A STUDY OF THE OUTCOMES OF
COLLABORATIVE AND STRUCTURED SUPPORT
FOR PRIMARY SCHOOL TEACHERS
TO FACILITATE INCLUSIVE EDUCATION
FOR STUDENTS WITH AN AUTISM SPECTRUM DISORDER

By Janine Bounds
Grad. Dip. App. Sci. (Prof. Counselling),
M.Ed. (Special Ed.)

A Thesis Submitted for Fulfilment of the Requirement for the
Degree of Doctor of Philosophy

Flinders University
Department of Disability Studies
School of Medicine
Faculty of Health Sciences

Adelaide, Australia

July, 2009
© Janine Bounds
TABLE OF CONTENTS

LIST OF APPENDICES xi
LIST OF TABLES xii
LIST OF FIGURES xvi
ABSTRACT xviii
DECLARATION xx
ACKNOWLEDGMENTS xxi

Chapter

1 INTRODUCTION 1
Current government and educational policy about inclusion 1
Concerns about Inclusion 2
Teachers’ Beliefs and Attitudes about Inclusion 2
Training and Support of Teachers 3
Particular Concerns in Relation to Students with an Autism Spectrum Disorder 4
Support for Schools and Teachers in Including Students with a Disability 6
Personal Observations and Concerns 9
Models of Support for Inclusion 11

2 THE DESCRIPTION AND PREVALENCE OF AUTISM SPECTRUM DISORDERS 15
The Description of Autistic Disorder 15
The Description of Asperger’s Disorder 17
Problems with the Current Diagnostic Criteria 19
Autism as a Spectrum 21
Terms Used in This Thesis 24
Prevalence of Autism Spectrum Disorders 26
International Prevalence Studies 26
Australian Prevalence Studies 27
Reasons for Increase in Prevalence 27
3 DEFICITS IN FUNCTIONING ASSOCIATED WITH AUTISM
SPECTRUM DISORDERS AND IMPLICATIONS FOR EDUCATION
The Cause of Autism Spectrum Disorders
Psychological Theories to Explain Autism Spectrum Disorders
  *Theory of Mind Deficit*
  *Executive Functioning Deficits*
  *Weak Central Coherence*
Relating the Triad of Impairments to These Psychological Theories
  *Impairments in Social Interaction*
  *Impairment in Communication*
  *Restricted, Repetitive, and Stereotyped Patterns of Behaviour*
Other Functional Difficulties Associated with Autism Spectrum Disorders
  *Intellectual Ability*
  *Sensory Processing Differences*
  *Motor Difficulties*
  *Academic Difficulties*
  *Emotional and Behavioural Problems*
Implications for the Education of Students with Autism Spectrum Disorder
  *Support of Theory of Mind Deficits*
  *Support of Executive Functioning Deficits*
  *Support of Weak Central Coherence*
  *Support of a Range of Deficits*
The Potential Mismatch between Autistic Difficulties and School Expectations

4 EDUCATIONAL INTERVENTIONS AND MODELS OF SUPPORT,
THE FORMULATION OF A PROJECT, AND HYPOTHESES
Research about Educational Interventions
The Treatment and Education of Autistic and Related Communication Handicapped Children Program
Comprehensive Structured Educational Programs
Kunce’s “Integrative Model of Effective Educational Intervention”
Foundational Elements

Accepting and knowledgeable people
Parent-teacher collaboration
Comprehensive assessment
Meaningful Education Plan

Structural Elements

Cognitive-organisational supports
Social communication supports
Behavioural-emotional supports

Curricular Elements

Traditional academics
Adaptive behaviour
Vocational skills
Meta-cognition
Social communication
Self-management
Sensory and motor needs

Student Outcomes

Simpson, de Boer-Ott, and Myles’ “Autism Spectrum Disorder Inclusion Collaboration Model”

Environmental and Curricular Modifications, General Education

Classroom Support, and Instructional Methods
Attitudinal and Social Support
Coordinated Team Commitment
Recurrent Evaluation of Inclusion Practices
Home-School Collaboration

