who said that "ultimately we got to preserve humanity." By this she meant that it is the effort to create the conditions necessary to realize human ends that should be the basic motivation in consulting and project management.

Situations in which a shared definition of the contingent and ultimate goals is lacking (which are part of the total environment in which consulting services are provided) lead to several other problems related to consulting. Three problems can be isolated from the interview data: problems related to training of local participants; problems surrounding evaluation, effectiveness, credibility and accountability of consulting. Each of these problems is briefly discussed below.

First, problems related to training were discussed in relation to duration of the consulting assignment and the life of the project. Generally, it was mentioned that either a consulting assignment should be of short term (six weeks or less) or long term (at least two years). In certain cases repeated short term (two or three weeks) visits by consultants were considered beneficial in the sense that this pattern did not make consultees dependent on outside consultants and thus avoided the dependency syndrome of the counterparts on the consulting services. Some consultants believed that ideas can be communicated in a short period of time, that a mere presence of a consultant beyond a certain time does not do any good, that minimum guidance is required after initial consulting had taken place, and that it is good to leave the local counterparts alone and let them take care of their own problems.

On the other hand, those consultants who visualized long term assignments as more beneficial pointed out that in short term, one-shot consultation, no provision is made to train the client in specific areas of competencies. Also, there is no provision for up-grading the skills of clients and for follow-up consultations to ensure that the client has attained the required or needed skills. Instead of reducing dependency, one-shot consulting situations tend to perpetuate it. The clients are usually overwhelmed by the mystique surrounding consultants (i.e., the feeling that consultants know the answers and will "fix" our problems). This encourages some consultants to feed on the situation. This is specially true in cases where the clients do not know how to use the consultants to their advantage because consultees lack competencies required to challenge and evaluate consultants' activities. Consequently, it is not uncommon to note that some consultants destroy local organizations and "kill" programs and projects without damaging the market for consulting services. There are many levels at which consultees can be trained. High levels of training programs should also be available to consultees so that they can learn those competencies and skills which will allow them to deal with high powered consultants confidently, who also play a decisive role in the setting up of evaluation criteria and the definition of effectiveness. Thus, the credibility and accountability of consultations tend to be located in the structure of sponsoring agencies and not in the client agencies. As a result of this, consulting often becomes a unclear and one-sided activity in which there is no room for learning and feedback. That is, generally there is no adequate built-in mechanism in a consulting situation whereby the client could set up meaningful procedures for evaluating the consultant's report. Further, sponsoring organizations tend to have built-in requirement for a certain amount of consultation.

Secondly, the question of who defines the needs for consulting services is an important one in the discussion of problems surrounding evaluation, credibility, and accountability of these services. Too often needs of clients are dictated by the sponsoring agencies which give their own employees some degree of role flexibility and mobility. On the other hand, consulting organizations too, once contracted, tend to create continuous need for their own kind of consulting services. Thus, marketing of consulting packages is often an integral part of the overall operations of consulting and contracting organizations.

A project manager needs information on a number of questions related to the organizational and task environments of both consulting and contracting organizations. Some of these questions are: What are the factors that make consulting and contracting organizations behave in the above ways? How do these

organizations manage to penetrate the clients' situations and create needs for constant flow of consulting contracts? How are the institutional structures of these organizations linked with the overall global structures of interdependency? What role do consulting and contracting agencies play in global interdependency? Under what conditions does consulting become a two-way learning process? What are implications of two-way consulting situation for selection and training of consultants and evaluations of their activities? As far as we are aware little research exists which throws light on such questions.

2. Problems Related to the Organizations of Consulting

In ICs consulting organizations exist in the public and private sectors of the economy. Within these organizations consulting services are packaged, presented, and delivered to the clients in different modes. The structure and functions of these organizations affect the delivery of consulting services - both in terms of quantity and quality - and each mode of delivering services has its own consequences for the client's situation.

Usually, consulting services are delivered to the client at three different levels: primary, secondary, and tertiary. At the primary level consultants are asked by the client to get involved in the planning process of a project from the very beginning. On the other hand, at the secondary level consultants are asked to focus their efforts on explaining to the client what had gone wrong with the planning process and to interpret the recommendations of the previous consultants. In other words, at the secondary level consultants are often asked to perform a "cleaning up" operation. At the tertiary level of involvement, consultants are requested to legitimize the planning process and give visibility, respect, and status to the project. Thus consultants' roles vary according to the level at which the consulting services are requested and delivered.

Another point which the consultants emphasized during their interviews is that consulting takes place at village, town, city, district, region, state, national, and international levels involving different degrees of technical and professional expertise. All these factors make consulting process a complex reality and have various implications for contracting consulting services by the client.

One of the problems in contracting consulting services is certain attitudes of consulting organizations. Usually each consulting organization had developed its own standardized system of delivering its services based upon certain beliefs and assumptions. One such assumption is that its own system of delivery, with minor changes, can be perfected to serve requirements of clients everywhere. By basically ignoring the complexity of a client's changing environment (social, political, cultural, economic and legal) this notion of packaging consulting services somehow perpetuate the secondary level of consulting at the expense of client's resources and ignorance.

3. Problems Related to the Organization of the Local Institutions

Other problems of consulting are related to the organization of local institutions. Often there are internal rivalries and competition among local institutions which are reflected in the local politics. It is not uncommon to observe that long drawn-out local political issues tend to impede the capacities of local institutions to carry out certain tasks in the changing national and international environment. Besides, structures and functions of the local institutions are generally adopted from the colonial situation and need revamping in order for them to absorb new technologies and flow of resources from outside. Lacking adequate understanding of these two factors consultants, donor, and consulting agencies are inclined to have unrealistic expectations about the capacities of local institutions to achieve certain goals. Their unrealistic expectations may in fact conflict with the goals of the local institutions and the aspirations of person who work in them. For example, internal rivalries and competition often reflect genuine concern and fear about one's own job security, status, prestige, chances for future promotions, income and working conditions. Usually, any sort of linkage of a local institution with outside sponsoring and consulting organizations are seen by local persons as an opening of new opportunities and a chance to attain desired upward mobility through establishing personal and professional contact with the outsiders. This insensitivity to local institutional structure and internal politics -- especially underestimation of the real or anticipated aspirations and expectations of people working in these institutions acts as a barrier to successful consulting.

It seems that project managers will be well advised to make sure, as much as possible, that an open ended opportunity structure remains a built-in criterion in designing, implementing, managing, and evaluating of his/her project. The fact is that people everywhere, at all levels of society, do worry about their job security, income, and working conditions. It is a basic question of survival.

4. Problems Related to Lack of Supportive Systems

The importance of supportive structures in LICs is stressed by most consultants. A successful consulting effort is contingent on the nature of these structures, and on the degree these are accessible to consultants and to their counterparts in order for them to carry out the assigned tasks. One of the problems in this situation is that supportive systems (e.g., bureaucracies, courts, communications technology, research and development centers, information systems, transportation system, centers for social and cultural activities, libraries, scientific and technical information clearing houses, etc.) are inadequate or often inaccessible both to the consultants and the local counterparts even when they are present in LICs. This is because cooperation and coordination among various local institutions are lacking due to political and other social factors. However, in certain situations supportive systems are available to consultants only and not to the counter parts. This creates difficulties in the professional and social relationship among them. The local experts interpret unequal accessibility to their own institutions and resources as unjust and perceive this situation as an example of the lingering legacy of colonial rule. A fuller understanding of the organization of supportive systems in LICs and of the dynamics of political processes which affect the functioning of these systems will enhance consulting efforts.

On the basis of the various observations made by the consultants who were interviewed it is suggested that project managers may like to develop a set of criterion by which they can interpret local political processes. An informed analysis in turn may serve as guide lines for their actions in managing their projects. For example one experienced local politician - cum-bureaucrat from a Southeast Asian country communicated to an audience that he and his colleagues have formulated their own tentative test for understanding the survival of various political regimes in the region. The test, he claims, helps him and others in understanding changing political realities in Southeast Asia. By using the test bureaucrats, politicians, and various experts can make informed judgments about the impact of social, cultural, political, economic and legal forces on the local infrastructures and supportive institutions.

The basic assumptions underlying the test are that in Southeast Asia people are basically concerned with providing their people with education, housing, food, clothing and other basic goods and services necessary for survival. Further they are interested in the questions of national unity; economic stability; development of institutions of R and D and supportive infrastructures; how to modernize without losing their cultural roots and touch with the rural-based population; self-sufficiency, self-reliance, self-respect, and freedom from domination of super powers. According to these local political analysts in Southeast Asia the question of survival in the LICs is defined quite differently than in ICs. One of the differences is that in ICs people are concerned with maintaining a high level of standard of living whereas people in LICs are concerned with the availability of necessities of life. In this context the ongoing debate on the formation of a new economic world order is highly significant.

These political analysts suggest that by looking at some specific indicators one can infer the nature of local institutions in many countries in Southeast Asia. For example, instability of a particular political structure along with the weakening of local supportive institutions can be inferred if the leadership in a country (a) is investing its resources abroad, (b) is staying in power by polarizing different factions, (c) is regarding opposition as an enemy or adversary, (d) is using intelligence services for its own survival as opposed to the security of the country, and (e) is corrupt. Further, instability and lack of support systems can be inferred if (f) development is city-based rather than rural-based, (g) greater number(s) of talented people are employed in the private sector than in the public sector, (h) immigration is high, and (l) substance of political debate is trivial rather than based on serious policy issues.

5. Cultural Misunderstanding as a Problem

All the consultants attached great importance to cultural variables in consulting and believed that such factors as values, ethics, perception, language, socialization, speech pattern, self-image, communication styles, and definition of a situation, to name a few, somehow contribute to cultural misunderstandings. Each of the consultants had his/her own anecdotes and stories to tell. These are so personal, elaborated, and diffused that it is impossible here to describe them in detail.

However, three perspectives on sources of cultural misunderstanding can be isolated from their comments. These are labelled as follows: faulty communication, unequal social structures, and negotiated social reconstruction.

Faulty communication perspective seems to emphasize the point that when a number of people from different social-cultural backgrounds work together there is bound to be vast cultural misunderstanding arising out of their social interaction. This is so because attitudes, values, intentions, and behavior of participants are usually guided by individuals' socio-economic backgrounds. In cross-cultural and international interaction situations they are more likely to be uncoordinated. This unfortunate misunderstanding can be improved if one can just improve the communication among the participants by making them realize that each of them is involved in complex, institutionalized social activities, that the purpose is to achieve certain agreed upon social goals, and that recognition of the purpose by all will benefit both the individuals and the particular organizations with which they are associated.

On the other hand, the unequal social structure perspective tends to emphasize the fact that sources of cultural misunderstanding lie in the unequal distribution of social power and other valued goods in society such as occupation, income, education, status, prestige, leisure time, and other alike things. Thus cultural misunderstandings can be reduced by reducing the gap among the powerful and the less powerful. Achieving this goal requires fundamental changes in social structure.

The negotiated social reconstruction perspective combines both the above-mentioned perspectives by emphasizing the point that changes both in faulty communication and in unequal social structure are necessary to reduce cultural misunderstandings. This can be achieved by encouraging dialogue among people around mutual problems. The ultimate goal of this perspective is to create a preferred world order which is conducive to human survival.

One can gather from the above discussion, as mentioned at the outset of this paper, that consultants enter into consulting situations with certain perspectives (forms of consciousness) and this will influence their style of consulting. This would also be the case with donor, consulting, and local organizations. A project manager may like to take these facts into account in his/her effort to manage the project in a cross-cultural situation and decide for him/her self how he/she should go about dealing with the issue of cultural misunderstandings.

6. Factors Contributing to Other Problems in Consulting

The consultants pointed out that there are a host of other factors which contribute to numerous problems in consulting. For example, technical expertise is only one factor in the selection of consultants. In specific cases, age, sex, class, ethnicity and race of consultants play crucial role in establishing successful consulting and professional relationships with the local counterparts, and in the resolution of problems. An older professional woman of Southeast Asian extraction may be perceived more effective in her consulting task which requires establishment of child care facilities, recruiting and training of local female health workers in Southeast Asian countries than a white, young male doctor. Knowledge of the local language(s) and dialects facilitates consulting. Nationality of consultants seems to create initial difficulties in establishing a healthy relationship and communication among the consultants and the consultees. For example, when an American consultant in India states that "population growth is a problem because it affects national interest of the United States," nationality becomes a negative factor in consulting. Further, there are

many theoretical and methodological issues. These relate to availability of quality data and information which can be used for analyses purposes. Usually, much of the initial effort of a new consultant is focused on establishing reliability and quality of information with which he/she has to work. Experienced consultants become well acquainted with these problems and have worked out effective channels of communications with their counterparts. In many cases they try to get involved in the primary stage of consulting and provide help to the counterparts from the very beginning in deciding the mode of data collection, analysis and the nature of information which is needed for attaining certain goals. There is a great need for developing data-based information systems in LICs.

Summary and Suggestions

In this section we summarize the perceptions of the thirty-one consultants about consulting in less industrialized countries and suggestions made by them to improve the consulting process.

Firstly, consulting should be approached from a larger socio-cultural and historical perspective. Local and international societal conflicts should be well understood by consultants. The way global interdependency is interpreted by a particular developing country is one of the crucial factors in professional and personal relationships among consultants, their counterparts in LICs, and contracting agencies.

Secondly, consulting should not be a one-shot activity. Implications of long/short term consulting should be well thought out before hand by considering it a well planned social activity. A sense of realism should be maintained as it related to the expectations, goals, and objectives of consultation.

Thirdly, technical expertise of consultants alone is not adequate input in effective consultation. Consultants should be selected on the basis of their experience in living in the clients' culture/country and interacting with counterparts in their cultural and ecological settings. Cultural sensitivity on the part of consultants should be an important variable in selecting them. Personality and socio-cultural background of consultants should also be taken into account during the selection process.

Fourthly, upgrading of clients' skills and competencies should be built into the consulting contract. Most of the training should be done in client's country using local examples. A majority of the participants should be local people. In many cases consultants are needed to be present physically only for a short period of time to help their counterparts set up training programs at early stages. There after funds and other material resources should be supplied directly to the counterparts to run these programs. However, follow up procedures should be included in the consulting contract (e.g., a retainer system) to enable consultants to return and work with the client whenever the need arises. The need for consultation should be determined by the clients. Consulting organizations should invest in research and development activities that are directly related to training and up-grading of skills and competencies required by the client.

Fifthly, criterion for assessment of participants' (both consultants and clients) activities should be included in consulting proposals. Procedures should be worked out to evaluate consultants' reports and be included in the contract from the very beginning. A super-consulting structure may be devised to catalog specific activities and capabilities of various consulting institutions with the purpose of providing the client more adequate information about the quality of consultation available. The information may help the client in selecting consultants and in evaluating their work effectively.

Finally, the consultants emphasized the fact that although cultural sensitivity and professional knowledge in one's own field of specialty are important factors in delivering consulting services effectively, nevertheless consulting should be considered an art form.

APPENDIX A

In this appendix responses of the ten Canadian consultants to the following fifteen questions are presented in a tabular form:

- What sorts of things have the professors been asked to do?
- What sorts of things have professors actually done in their field-based activities?
- For whom were services provided?
- What discrepancies are found between particular requests and the actual consultant activities?
- What competencies are used in responding to particular requests.
- What competencies are identified as lacking in reference to particular consultant activities?
- What is the value of these field-based activities to the scholarly field and to the professional person?
- Of what consequences are particular services rendered?
- What are the current issues and questions perceived by you as consultant in your own field?
- What is the likely future of the concerns and emphasis in your discipline?
- What skills are likely to become more important in light of those anticipations?
- What are the consequences of particular kinds of experiences in terms of continued or expanded professional involvement?
- What is your model of man or human nature?
- What is your model of man and society or how do you conceptualize relationship between man and society?
- What is your model of modernization? Or what is your thinking on modernization?

TABLE 1
What Sorts of Things Have the Professors Been Asked To Do?

Responses of Consultants	Frequencies
Participation in ongoing programs in LICs	8
Supply of Technical and Professional Information	7
Research (Basic/applied)	6
Evaluation of Research Proposals	5
Up-Grading Skills of Professionals	5
Supervision and advising of Master and Ph.D. Theses	4
Teaching Undergraduate and Graduate Students	4
Setting up of new projects or programs in a university	3

TABLE 2
**What Sorts of Things Have Professors Actually Done
 In Their Field-Based Activities**

Responses of Consultants	Frequencies
Same as expected	10
Same as expected but emphasis was changed	2
Same as expected but also got involved in routine work of the host institution	2

TABLE 3
For Whom Were Services Provided?

Responses of Consultants	Frequencies
International Agencies (e.g., Who, CIDA, etc.)	4
Professional Groups and Non-Governmental Professional Organizations	4
Students	4
Universities	4
Government	3
Professionals in Industries	2
British Medical Research	1
Businessmen	1
General Hospitals	1
National University Commission	1
Teachers' Education College	1
Village Workers	1

TABLE 4
What Discrepancies Are Found Between Particular
Requests and The Actual Consultant Activity

Responses of Consultants	Frequencies
People expect too much from consultants	6
Very often you end up educating people rather than delivering technical knowledge	4
None, but now people are more aware of the research process and ask questions about purpose of research and potential benefit to them	4
Things were not spelled out in detail before I went	3
More emphasis in a particular area than it was originally expected	2
Equipments were not there	1
Providing special program for government and mining companies was not expected	1
None	1

TABLE 5
What Competencies Are Used in Responding to Particular Requests?

Responses of Consultants	Frequencies
Professional competencies in one's own discipline	10
Human orientation skills, i.e., skills required to become sensitive to other people's situations	8
Competencies required for negotiating programs of mutual interests	4

TABLE 6
What Competencies Are Identified As Lacking in Reference To
Particular Consultant Activities?

Responses of Consultants	Frequencies
Human orientation competencies	8
Language competencies	7
Competencies needed to become culturally sensitive	7
Communication competencies	6
Competencies used in other fields related to one's own	4
Competencies required to deal with bureaucracy and civil servants	3
Administrative skills	2
Analytical skills	2
Applied scientific techniques (i.e., skills required to carry out scientific work in the field)	2

TABLE 7
What Is The Value Of These Field-Based Activities To The Scholarly Field And To The Professional Person?

Responses of Consultants	Frequencies
Increased knowledge about real world and appreciation of it	9
Professional exposure to wider range of doing things	9
Possibility of becoming an understanding, a better person through gaining enriching experience	8
Identification of future research projects	7
Two-ways kind of doing things, i.e., learning mutuality	5
Career advancement and other fringe benefits	4

TABLE 8
Of What Consequences Are Particular Services Rendered?