The Proposed Model of Support to be Implemented

Foundational Elements

Communication with regional staff, network support staff and school principals
Accepting and knowledgeable school community
Comprehensive assessment
Collaborative Planning and Support 81
Structural Elements 82
Curricular Elements 82
Student Outcomes 83
Research Aims and Hypotheses 83

5 RESEARCH METHOD 85
Participants 85
Student Participants 85
Allocation of Student Participants Into Matched Groups 85
Age of Student Participants 87
Intellectual Ability of Student Participants 87
Autistic Diagnostic Category of Student Participants 88
Severity of Autism of Student Participants 90
Student Participants with Student Support Groups 91
Teacher and Parent Participants 92
Education and Socio-Economic Status of Parents 93
Autism Consultant 93
Design 94

Instruments 95
The Diagnostic Interview for Social and Communication Disorders (DISCO) 95
The Childhood Autism Rating Scale (CARS) 101
Behaviour Rating Inventory of Executive Function (BRIEF) 102
Achenbach System of Empirically Based Assessment (ASEBA) 103
The Wechsler Scales of Intelligence 106
The Neale Analysis of Reading Ability 107
Wechsler Individual Achievement Test – Second Edition (WIAT-II) 108
Special Learning Difficulties 108
Theory of Mind Tests 109
Sensory Profile 110
Survey Questions for Teacher and Parent Participants 112
Evaluation Questions in Relation to the Whole School Session 113
Procedure 114
Consent Procedures 114
Communication with Regional Staff and Network Support Staff 114
Communication with School Principals 114
Time Commitment of Participants 115
Establishment of a Clear Understanding of Processes 116
School and Teacher Involvement in the Project 116
Parent Involvement in the Project 116
School Responses 117
Intervention and Wait-Control Periods 117
Comprehensive Assessment 119
The Collaborative Planning and Support Group 121
Participants and meetings 121
Content of training in the group meetings 123
Deciding about and implementing interventions 124
Evaluating interventions 125
Support from Other Professionals 126
Whole School Training Session 127
Maintenance of Support for Participating Students 129

6 THE PROFILE OF STUDENTS IN THE SAMPLE 130
Intellectual Ability 130
Academic Ability 133
Reading Ability 133
Academic Achievement in Word Reading, Written Expression and Mathematical Reasoning 136
Academic Achievement Scores in Relation to Predicted Achievement Scores 139
Autistic Behaviours 141
Executive Functioning 145
Problem Behaviours 149
Sensory Responses 159
Theory of Mind Functioning 162

7 THE IMPLEMENTATION OF THE RESEARCH MODEL 166
Teachers, Parents, and Other Professionals 166
Talking about Disabilities 167
Whole Class Interventions 168
Providing and Producing Resources 169
Cognitive-Organisational Structural Supports 170
Social-Communication Structural Supports 171
Behavioural-Emotional Structural Supports 174
Sensory and Motor Needs Structural Supports 177
Supports in Traditional Academics 179
Adaptive Behaviour Curricular Supports 181
Vocational Skills 184
Metacognition 184
Social Communication Curricular Supports 185
Self Management Curricular Support 188
Sensory and Motor Needs/Therapy Curricular Support 189
Case Study 190

8 EXPERIMENTAL AND REPEATED MEASURES RESULTS 195
Effect of the Implementation of the Research Model on Autistic Behaviours 195

Effect on Group One When They Participated in the Implementation of the Research Model 196
Effect on Group Two When They Participated in the Implementation of the Research Model 200
Comparison of Effects on Group One and Group Two 204
Comparison of Effects on Students in Each Autistic Diagnostic Category 204
Executive Functioning Before and After the Intervention 205
Problem Behaviours Before and After the Intervention

Problem Behaviours Reported by Teachers

Problem Behaviours Reported by Parents

9 SURVEY RESULTS

Teacher Responses to the Whole School Session “Building the Big Picture”

Relevance of the Session to Teachers

What teachers Gained from the Session

Change in Teachers’ Practice

What was Missing from the Session

Teachers’ Responses to Survey Before and After the Intervention

Helpfulness of Knowing a Student’s Diagnosis

Knowledge about the Intellectual Ability Range of Students with Autism Spectrum Disorders