Responses of Consultants	Frequencies
Extended network	6
Mutual learning of common problems	6
Improvement in health	5
Establishment of new facilities	4
Joint research program	4
Delegation of responsibilities to local experts. We filled in the gap	3
Introduction of new programs. Long-term benefit to be expected	3
Increase in the number of local organizations for community actions and political leadership in rural areas	1

TABLE 9
What Are the Current Issues and Questions Perceived By You
As A Consultant In Your Own Field?

Responses of Consultants	Frequencies
Control at the grassroot level is the issue (i.e., who controls the resources and funds)	5
Exposure of professional from LICs to professionals in ICs and vice-a-versa	5
Transfer of advance technical and scientific knowledge to LICs	5
Establishing linkages between work and schooling	4
Restructuring of giving and receiving of aid	3
Revamping of educational system in LICs to meet their own needs	3
Training of technicians and para professionals	3
Rural orientation in development as opposed to characterization of the world as urban	2
Biological control of insects for disease control	1
Development of criteria for land use because it affects ecological balance	1

TABLE 10
What is The Likely Future Of The Concerns
and Emphasis In Your Discipline?

Responses of Consultants	Frequencies
More research on mutual problems	1
Universal primary education	1
Interpretation of scientific work so that it can be used by other countries	1
Sophisticated research in pharmacology	1
Increased focused on rural world view and development of rural institutions for political actions	1
Increase effort to reduce dependency of LICs on LIs	1
Formulation of long-term development policies	1
Tropical disease control	1
Increased focus on cooperative educational programs	1

TABLE 11
What Skills Are Likely To Become More Important
In Light Of Those Anticipations?

Responses of Consultants	Frequencies
Communication skills (i.e., How to transmit information to people in a meaningful way and how to receive information from them)	5
Skills required for transfer of appropriate technology to LICs	5
Skills required for long-term planning	4
Skills required for field-based consultants who can provide services to local personnel in their ecological systems	4
Skills required to interpret basic research data	4
Skills required for coordinating programs	3
Skills related to motivating people to undertake certain tasks	3
Skills required for writing research proposals by using the current political jargon	3
Skills required to train first rate biologically oriented bio-chemistry	2

TABLE 12
What Are The Consequences Of Particular Kinds of Experiences
In Terms of Continued or Expanded Professional Involvement?

Responses of Consultants	Frequencies
Continued personal and professional involvement in cooperative research	5
It has impact on the kind of research I do	5
Teaching and research become down to earth	5
Realizing that there should be better exchange of experience among people in the world	4
Realizing that collaboration requires major effort	4
Increased desire to do something useful for humanity	3
Realizing that informal working relations overseas are better than bureaucratically arranged relationships	3

TABLE 13
What Is Your Model Of Man Or Human Nature?

Responses of Consultants	Frequencies
Man is curious being. Aesthetic values are important	2
Man is spiritual being	2
Man functions in a mechanical mode	1
As a man one works in present and future to alleviate human sufferings	1
Man functions within the framework of reciprocity. That is what I get from others and what they get from me is important	1
Ultimately we are what God has made us	1
Man can be cooperative and violent depending upon which situation he is in	1
Man is satisfying animal, likes to change things	1
Man is many sided animal, a complex being	1
Man is an intelligent being and is evolving into higher level of complexity	1

TABLE 14
What Is Your Model Of Man and Society? How Do You Conceptualize Relationships Between Man and Society?

Responses of Consultants	Frequencies
Rich and poor. Too much disparities	4
Opening of social structure in order to give people real choices to live. This is what I mean by justice	3
I believe in equal opportunity and not in equal distribution	2
Poverty is relative	2
Equalization policies have its genesis in guilt. Each of us in our own ways are struggling with illusive things and are enjoying them in our ways	2
Honest communication among human being is the key to human survival	1
I believe in Plato's Republic. I am opposed to much emphasis on 'rights' without responsibilities	1
I believe in Western Humanist model of man and society	1
Society is accumulated influence of man	1
Consciousness of inequalities has to come from within a country	1

TABLE 15
What Is Your Thinking On Modernization?

Responses of Consultants	Frequencies
Change is inevitable but high consumption pattern is not possible	5
Western type technological development is not possible at global level. This type of development has to be stopped first in the West	4
More homogenous distribution of knowledge for industrialization in LICs is needed	3
The will to change one's institutions has to be created	3
Got to preserve humanity, i.e., survival of human beings is most important	3
LICs cannot and should not follow the footsteps of ICs. But conditions in LICs must be changed. I don't know what model is better	2
Professional ethic is crucial	1
Monitoring of econological shifts is crucial in modernization	1
Only way to go is upward and forward	1
You cannot stop progress but don't hurry to destroy the old order until you can but new things in its place	1

TABLE 16
Disciplinary Background Of American and Canadian*
Consultants Interviewed

Academic Disciplines	Numbers
International health	4
Public Health	3
Tropical Medicine, Medical Microbiology and Public Health	3
International Health and Community Health	2
Avian Biology*	1
Behavioral Science and Population and Family Planning Studies	1
Biological Rhythms*	1
Community Development and Extension*	1
Comprehensive Health Planning and Geography	1
Development Economist*	1
Earth Science*	1
Engineering*	1
Environmental Health and Sanitary Engineering	1
Epidemiology	1
Geology*	1
Gerontology Education and Human Development	1
Health Services and Administration	1
Management and Quantitative Research*	1
Maternal and Child Health and Pediatrics	1
Math Education*	1
Medical Entomology*	1
Population and Family Planning Studies	1
Public Health Education and Population and Family Planning	1
TOTAL	31

ENDNOTES

** Dr. George Hickman, Memorial University, read this and an earlier related article "Cross-National Consultation in International Collaboration," *The Morning Watch* Vol. 21, Nos. 3-4, Fall 1994, pp. 33-42, written by this author. The author thanks Dr. Hickman for reading these articles and providing valuable comments. Dr. Hickman has extensive experience in international, national and local consultation processes. Needless to say, the author bears sole responsibility for ideas expressed in these articles.

See Lauer, R.H. and W.H. Handel (1997). *Social psychology: Theory and application of symbolic interactionism*. Boston: Houghton Mifflin, p. 44.

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**PARTICIPATION IN POST-SECONDARY EDUCATION IN NEWFOUNDLAND:
SOUNDINGS FROM A LOCAL STUDY**

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Introduction

Education and training have always been viewed as primary instruments for determining the labour market outcomes of youth, especially for the successful transition of youth from high school into the world of work. Further education meant an assured means of improving employability in terms of obtaining and retaining employment, increasing the range of employment opportunities, providing access to higher salaries, and assisting the worker to become more adaptable to occupational and industrial changes (Sharpe & Spain, 1991). While many youth make a decision to seek full-time employment prior to completing school, they generally encounter more difficulty in finding employment or in obtaining other than part-time, menial, low-paying, and cyclical jobs (Samuelson, 1988). The best chance any young person has of obtaining full-time, better-paying, and more meaningful work is to stay in high school until graduation and to continue on to post-secondary education afterwards (Ashton, 1988; Khran & Lowe, 1989). This participation imperative is being made all the more urgent in the new industrialism with its growing demands for sophisticated and highly technical work skills.

In Canada, however, and especially in Newfoundland, participation in post-secondary education has been historically low in absolute terms. For example, in 1990-91, the combined national rate for university and public college participation among 18-24 year olds in Canada was 23.0%. The comparable rate for Newfoundland was 18.7% (Table 1). While the gap between the rates has narrowed since 1971-72, the Newfoundland rate was only slightly closer to the national rate 20 years later despite increasing by 97% from its baseline rate of two decades earlier.

In spite of concern expressed in the province over the years about our low post-secondary participation rates (Crocker & Riggs, 1980; Royal Commission on Employment and Unemployment, 1986), participation in higher education has not been extensively studied in Newfoundland. Several Masters level theses were completed in the past two decades or so on such issues as educational plans of youth, career decision-making, knowledge of post-secondary institutions, and dropouts (Baker, 1978; Burry, 1975; Coffin, 1976; Duncan, 1973; May, 1975). Several government-sponsored studies or position papers were also completed (Crocker & Riggs, 1980; Montgomery, 1982; Batten et al., 1974; Kealey, 1986). These research projects reported on ways to improve student retention and post-secondary participation, employment issues related to women in the labour force, and/or equity issues of working women generally. Only one study (Parsons, 1974) specifically devoted attention, albeit in an ancillary way, to the personal and environmental antecedents of post-secondary participation. Because of this general lack of direct research on participation, the current study--on which this paper is based--was a foundational, exploratory one aimed towards increasing our understanding of factors which might influence the decision young people make about continuing their education beyond high school.

Table 1
Post-secondary¹ Participation² Rates by Province, Canada, 1971-1991

Province	71-72 ³	72-74 ⁴	74-76	76-78	78-80	80-82	82-84	84-86	86-88	88-90	90-91
NF	9.5	8.5	7.3	7.5	7.3	8.6	11.	14.	15.	17.	18.7
PE	15.	14.	13.	13.	12.	12.	0	0	9	2	20.0
NS	9	1	5	4	1	5	14.	14.	15.	17.	23.4
NB	16.	15.	15.	16.	15.	15.	3	5	8	6	19.7
PQ	4	5	9	1	2	7	17.	18.	19.	21.	28.6
ON	14.	12.	12.	11.	11.	12.	8	9	5	7	24.4
MB	6	5	0	8	5	4	14.	15.	16.	18.	15.6
SK	13.	15.	16.	16.	16.	17.	4	8	8	2	17.8
AB	9	4	0	3	7	3	20.	23.	25.	26.	19.2
BC	16.	16.	17.	17.	16.	18.	3	7	3	9	16.0
	5	8	3	2	8	1	19.	20.	21.	22.	
	14.	13.	13.	13.	11.	12.	9	6	4	7	
	3	9	8	3	9	6	14.	14.	14.	14.	
	14.	12.	12.	12.	11.	11.	2	2	1	8	
	3	8	3	0	0	3	13.	14.	15.	16.	
	15.	15.	15.	14.	12.	11.	1	0	1	1	
	7	2	1	2	2	3	12.	14.	16.	18.	
	13.	11.	12.	11.	11.	11.	6	8	4	3	
	0	8	5	9	1	0	12.	13.	14.	15.	
							5	3	3	4	

Source: Human Resources Development Canada, 1994

¹ Public colleges and universities (undergraduates).

² Participation by 18-24 year-olds as a percentage of the general population, 18-24 years old.

³ Actual percentages are shown for 1971-72 and 1990-91.

⁴ Percentages are averaged over intervals of two academic years from 1972-73 to 1989-90

Theory and Method

Theory related specifically to post-secondary participation is derived from the general literature on status attainment. A vast sociological literature on status attainment, both educational status and occupational status, exists for many countries. Findings from Canadian studies since the 1970s generally supported the findings of studies conducted in the United States, Australia, and elsewhere, namely, that social origin factors were strong determinants, directly and indirectly, of both access to and the attainment of higher education.

The conceptual model typically used in this kind of research assesses an idiosyncratic selection of social and psychological influences on the level of education that subjects under study have attained. These influences are derived from the social

and economic status of the subjects parents or are attributed to achievement characteristics which the subjects have acquired through personal effort. The overwhelming use in the literature of this status attainment model prompted its adoption in the study cited in this paper. The model (Figure 1) follows the conventions established by Blau and Duncan (1967), Sewell & Shah (1967), and others with the exception that a socioeconomic variable, common to other status attainment research, was not specifically included. However, several of the background variables, e.g., well-being, career plans, value of education, family size, and advanced mathematics, can be regarded as socioeconomic variables.

The model assumes that personal status variables, selected family status variables, school resource variables, and community context variables are all exogenous variables. It also assumes that academic achievement, high school graduation, vocational self-concept, the influence of significant others, and barriers are all intervening variables that mediate the effects of the exogenous variables on the criterion variable--participation in post-secondary education. In quantitative terms, the model is a series of structural equations in which the parameters of the variables are estimated from correlational matrices or partial regression coefficients. It is additive in nature in that the effects of the exogenous and endogenous variables combine directly and indirectly to affect the probability that a young person will participate in post-secondary education (see Hayden & Carpenter, 1990).

The design of the research flowed from the conceptual framework. The independent and dependent variables were selected following a review of the youth transition and status attainment literatures and from a pilot study and series of interviews undertaken as a preliminary to the main study (McGrath, 1993). Quantitative data for the study were obtained from a longitudinal study that began in Newfoundland in 1989 (Sharpe & Spain, 1991). Qualitative data were from interviews conducted in the province with former students, guidance counsellors, principals, and district superintendents from the K-12 system, and with public college presidents, Memorial University faculty, and senior provincial government officials responsible for post-secondary education. Other information was obtained from federal and provincial public documents and from the public examination database at the Newfoundland Department of Education. The data were organized and analysed using factor analysis, multiple regression, and path analysis. Separate analyses were conducted for males and females.

Findings

Both the correlational and regression analyses revealed that six of the 17 independent variables were consistently most highly related to Post-secondary Participation. In descending order, they were Academic Achievement, Barriers, Value of Education, Advanced Mathematics, Academic Attainment and Well-being.

Their correlation coefficients were comparable in all three matrices, i. e., the model for males, the model for females, and the total group model. In the regression analysis, the order of the effects of the six variables was generally consistent in all three models and the relative size of the effect of each variable on Participation was generally comparable across the three models (Table 2). While these relationships were statistically significant at the .01 level throughout (an artifact doubtlessly of the large sample size; N=5,420), they were weak in real terms and suggested that major

shifts would have to occur in the effects of the independent variables for a movement from non-participation to participation to take place.

A profile of the most likely participant in post-secondary education in Newfoundland emerged, albeit opaquely, from the regression analysis for the integrated model. The participant could be either a male or female from a small family in any community--rural or urban--in the most populous region of the province (Region 1, the Avalon Peninsula). He or she would have graduated from high school with a high average in the provincial public examinations, and would likely have taken advanced mathematics in high school as well as attended a school where career information services were available. The person may not have formulated a career plan but would possess a high sense of well-being.

Table 2
Comparisons of Regression Parameters for Participation

Independent Variables	Participation					
	Male Model		Female Model		Integrated Model	
	b	β	b	β	b	β
Gender		n/a		n/a	0.045	0.048
R _u	0.02	0.02	0.046	0.05	0.035	0.037
Reg 2	0.046	0.031	0.035	0.026	0.04	0.028
Reg 3	-0.057	-0.054	-0.042	-0.042	-0.048	-0.047
Reg 4	-0.057	-0.044	-0.022	-0.018	-0.039	-0.031
Reg 5	-0.006	-0.003	0.031	0.014	0.009	0.004
Plans	0.013	0.031	0.032	0.062	0.021	0.044
Famsize	-0.011	-0.044	-0.01	-0.049	-0.01	-0.047
Attach	-0.017	-0.032	-0.005	-0.011	-0.011	-0.022
Valued	0.059	0.129	0.061	0.127	0.06	0.128
Guidance	0.051	0.022	0.047	0.024	0.061	0.029
Careinfo	0.029	0.06	0.031	0.069	0.031	0.067
Advmath	0.107	0.086	0.07	0.06	0.087	0.071
Wellbe	0.032	0.067	0.045	0.093	0.038	0.079
Lstyle	0.014	0.029	0.007	0.016	0.01	0.021
Avg.	0.006	0.163	0.006	0.178	0.006	0.17
Hsgrd	0.13	0.074	0.224	0.109	0.17	0.09
Vocself	0.005	0.01	0.009	0.019	0.007	0.016
Sigoths	0.015	0.02	0.016	0.022	0.016	0.021
Barriers	-0.089	-0.183	-0.07	-0.145	-0.08	-0.165

R² = .2152 (Male Model)

R² = .2233 (Female Model)

R² = .2246 (Integrated Model)

Path analysis was utilized to determine whether any of the independent exogenous variables influenced post-secondary participation indirectly as a result of the influences of the intervening variables. Indirect effects showed if the influences

were mediated or transmitted through the intervening variables. For example, attachment to home and community was not statistically significant as a determinant of participation in the extended integrated model. But, in both the male and female reduced models, attachment was statistically significant as a barrier to post-secondary participation with about equal effects on males and females (see Table 2). The object of examining the indirect effects and the direct effects of the attachment variable in a path model was to determine if the total effect was a predictor of or a detractor to participation. It was hypothesized that attachment was a factor in participation as a form of barrier which prevented young people from otherwise enrolling in post-secondary education. Other independent exogenous variables were also examined for direct effects.

Table 3 shows the estimated direct effects, indirect effects and total effects for each of the background variables. A t-value was calculated for total effect only. All values found to be statistically significant at the .05 level included gender, value of education, rural/urban, regions 3 and 4, career plans, family size, career information, attachment, advanced mathematics, well-being and learning style. Standardized regression coefficients (β) for independent variables that were shown in the extended integrated model analysed above to be statistically significant with participation were generally enhanced through the effects of indirect analysis. That is, the size of the total effects in nearly all cases was bigger than the for direct effects indicating support for the general hypothesis that the exogenous variables were mediated by the intervening variables.

Table 3
Correlations, Direct Effects, Indirect Effects, Total Effects, and t-Values
for the Effects of the Exogenous Variables and
the Intervening Variables on Post-secondary Participation

Outcome Variable	Independent Variables	Correlation [®]	Direct Effect	Indirect Effect	Total Effect	t-Value
Participation	Gender	0.097	0.048	0.022	0.07	3.823
	R_U	0.099	0.037	0.008	0.045	2.438
	Reg2	0.022	0.028	-0.007	0.022	1.166
	Reg3	-0.079	-0.047	0.007	-0.039	-2.133
	Reg4	-0.033	-0.031	-0.016	-0.047	-2.569
	Reg5	0.006	0.004	0.008	-0.004	-0.233
	Plans	0.13	0.044	0.016	0.06	3.261
	Famsize	-0.123	-0.047	-0.013	-0.061	-3.288
	Attach	-0.071	-0.022	-0.027	-0.048	-2.634
	Valued	0.286	0.128	0.079	0.208	11.525
	Guidance	0.001	0.028	-0.004	0.025	1.33
	Careinfo	0.113	0.067	0.019	0.086	4.694
	Advmath	0.226	0.071	0.073	0.145	7.933
	Wellbe	0.153	0.079	0.021	0.1	5.435
Lstyle	0.065	0.019	0.019	0.04	2.161	

Multiple R = .4739

$R^2 = .2246$

Note: The t-values are given for the total effect only. A t-value equal to or greater than 2.00 is statistically significant at the .05 level.