Specific Areas of Knowledge about Autism Spectrum Disorders

Need for More Specific Training in Particular Areas

Post-Intervention Understanding of Educational Interventions

Access to Professional Support

Needs of Students with Autism Spectrum Disorders

Need to Modify the Classroom Environment

Need to Modify Teaching Materials

Teachers’ Experiences of the Program for Students with Disabilities

Appropriate School Options for Students with Autism Spectrum Disorders

Support from Other Teachers and the School Community

Communicating and Collaborating with Parents

Additional Comments

Parent’s Responses to Surveys Before and After the Intervention

Specific Diagnoses Given to Their Children

Age of Their Children When Diagnosed

Importance of Diagnosis When Attending Mainstream Schools
Knowledge about Autism Spectrum Disorders 233
Positive Aspects of Their Children’s School Experience 234
Difficulties Their Children Experienced at School 235
Support through the Program for Students with Disabilities 236
Parental Contact with the School 237
Importance of Parental Contact with Children’s Classroom Teachers 240
Need for Further Support 241
Appropriate School Options for Students with Autism Spectrum Disorders 242
Additional Comments 243

10 DISCUSSION 245
The Behavioural Effects of the Model on Students with an Autism Spectrum Disorder 245
The Effect on Students’ Autistic Behaviours 245
The results of the present research 245
Previous research supportive of the present results 247
The effectiveness of the research model 247
The Effect on Students’ Executive Functioning 249
The Effect on Students’ Problem Behaviours 251
The Profile of Students with an Autism Spectrum Disorder 253
Intellectual Ability 253
Academic Ability 255
Reading Accuracy and Reading Comprehension 255
Written Expression 257
Mathematical Reasoning 258
Sensory Processing Difficulties 259
Theory of Mind Ability 260
Autistic Behaviours 262
Executive Functioning 263
Problem Behaviours 264
Differences between Teacher and Parent Report of Problem Behaviours 264
Differences in Problem Behaviours According to Autistic Diagnostic Category 266
Provision of Support through Student Support Groups 267
Evaluation of the Effect of the Model on Teachers 268
Teacher Knowledge about Autism and Knowledge of the Student 269
Teacher Benefit from Participation in the Process 270
Factors Contributing to the Effectiveness of the Model for Teachers 270
Teacher learning as part of ongoing experience 270
Realistic strategies for teachers in developing an inclusive classroom 271
The provision of time 271
Whole staff support 272
Evaluation of the Effect of the Model on Parents 273
Parent Knowledge about Autism and Benefit from Participation in the Process 273
The Importance of Parental Communication with Teachers 274
Limitations 275
Recommendations 276
Conclusion 279