For some variables--attachment, value of education, and advanced mathematics--the total effects were substantially higher, relatively, than the direct effects. In the regression equation for the extended integrated model, the standardized coefficient (direct effect) for attachment, for example, was not statistically significant with participation. Through the mediating effects of the intervening variables, however, the β for total effect of the attachment variable was rendered statistically significant at the .05 level. The magnitude of the attachment-participation relationship was made twice as strong by the addition of the indirect effects. Similarly, the magnitude of the advanced mathematics- participation relationship doubled through the addition of indirect effects. In addition to attachment, three other variables changed status in terms of statistical significance through the total effects analysis, namely, region 2, guidance, and learning style (see Table 3).

Findings from the series of interviews with youth, principals, and guidance counsellors in the K-12 education system, with principals and senior officials from the post-secondary system, and with staff from the Department of Education complemented the quantitative results from the survey data. Results from the interviews gave added weight to the influences of the variables found in the regression analyses to have statistically significant effects on post-secondary participation. For example, the importance of advanced mathematics to participation was confirmed by the principals and guidance counsellors, all of whom also said it was important for parents to have a high value for education because a positive attitude largely determined whether parents encouraged their children to attend university or one of the public colleges. And the nature of the barriers to participation that were identified in the regression analyses was similar to the kinds of barriers the stakeholders identified; the main impediments in their view being lack of money, meeting academic prerequisites, inadequate access to programs, negative family influences, and an encumbering attachment to home and community.

Conclusions and Implications

Generally, the hypotheses formulated for the study were supported by the findings from the data analyses. The effects of the independent variables on participation, both the background and intervening variables, also generally conformed to the theory reported in the literature.

With reference to the theoretical model, none of the effects of the personal variables was strongly associated with participation in post-secondary education. The effects of well-being were higher than the effects of gender, career plans, and learning style, but not to the extent where it could be generalized that a continuing sense of well-being is predictive of entry into post-secondary education. The extent to which family variables influenced participation was contingent on the value held for education in the home. Family size had little effect, but value of education had the third highest effect on participation of all the independent variables in the study. School variables on average were moderately related to participation. Guidance had

a negligible influence and career information and advanced mathematics in the numerical analyses both had small effects. However, the interview results gave much more support to all three variables in the extent to which they were related to participation. Community variables generally had little or no effect on whether residents obtained higher education according to results from the survey data. Results from the interviews, however, indicated that the attachment variable was highly associated with participation for many students from small communities. Post-secondary administrators, principals, counsellors, and even several youth referred to the inhibiting effects on young people of not wanting to leave home. These respondents all regarded community attachment to be a significant influence in detaching young people from participating in post-secondary education. Generally, the mediating effects of the intervening variables enhanced the effects of the background variables on participation. While the boosting effects were not large in substantive terms, the influence was in the direction hypothesized for them and as theorized in the literature. An ancillary question had been examined in the study as to whether the effects of the background and intervening variables on post-secondary participation differed between males and females. In general, the similarities between males and females were more apparent than the differences in all the analyses. In short, there were no substantial differences between males and females in the effects of the variables on participation.

In summary, the variables found to be most frequently associated with participation were academic achievement, barriers, value of education, advanced mathematics, academic attainment, and well-being. These six consistently had the biggest effects in the various analytical models used in the study. Results from the interviews held with various stakeholders supported the findings from the regression and path analyses and gave added weight to the influences of the variables found to be related to participation.

Several policy initiatives emanate from the study that if carried out would additively contribute to a more complete explanation of the predictive influences on post-secondary participation. For example, three of the variables found to be most influential, relatively, on participation--academic achievement, advanced mathematics, and academic attainment--are directly manipulable by the K-12 education system. The advanced mathematics variable is more open to policy change than the other two because it is a clearly defined part of the curriculum and is less intricate and nebulous than is achievement or attainment. However, in 1992, only a little more than 22% of Grade 12 students in the province were enrolled in the third year advanced mathematics course. While this percentage was double the enrolment six years earlier, it was still quite low considering the course was available in more than 90% of all Newfoundland high schools. A way to begin increasing participation in post-secondary education, therefore, might be to increase the participation of high school seniors in the advanced mathematics courses (which could be a consequence of current high school curricula policy considerations).

The variable, value of education, is less within the control of the school but not outside its sphere of influence. Schools experience varying degrees of contact with parents and they generally know the family situations of their students, even in urban communities. Professional school personnel such as teachers, principals, counsellors, and others have an opportunity to enhance the esteem held for education in families where esteem is known to be low. Information obtained in the

interviews clearly disclosed that many educators felt that some parents from their area placed a low value on education. This disregard resulted in children from these families neither completing high school nor continuing with their education if they did graduate. But, the anomaly also exists where the reverse is true in that youth from good families are known to complete high school, do well academically while there, are encouraged if not implored by their parents to continue their education, and have brothers or sisters who went into post-secondary education, yet opted not to attend after they, themselves, graduated. Why do such anomalies occur in families where education is demonstrably highly valued? The variable has much research potential but none was found that focused on the issue. Pending the research, the variable's contribution to educational attainment theory remains unknown.

The barriers variable is similarly within the sphere of influence of the schools in terms of their capacity to inform. Both the quantitative and qualitative findings revealed that financial constraint was the main barrier that prevented many eligible high school graduates from enrolling in post-secondary education. Despite recent revisions to it, many students believe that the Canada Student Loan program is inadequate to meet their financial needs, at a time when availability of a loan is becoming crucial to high school graduates in their decision to go on to further education. Yet, little research has been undertaken in Newfoundland about the effects of the student loan program on post-secondary participation. While the loan program was never meant to be other than a supplemental source of funding for students, it has evolved to where it is for many the only source of financing that enables them to enrol in and continue with university or college studies. New phenomena might be emerging, however, where a reduction in demand for student loans could occur. Many students reported they are hesitating to accumulate large debts to obtain higher education when there is no assurance they will find subsequent employment to repay them. Further, the number of students defaulting on their loans, reported in the public media as already high, might increase in the near future which could potentially have serious implications for future loan availability. These factors are in addition to a naturally occurring reduction in demand as secondary student populations decline further in the years ahead. The entire student loan program has recently undergone substantive changes which makes comprehensive research into the issue both timely and topical if loan accessibility, and thereby post-secondary education accessibility, is to be enhanced and maintained.

Other barriers such as lack of access to courses and programs, lack of career direction, and insufficient knowledge of occupations and educational options were also identified in the study as important impediments for many youth. Several of the post-secondary administrators said that general information was known about participation in post-secondary education in Newfoundland but that specifics were lacking on many of the pertinent factors believed to affect it. Variables such as guidance, career planning, and career information especially required more research. Some of the basic assumptions underlying present career education curricula may need to be examined. For example, the traditional focus of providing information on careers and educational options are based on the assumption that the more information students have, the better their decision-making capability about post-secondary participation. This assumption may only be partly valid; further theoretical perspectives yet unknown to program developers or which have not been given prominence in the career education literature need to be explored. Emphasis, for example, may need to be placed on the way students process the information that is

already available or on their perceptions of the value of such information to their career decision-making.

With a few exceptions, the effects of the study variables on participation were in the direction that was expected and were generally similar to the findings of previous research. Further research to substantiate the effects of the variables would be desirable, but some indicators are already apparent which can generate changes that could lead to greater participation in post-secondary education. It is important that such change be made. The issue of participation in education generally has become more important in recent years because of the general economic restructuring that has occurred in industrialized countries where traditional sources of work have largely disappeared. There was a time in Newfoundland, for example, when many people were self-sufficient with a modest income. Outlets such as fishing, hunting, gardening, raising a few domestic cattle, wood-cutting, building one's own home and carrying out one's own maintenance could substitute for hard currency. Seasonal work in the Newfoundland construction industry, fishing, forestry, or mining industries, or in a metropolitan area on the mainland enabled many people to earn a reasonable living without long-term work. In the last decade, however, high unemployment in these traditional industries, combined with decreasing employment opportunities elsewhere in Canada, has left many Newfoundlanders, especially youth, without the traditional means of earning a living. The options for employment will be limited even with an education, but the conventional wisdom is that, as youth everywhere in the industrialized world, young people in Newfoundland will have no chance at all to compete for better-paying jobs without some formal education beyond high school. With severe economic conditions currently facing the province, educational participation is regarded as instrumental in the government's strategic economic plan that is expected to reshape the provincial economy. Higher education in particular is viewed as an important means of revitalizing the province's labour force and for creating new employment opportunities. If the theoretical relationship between education and economic development is valid, the sooner a change process can begin that is directed at enhancing present levels of participation in post-secondary education, the quicker could positive results be realized that would bring about corresponding desirable changes in the provincial economy.

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ENDNOTES

SCHOOL RETENTION AND THE CANCELLATION OF OAC'S:

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Editorial Introduction

In Newfoundland, educators are used to looking outward to other Canadian provinces for inspiration and advice. How do they handle this issue in Ontario? What is policy on such and such an aspect of schooling in Alberta? When we ourselves are the focus of policy interest on the part of teachers and administrators in other provinces we are pleasantly surprised. Thus, we were pleased to receive a report on school retention policies in Ontario in which the author points to the Newfoundland experience vis-a-vis student retention as constituting a set of model procedures.

The author, Dr. Noel P. Hurley, is a professor in the Faculty of Education, University of Windsor. Prior to his University of Windsor appointment he was an Assistant Superintendent (Curriculum) with the Conception Bay North Roman Catholic School Board. His doctorate at the University of Ottawa was in the area of Educational Administration, where his special research interest was in the formulation and estimation of econometric models of schooling resource allocation processes and their relationships to both the affective and cognitive outcomes of schooling. In addition to a career in the public sector Dr. Hurley has worked in the private sector where he held directorships in several Newfoundland companies, and has held public offices at the municipal level.

Hurley argues that the November 1995 cancellation of an advanced university placement program in Ontario high schools known as the Ontario Academic Credit will adversely affect student retention rates. He draws on his experience as a member of the Dropout Prevention Committee of Newfoundland's Department of Education in 1989, as well as on the positive results stemming from the implementation of policies recommended by the Committee. In the paper he traces the origins of Newfoundland's dropout prevention policies over the past 15 years, policies which have been bearing fruit for several years now in this province, and which in his opinion could well be heeded by the policy makers in other provinces during a period of retrenchment in public education services.

Jeff Bulcock

Retention Rates: The Ontario Case

Ontario has been the envy of most other provinces over the years, at least in terms of a few educational indicators. One of these areas has been its student retention rate. The number of students who have remained in school in Ontario has been consistently the highest or nearly the highest for the past couple of decades. It can be argued that this has in large part been a result of the existence of the Ontario Academic Credit (OAC) year.

Ontario students have been able to complete the equivalent of first year university for modest direct cost in their home high schools. On November 2, 1995,

however, John Snobolen, Minister of Education, announced the cancellation of the OAC year in Ontario beginning in 1997, becoming fully effective in the year 2001. The province intends to compress its five high school years into four years. Snobolen said, "It means we're going to do some compression and have normal high school completed in four years". How is the reduction of the number of years of schooling likely to affect Ontario students?

Policy Implications of OAC

If one examines Snobolen's statement critically, it leaves the Ontario government the option of off-loading the OAC year of schooling onto the individual. In Newfoundland and many other jurisdictions the equivalent of OAC is purchased privately by students in the form of a junior studies or a general studies year at university. The likely effect of the cancellation of the OAC year will be the reduction of the number of students who complete that year of schooling. It might be that Snobolen feels "ordinary high school" is schooling to the end of grade 12. For the Minister and The Government OAC might no longer be "ordinary high school".

Student Retention in Newfoundland

Student retention has long been identified as a problem in North American education. Schreiber (1967) stated that it was 1950 before the number of students who stayed in school until their normal graduation year equaled those who dropped out. Newfoundland, too, has long been concerned with student retention as was evidenced by the appointment of the Crocker and Riggs (1980) Taskforce on **Improving School Retention and Post-secondary Participation**. The Newfoundland Department of Education established a student retention committee in the 1980's to develop policies to address the still persistent problem of student retention. The advent of the grade 12 program in Newfoundland saw an improvement of the retention rate of students that seemed to be the result of increased academic success of students because the academic requirements were spread over four years rather than three. Many studies such as Radwanski (1987), Crocker and Riggs (1980), and Harris and Snelgrove (1983) identified the main cause of student dropouts as student dissatisfaction with school.

What Researchers Find About Student Retention

Ontario recently appointed a sociologist to study the issue of the relevance of educational programs and the issue of dropouts. Radwanski (1987) reported that the dropout of students in Ontario was more related to student socio-economic background than to school factors. His arguments, similar to those of Coleman et al. (1966), claim that higher student achievement was related to higher socio-economic levels. Radwanski pointed out that students in lower socio-economic home environments receive less support and encouragement with regard to their school work. If this argument is valid then Newfoundland students would be much more likely to drop out than their more affluent counterparts in Ontario, but in recent years such has not been the case. The Newfoundland Department of Education, in the early 1980's, identified low retention rates as a major educational system problem. Only 55 percent of seventeen-year-old students were staying in school until their normal graduation year. These were the years when the Newfoundland high school program was compressed into three school years. The introduction to Grade 12 to the

Newfoundland system increased the student retention rate in spite of predictions from a task force on dropouts in the opposite direction.

Two reasons are suggested for the subsequent increase in retention rates. One was the lengthening of the program from three years to four years which made it possible for academically challenged students to master learning outcomes which were too demanding over a three year period. The second reason that one can propose has to do with an increase in the expectations of students accompanying the additional year of schooling. Since the curriculum was made more manageable it was easier for a larger proportion of the student body to meet with success. Other recent studies, too, have reported that academically successful students have more favourable attitudes towards school and are less likely to drop out.

Radwanski (1987), for example, reported that surveys completed by Decima and Goldfarb for his Royal Commission identified the main reason for withdrawal from school as being school related. These findings were consistent with similar studies in Newfoundland that identified problems in school as the leading reason why students withdrew.

Potential Consequences of the Snobolen Initiative

The Snobolen initiative is likely to make the curriculum load more difficult for students to master over the shorter period of time. Average and slower students are likely to be more challenged by the contraction in the high school program. If the Newfoundland experience can be used as an example, then many Ontario students are likely to become discouraged; hence, they will be more at risk to drop out before graduation.

Thus the cancellation of the OAC year of schooling in Ontario is likely to be a "double jeopardy" for many students, but especially the disadvantaged. They will be more at risk to drop out before graduation. If they persevere and successfully graduate they will have the further challenge of trying to fund an additional year of post-secondary study. One presumes that the Minister is unaware that Ontario's grade 12 students are performing in aggregate below the level of grade 12 students in the other 9 provinces. Thus, it is likely that fewer students will be able to successfully complete the four year degree programs at Ontario's universities.

Learning from The Newfoundland Experience

What then are the lessons that Ontario can learn from the Newfoundland experiences of the mid 1980's? Any answer to this question has to be preceded by a second question: Which goal is most important to the Ontario educational system? Is it equity, accountability, efficiency, or adequacy? In these conservative times of budget cutbacks, doing more for less, and more scholar for the dollar discussions, equity tends to take a back seat to efficiency concerns. Thus, Snobolen is not likely to be concerned about the possibility of Ontario students having to pay for a general studies year as Newfoundland post-secondary students do. It seems that the reduction of the OAC year will probably result in the reduction of student achievement outcomes by one year. Perhaps the years of schooling might have been more painlessly reduced by eliminating the junior kindergarten program which was probably begun as much to provide cheap day care as for educational achievement outcomes.

One of the strongest features of the OAC program of studies is that it makes it possible for all Ontarians, regardless of socio-economic status or geographic location, to complete one year of education generally considered to be post-secondary in other provinces. Thus Snobolen's cancellation will tend to make the Ontario system more elitist. As tuition fees increase in response to transfer cuts at the post-secondary level fewer students from lower socio-economic levels will become post-secondary participants. The elimination of OAC will therefore promote greater inequity among different income groups in the province.

It seems that the two provinces are heading in different directions from an educational perspective. On the one hand Newfoundland adapted many strategies from Ontario that seemed to promote educational conditions favourable to student retention - it lengthened the number of years for its high school program and concomitantly raised its level of student retention. On the other hand Ontario is contracting its program, and that will likely frustrate students who are experiencing academic difficulty and increase student dropouts. Whether or not the cancellation of the OAC year actually saves the economy of Ontario money or causes an erosion of its stock of human capital and a student retention problem should be a subject of debate in months and years to come.

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ENDNOTES

DAESIN

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Abstract

Intrinsic motivation is a psychological construct that is thought to be critical to sustained learning. Students who are intrinsically motivated display more adaptive and constructive behaviours related to academic success than those who do not. Yet, it is also unclear what exactly is intrinsic motivation. In this paper, I describe intrinsic motivation as a way of being, a particular disposition which certain individuals have in approaching academic tasks. This way of being is unique and self-enhancing. The psychological characteristics that underlie intrinsic motivation are explored.

Children love to play. From birth, humans are inquisitive and playful. They display a “ubiquitous readiness to learn” and this natural curiosity leads them to exploration and experimentation. Without prodding or incentives, children will strive to figure out how things work, what effects might be produced by a given action, or to know more about the world in which they live.

Yet the play itself is unstructured and undirected. There is no obvious goal except to play. It is self-directed and is satisfying in-and-of itself. There is an inherent interest and it is in acting on that interest that children experience cognitive growth. Through play, infants begin to identify patterns; they begin to develop classes or categories of concepts which become arranged into hierarchies. They learn to solve problems, make plans and set goals. In doing so, a sense of mastery emerges as they learn to exercise self-control. Consequently, it is in play that we encounter one of the most basic truths of human nature. Stimulated by curiosity or interest, individuals will naturally engage in exploratory, playful behaviours that result in an enhancement of self. The child is intrinsically motivated.

There are three characteristics that define intrinsic motivation. First, the activity is undertaken strictly of the individual's volition. It is self-initiated; the individual chooses to engage in the activity. Second, the reward of the activity, whether enjoyment or the satisfaction of needs, is contained wholly within the activity. There is no separable outcome other than that contained within the activity, and this outcome is typically described as satisfaction, enjoyment or learning. Third, the individual engages in the activity because it is inherently interesting, and it is the interest from the engaging in the activity that makes it intrinsically motivating.

Major writers in the field of intrinsic motivation agree that intrinsic motivation is invoked when an activity is undertaken for its own sake. By definition, intrinsic motivation is a self-justifying experience. There seems to be a general agreement that interest plays a critical role in intrinsic motivation. Yet Csikszentmihalyi claimed that it is the pursuit of enjoyment or satisfaction that gives rise to intrinsic motivation and individuals will seek out activities that will provide enjoyment and satisfaction. Deci & Ryan also suggested that individuals are intrinsically motivated when the

activity is undertaken for pleasure and satisfaction. However, they also suggest that intrinsic motivation is driven by needs for competence and self-determination.