APPENDICES 281

REFERENCES 358
## LIST OF APPENDICES

Appendix

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bartak, Bottroff, And Zeitz’ Dynamic Model Of Autism</td>
<td>281</td>
</tr>
<tr>
<td>B</td>
<td>Criteria for Autism Spectrum Disorder</td>
<td>282</td>
</tr>
<tr>
<td>C</td>
<td>Criteria for Childhood Autism</td>
<td>285</td>
</tr>
<tr>
<td>D</td>
<td>Diagnosis of Asperger Syndrome</td>
<td>295</td>
</tr>
<tr>
<td>E</td>
<td>Theory of Mind Tests</td>
<td>313</td>
</tr>
<tr>
<td>F</td>
<td>Teacher Survey 1</td>
<td>316</td>
</tr>
<tr>
<td>G</td>
<td>Teacher Survey 2</td>
<td>323</td>
</tr>
<tr>
<td>H</td>
<td>Parent Survey 1</td>
<td>328</td>
</tr>
<tr>
<td>I</td>
<td>Parent Survey 2</td>
<td>333</td>
</tr>
<tr>
<td>J</td>
<td>Staff Response to Building the Big Picture</td>
<td>336</td>
</tr>
<tr>
<td>K</td>
<td>Letter of Approval from University</td>
<td>337</td>
</tr>
<tr>
<td>L</td>
<td>Letter of Approval from Education Department</td>
<td>338</td>
</tr>
<tr>
<td>M</td>
<td>Letter of Introduction to Principals</td>
<td>340</td>
</tr>
<tr>
<td>N</td>
<td>Teacher Consent Form</td>
<td>344</td>
</tr>
<tr>
<td>O</td>
<td>Letter of Introduction to Parents</td>
<td>345</td>
</tr>
<tr>
<td>P</td>
<td>Parent Consent Form</td>
<td>349</td>
</tr>
<tr>
<td>Q</td>
<td>Basic Guidelines about the Use of Language with a Student with ASD</td>
<td>350</td>
</tr>
<tr>
<td>R</td>
<td>Results of Calculations Using Tukey’s Honestly Significant Difference (HSD) Formula When Results of One-way Repeated Measures ANOVAs Comparing Group Two’s Rated Disco Items Scores Across Time 1, Time 2 and Time 3 were Significant</td>
<td>354</td>
</tr>
<tr>
<td>S</td>
<td>Results of One-way ANCOVAs Comparing Changes in Group One Students’ Rated Disco Items Scores from Time 1 to Time 2 with Group Two Students’ Rated Disco Items Scores from Time 2 to Time 3</td>
<td>355</td>
</tr>
<tr>
<td>T</td>
<td>Results of One-way ANCOVAs Comparing Changes in Rated Disco Items Scores of Students in Each Autistic Diagnostic Category from Start to End of Implementation of Research Model</td>
<td>356</td>
</tr>
<tr>
<td>U</td>
<td>Results of SPANOVAs in Relation to BRIEF Teacher Form T Scores of Students in Each Autistic Diagnostic Category and in Whole Sample Before and After Implementation of Research Model</td>
<td>357</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table

2.1 The Autistic Continuum (Features Most Often used in Diagnosis) 23

3.1 Selected Examples of the Potential Mismatch between Student and Classroom Characteristics 54

5.1 Grade Level and Gender of Group One and Group Two Students 87

5.2 Descriptive Statistics of Wechsler Intelligence Ability Standard Scores of Group One and Group Two Students 88

5.3 Autistic Diagnostic Categories of Group One and Group Two Students 90

5.4 Number of Questions in the Sub-Domains and Domains of the Rated Disco Items 98

5.5 Meanings of Ratings given for Different Kinds of Behaviours when Using the Rated Disco Items 100

5.6 Assessment and Intervention Periods for Group One and Group Two Participants 118

5.7 Assessments Administered or Completed During Each Assessment Period 122

6.1 Descriptive Statistics of Wechsler Intellectual Ability Standard Scores of Students in Each Autistic Diagnostic Category and in Whole Sample 131

6.2 Results of One-way Between-Groups ANOVAs in Relation to Wechsler Intellectual Ability Standard Scores of Students in Each Autistic Diagnostic Category 133

6.3 Descriptive Statistics of Neale Reading Ability Percentile Ranks of Students in Each Autistic Diagnostic Category and in Whole Sample 134

6.4 Numbers of Students in Sample with Each Neale Reading Ability Performance Descriptor 134

6.5 Results of One-way Between-Groups ANOVAs in Relation to Neale Reading Ability Percentile Ranks of Students in Each Autistic Diagnostic Category 136
6.6 Descriptive Statistics of WIAT-II Subtest Standard Scores of Students in Each Autistic Diagnostic Category and in Whole Sample 137

6.7 Results of One-way Between-groups ANOVAs in Relation to WIAT-II Academic Achievement Scores of Students in Each Autistic Diagnostic Category 139

6.8 Numbers of Students in Each Autistic Diagnostic Category and in Whole Sample whose WIAT-II Academic Achievement Scores were Higher Than, Not Different To, or Lower Than Predicted Achievement Scores 140

6.9 Descriptive Statistics of Rated Disco Items Scores of Students in Each Autistic Diagnostic Category 142

6.10 Results of One-way Between-groups ANOVA in Relation to Rated Disco Items Scores of Students in Each Autistic Diagnostic Category 142

6.11 Descriptive Statistics of BRIEF Teacher Form T Scores of Students in Each Autistic Diagnostic Category and in Whole sample 145