Interest is an important part of intrinsic motivation, so much so that the two terms are often treated as synonymous, in part because they result in similar outcomes. As a psychological trait, interest results in focused attention, increased cognitive engagement, greater persistence, and, in general, positive affect. While high interest leads to increased effort, the activities feel relatively effortless because they are interesting.

Recent research on interest acknowledges two types of interest: situational, and individual. Situational interest refers to interest that is invoked by conditions or objects that focus attention, and may create an affective reaction that is transitory. Situational interest needs to be triggered and sustained. It tends to be associated with novelty, variety, or attention-getting mechanisms.

Individual interest is deeper. It represents a psychological state, a part of the self, an enduring disposition to engage a class of objects or events. It is a continually evolving relationship between a person and some subject matter through which the person comes to identify and be identified with the content, such that the content becomes part of the person's identity. As the individual learns more about the topic and develops positive feelings about it, opportunities for setting goals and seeking challenges develop. As these challenges are met and knowledge continues to grow, individual interest will deepen.

The embodiment of intrinsic motivation may best be captured in a mode of being Csikszentmihalyi has called flow. Flow is a particular subjective experience that occurs when individuals are engaged in intrinsically motivated activities. In flow, the individual experiences an autotelic state of consciousness - the activity is enjoyable in and of itself. It is what people feel when they feel that they would not want to be doing something else.

Yet, it is not just enjoyment that characterizes flow. When in flow, a subjective experience of consciousness occurs such that:

Concentration is very deep to the point that the mind and body are completely absorbed in the activity;

There is a loss of sense of time -- time passes faster or slower than normal;

A loss of sense of self - the self becomes merged with the activity; there is a loss of self-consciousness and worry, and there are no concerns about failing.

Flow is a melding of consciousness and activity. Attention is completely focused upon the activity to the point in which the individual has become completely absorbed in the activity, and actions are spontaneous and automatic. In describing the flow experience, one individual stated "Your concentration is very complete. Your mind isn't wandering, you are not thinking of something else; you are totally involved in what you are doing... your energy is flowing very smoothly."

When the individual enters into a flow experience, there is a narrowing of the field of stimuli that are attended to. In some respects, the outside world ceases to exist. Our observations of skateboarders indicate that when absorbed in their activities, skateboarders pay little attention to the outside world. They do not interact with each other and do not seem readily distracted from attempting to execute their techniques. They are "in the zone" and their focus is skateboarding. Likewise, interviews with individuals illustrate this narrowing of the field of stimuli. "The game is a struggle, and concentration is like breathing - you never think of it. The roof could fall in and, if it missed you, you would be unaware of it." "When the game is exciting, I don't seem to hear nothing - the world seems to be cut off from me and all there is to think about is my game."

Because the individual is completely absorbed in the activity there is an apparent transformation of time. In some instances, a heightened sense of awareness may give the sensation of time standing still. For example, "[b]allet dancers describe how a difficult turn that takes less than a second in real time stretches out for what seems like minutes." On the other hand, a narrowing of the field of stimuli to exclude that external to the activity may give the sensation that time has sped up. That is, time passes by without being noticed. An individual may have been engaged in an activity for hours, but that it may have seemed like minutes. One sequence of events in the activity merges into the next seamlessly, spontaneously and automatically with no regard for external references. Time flies when you are having fun and it is from this feature that the label "flow" was derived.

Flow is also accompanied by a loss of the sense of self as being separate from the world, accompanied by a feeling of union with it. "It's a Zen feeling, like meditation or concentration. One thing you're after is one-pointedness of mind. ...it's like an egoless thing in a way." In flow, psychic energy is directed towards engagement with the task. Consequently, there is no opportunity for self-scrutiny or for the self to be threatened. There is no fear of failure, worry about loss of control or concern about opinions of others. All psychic energy is directed towards the task at hand. Again, this is illustrated in our observations of skateboarders who are "in the zone." They are not concerned with being scrutinized or performing. They are focused upon executing the next trick, and if not successful, persisting until success is achieved.

Although a number of accounts of flow have been published, the experience is nicely portrayed in a scene from Alexander Solzhenitsyn's *One day in the life of Ivan Denisovich*. Denisovich, or Shukhov as he is called in the story, is a prisoner in a Soviet prison camp in Northern Russia. In this scene, Shukhov's company of prisoners have been marched to a small town outside of the camp. It was a sunny winter's day: -17 with a blustery wind, but the temperature had not yet fallen to the point at which they would not be allowed to work. Shukhov was the mason. His job was to lay bricks, and it was during this exercise that he began to enter into the flow experience:

"...Shukhov made no mistakes. ...Shukhov took up some of the steaming mortar on his trowel and slapped it into the appropriate place, with his mind on the joint below ... He smoothed the mortar with his trowel and then - down with the block! And without losing a moment he leveled it, patting it with the side of the trowel ... The work went with a

rhythm ... Shukhov pressed ahead ...Steady. That's the ticket. He was working so fast he had not time to wipe his nose. ... And now Shukhov and the other masons felt the cold no longer. Thanks to the urgent work, the first wave of heat had come over them ... But they didn't stop for a moment ... Their feet didn't feel cold, that was the main thing. Nothing else mattered. Even the breeze, light but piercing, couldn't distract them from the work. ... What a pace they had set! They were driving along the fifth row now. ... Shukhov should have stretched a string higher but there was no time for it now. ... [T]he sun was beginning to set. ... And they'd got into the swing - couldn't be better."

Following a flow experience, the self is more complex in its organization than it was before. This complexity is the result of two processes: differentiation and integration. Differentiation refers to a tendency for uniqueness, separating one's self from others, knowing that one is a unique entity. Integration refers to a union with others, and with ideas or entities beyond self. The self is more differentiated after the flow experience because the challenge within the experience leaves the individual feeling more capable, competent and autonomous. After each flow experience the person becomes more of a unique individual. Yet flow helps to integrate the self because it leads to an ordering of consciousness. Thoughts, feelings and senses are all directed toward the same goal. The experience is one of harmony. Every flow experience provides a sense of discovery, a creative feeling of transporting the self into a new reality, pushing the individual to higher levels of performance. It transforms the self by making it more complex, and it is this growth that is the key to flow activities. "The self is more complex as a result of experiencing flow. ... When we choose a goal and invest ourselves in it to the limits of our concentration, whatever we do will be enjoyable. And once we have tasted this joy, we will redouble our efforts to taste it again. This is the way the self grows."

While this growth of self has been described as cognitive, other characteristics begin to develop. Growth emanating from intrinsically motivated experiences, in particular flow, may include the development of gratitude, altruism and empathy, forgiveness, and humility. For example, in the state of humility, there is a lack of focus on self. There is no preoccupation with self. The self is no longer the phenomenological center of its world. We no longer need to have the need to enhance or defend an "all-important" self. There is no need for self-aggrandizement and there is no arrogance. It is, rather, a state of self-assuredness. Our focus shifts outward to the beauty of the world around us and the self becomes focused on the larger community which it is part of. There is an increased valuing of others, and a greater appreciation of the value of all things. Consequently, as individuals engage in intrinsically motivated behaviours and experience flow, their sense of self is strengthened enabling them to move beyond themselves. The self is no longer its focus.

Csikszentmihalyi seems to describe a flow experience as equivalent to a mystical experience. Religious and meditative experiences are reduced, in his view, to flow experiences. Western contemplative techniques such as those of St. Ignatius Loyola and St. Benedict appear to be attempts to focus or control attention. Eastern religions, in particular Sanskrit Yoga, seem to share qualities with the flow experience. They seek to achieve a self-enhancing, self-forgetting experience through control of concentration. Thus, for Csikszentmihalyi, meditative experiences

involve focusing attention and ordering consciousness, and are, in essence, entirely human experiences. Flow, in particular meditation, is not seen as a means of communion with the divine or entry into the infinite, nor is it described in a transcendental manner. Rather, it is reminiscent of Laplace's reply to Napoleon when asked to explain the role of God in his model of the universe: "Sir, I have no need of that hypothesis!"

If intrinsically motivated experiences, especially flow, result in growth of the self, in particular cognitive growth, under what conditions might intrinsic motivation occur? Self-determination theory posits that intrinsically motivated behaviour is driven by three psychological needs: a need for competence, a need for autonomy, and a need for relatedness. These needs are innate, propelling individuals into actions that will result in the satisfaction of those needs. Yet, they also prepare the individual to continue to seek challenges, and create the feeling that one is a capable human being. Our own research indicates that students who feel competent, have an internal locus of causality, feel a sense of school belonging, and see the teacher as being supportive are 10 times as likely to achieve a pass than children who do not feel competent, make external attributions, feel alienated and do not see their teacher as being supportive of their learning.

Individuals are motivated to try to increase their sense of competence by seeking out challenges, pursuing goals and increasing learning. Events that increase one's sense of competence will enhance intrinsic motivation. Yet, increasing one's sense of competence is insufficient. To engage in an activity, one must perceive one's self to be capable of performing the task. The greater one's perceived capacity to perform the activity the greater the quality of engagement in the activity, and the more intrinsically motivated the activity will be. Increased self-efficacy is associated with positive achievement related behaviours, and students who feel efficacious are more likely to be self-regulating, strategic, and metacognitive than students who do not. They are also more likely to be able to exercise control over stressors than may provoke anxiety (Bandura, 1993). Students who see themselves as capable are more likely to display adaptive, mastery behaviours while those who do not are more likely to behave in an ego, performance oriented manner (Dweck, 1986).

In addition to the need for competence, the need for autonomy is essential to intrinsic motivation. This need is an innate tendency leading individuals to seek to control aspects of their environment. The need for control allows individuals to obtain resources necessary for survival and adapt to their surroundings. Yet, it is not just the tendency to exercise control that results in intrinsic motivation; individuals must also perceive themselves as having control over actions and outcomes. Autonomy refers to the sense that one's actions emanate from oneself, and is accompanied by feelings of freedom and choice. Students who have an internal perceived locus of causality, or make internal, controllable attributions will display intrinsically motivated behaviour. These students see outcomes as the results of their actions. By applying effort and utilizing their knowledge they believe they can achieve desirable outcomes. They are more likely to be effective problem solvers, engage more deeply with the content, and persist on challenging tasks Perceived autonomy (or an internal locus of causality) is related to psychological well-being. People with greater perceived control are better able to cope with stress, are less anxious and depressed, and respond better in the face of trauma.

The third need conducive to intrinsic motivation is relatedness. Relatedness refers to feelings of attachments to other individuals, and developing intimate relationships. Children need to experience secure attachments to parents and students need to develop positive relationships with their teachers. In order to develop and function in an optimal manner, humans need to feel attached to others. Individuals with well-developed relationships tend to function better, display better resilience, and report fewer psychological difficulties. Autonomy develops most effectively when children have a sense of attachment.

Although perceptions of competence, autonomy, and relatedness are personal characteristics that support and sustain intrinsic motivation, other factors appear necessary to induce flow. Flow occurs within a sequence of activities that are goal directed, requiring concentration and psychic energy. Consequently, in order to achieve flow, the goals of the activity need to be clear and immediate. There is a clear focus upon what is to be achieved so that energy may be directed towards achieving that goal. The goals are set to maximize the match between challenge and skill. In flow, the goals are neither too easy nor too difficult, but are within the limits of the individual. However, it also appears that the goals must challenge the individual, stretching existing skills and knowledge to produce growth. At the same time, there is no worry about not meeting the goal and no fear of failure. Because all psychic energy is directed towards achieving the goal, there is no focus upon self. There is no concern about achieving rewards or avoiding punishments. The self is not concerned with obtaining approval from others or looking incompetent. It is focused upon the goal and is functioning at its fullest capacity.

Csikszentmihalyi believed that flow occurred when the level of challenge was high but within the capabilities of the individual. What is not clear is whether or not the activity had to be inherently interesting, and whether or not it is freely chosen, although these seem to be implicit. On the other hand, Deci & Ryan stated that behaviour is intrinsically motivated when the activity is interesting and freely chosen. What is not clear is whether or not flow can be achieved under conditions in which the activity is not freely chosen. If the individual identifies with a particular subject matter but that activity is not freely chosen, such as in mathematics or music, can the individual still experience flow? Given that most students (and adults) rarely experience flow or are intrinsically motivated, it would be important to know if flow is possible in conditions other than those described by Csikszentmihalyi and Deci & Ryan.

I would speculate that flow is possible if certain conditions are met. First, the goals of the activity need to be clear and unambiguous, so that attention may be completely focused. Second, the goals of the activity need to be within the capabilities of the student. If the goals are clear and within the capabilities of the student, then three important psychological functions occur: the student is able to organize cognitive resources to complete the activity; in doing so, self-efficacy is heightened; self-evaluations will tend to be self-enhancing. Third, individual interest in the task should be high. When students are interested in the activity, two psychological functions occur: they are more willing to expend psychic energy in completing the task and engage in the self-regulated behaviours necessary to complete it. Fourth, the student's self-efficacy would need to be high. If students are confident they can successfully complete the activity they will be more willing to invest psychic energy. Fifth, students need to have an internal locus of causality,

recognizing that it is their own effort, strategies and knowledge that yield the outcome of the activity. At the same time, they approach the task with a learning orientation, a desire to increase competence and knowledge. They are willing to attempt the task even though there may be a risk of not being successful, if it means that something may be learned. If not successful, they will make strategy and knowledge based attributions which will result in learning from mistakes, leaving them feeling optimistic about future attempts.

Yet at the same time, there are people for whom these criteria are dispositional and constitute a *way of being* in the world. They tend to be well adjusted and optimistic. They seek challenges, are self-regulating and are able to channel their energies into task completion. Unfortunately, in Western education, few students have the opportunities to develop these characteristics and attain this *way of being*. Few students (or adults) experience flow and few are intrinsically motivated and many display less adaptive patterns of behaviour.

Considerations of intrinsic motivation, flow, and the underlying psychological characteristics leads to a number of important educational and therapeutic implications. These could range from simple changes in classroom practice to fundamental changes to the way education occurs. Giving students the opportunity to be intrinsically motivated and experience flow, with its potential for growth, should be one of our primary concerns. Focusing on the contexts that promote characteristics which lead to flow, and those that hinder it should be part of every teacher's vision of the classroom.

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NAME INDEX

Andrews, J., 474-485
Andrews, L., 474-485
Aylward, Norma, 69-81

Baksh, Ishmael, 1091-1099
Barbour, Michael K., 82-88, 238-253, 554-571, 683-693
Barrell, Barrie, 287-292, 299-308, 694-698, 934-947
Bartley, Anthony W., 38-51
Bowen, G. Michael, 18-26
Brown, Jean, 411-415, 848-865, 921-932, 1002-1012
Brown, Chris, 201-213
Bulcock, Jeff, 416-433
Bussey, Wilf, 660-666

Cahill, Mildred F., 1170-1176
Coady, D., 474-485
Coish, Della, 733-740
Collins, Michael, 82-88
Collins, Alice, 821-822, 1069-1079, 1080-1090
Constantine, Tammy, 462-473
Cowan, R., 474-485
Crocker, Robert K., 1213-1222

Davis, Garry, 462-473
Dawe, Ron, 416-433
Delaney, Jerome, 1013-1019, 1020-1028
Devereaux, Lorraine, 840-847
Dibbon, David, 1177-1192
Doyle, Clar, 866-880
Drodge, Edward, 293-297
Dwyer, K., 474-485

Edwards, P., 474-485
Elliott, Harry G., 214-219, 787-794, 1100-1105
Elshof, Leo, 27-37

Fagan, William T., 231-237, 712-726, 727-732, 733-740, 741-753, 754-766, 767-777
Fagan, Carol Ann, 69-81
Finn-Pike, C., 474-485
Fleet, Beverly, 795-807
Furey, Doug, 572-581

Goodnough, Karen, 2-3, 52-59
Gosse, Paul, 169-180
Grant McLoughlin, John, 191-200, 277-286

Hache, George J., 795-807, 881-887
Halleran, Darlene, 69-81
Hammett, Roberta F., 181-190
Harris-Anstey, V., 474-485
Hiscock Pugh, Nancy, 817-820
Hodson, Derek, 4-9
Hurley, Noel P., 1254-1258

Janes, Craig, 399-410
Jeffery, Gary H., 1106-1112, 1170-1176

Kennedy, William, 866-880, 1050-1056
Kim, Ki Su, 1037-1041, 1042-1049
King, Irwin L., 309-321, 322-345

Maich, Kimberly, 522-536
Mann, Bruce L., 582-590, 651-659, 660-666, 699-705
Martin, Wilfred B.W., 1091-1099
May-Follett, Cindy, 371-372, 823-824
McCann, Phillip, 641-650, 1148-1155

McCarthy, Karen, 462-473
McGrath, Samuel, 1243-1253
Mellor, Judith, 821-822
Mulcahy, Dennis M., 238-253, 612-640, 667-682, 889-901, 902-920, 965-977,
994-1001, 1143-1147
Murphy, Elizabeth, 157-168, 220-230, 254-265, 373-380, 572-581, 591-600, 601-611

Nesbit, Wayne C., 1170-1176

O'Keefe, Barbara A., 381-390
O'Leary, Kevin J., 601-611
Oldford, Joan, 90-148, 779-786
Oldford-Matchim, Joan, 435-447, 448-461
Orpwood, Graham, 38-51

Philpott, David, 508-521, 537-552, 1170-1178
Piper, Terry, 1029-1035, 1168-1169
Power, Rob, 591-600
Power-Piercey, Sharyn, 220-230

Ralph, Gordon, 1156-1167
Rose, Andrea M., 808-816, 866-880

Seifert, Tim, 266-276, 391-398, 1259-1269
Sheppard, Bruce, 411-415, 848-865, 921-932, 1002-1012
Singh, Amarjit, 346-362, 363-368, 435-447, 448-461, 462-479, 474-485, 486-499,
827-833, 866-880, 948-964, 978-993, 1057-1067, 1193-1212, 1223-1242
Stevens, Ken, 706-710
Sullenger, Karen, 10-17

Tite, Rosonna, 1113-1121
Treslan, Dennis, 834-839

Wadden, Mike, 727-732
Web, Jessica, 60-68
Whitmore, Mark, 660-666
Williams, Wayne, 369-370, 825-826

Yeoman, Elizabeth, 149-156
Younghusband, Lynda, 501-507, 1122-1142