6.12 Numbers of Students in Each Autistic Diagnostic Category and in Whole Sample with BRIEF Teacher Form T scores in Clinical Range 146

6.13 Results of One-way Between Groups ANOVAs in Relation to BRIEF Teacher Form T Scores of Students in Each Autistic Diagnostic Category 147

6.14 Descriptive Statistics of ASEBA-TRF T Scores of Students in Each Autistic Diagnostic Category and in Whole Sample 149

6.15 Descriptive Statistics of ASEBA-CBCL T Scores of Students in Each Autistic Diagnostic Category and in Whole Sample 150

6.16 Numbers of Students in Each Autistic Diagnostic Category and in Whole Sample with ASEBA-TRF T scores in Clinical Range 151

6.17 Numbers of Students in Each Autistic Diagnostic Category and in Whole Sample with ASEBA-CBCL T scores in Clinical Range 152

6.18 Results of Paired-Samples t Test Comparing ASEBA-TRF and ASEBA-CBCL T scores of Students in Whole Sample 153

6.19 Results of One-Way Between Groups ANOVAs in Relation to ASEBA-TRF T Scores of Students in Each Autistic Diagnostic Category 154
6.20 Results of One-Way Between Groups ANOVAs in Relation to
ASEBA-CBCL T Scores of Students in Each Autistic Diagnostic Category 155
6.21 Numbers of Students in Each Autistic Diagnostic Category and in
Whole Sample with Sensory Profile Section Results Showing
a Definite Difference 160
6.22 Numbers of Students in Each Autistic Diagnostic Category and in
Whole Sample with Sensory Profile Factor Results Showing
a Definite Difference 161
6.23 Numbers of Students in Each Autistic Diagnostic Category and in
Whole Sample with Correct, Incorrect, or No Answer to Theory of
Mind Test Questions 163
8.1 Descriptive Statistics of Group One Students and Group Two Students’
Rated Disco Items Scores at Time 1 and Time 2 197
8.2 Results of One-way ANCOVAs Comparing Group One’s Rated Disco
Items Scores from Time 1 to Time 2 with Group Two’s Rated Disco
Items Scores from Time 1 to Time 2 199
8.3 Descriptive Statistics of Group Two Students’ Rated Disco Items
Scores at Time 1 and Time 2 and at Time 2 and Time 3 201
8.4 Results of One-way Repeated-Measures ANOVAs in Relation to Group
Two Students’ Rated Disco Items Scores at Time 1, Time 2, and Time 3 203
8.5 Descriptive Statistics of BRIEF Teacher Form T Scores of Students in
Each Autistic Diagnostic Category and in Whole Sample Before and
After Implementation of Research Model 206
8.6 Descriptive Statistics of ASEBA-TRF T Scores of Students in Each
Autistic Diagnostic Category and in Whole Sample Before and
After Implementation of Research Model 208
8.7 Results of SPANOVA in Relation to ASEBA-TRF T Scores of Students
in Each Autistic Diagnostic Category and in Whole Sample Before and
After Implementation of Research Model 210
8.8 Descriptive Statistics of ASEBA-CBCL T Scores of Students in Each
Autistic Diagnostic Category and in Whole Sample Before and
After Implementation of Research Model 211
8.9 Results of SPANOVA in Relation to ASEBA-CBCL T Scores of Students in Each Autistic Diagnostic Category and in Whole Sample Before and After Implementation of Research Model 213

9.1 Numbers of Teachers Before and After Intervention Having Specific Knowledge about Autism Spectrum Disorders 219

9.2 Numbers of Teachers Before and After Intervention Indicating Specific School Options to be Appropriate for Students with Autism Spectrum Disorders 226

9.3 Numbers of Teachers Before and After Intervention Making Specific Judgements about the Importance of Parents’ Involvement with Teachers 229

9.4 Details of Diagnosis Given to Parents, Parents’ Beliefs about Correct Diagnosis, and Diagnosis Given in Present Research through Application of Algorithms in the DISCO (Wing, 1994) 232

9.5 Numbers of Parents Before and After Intervention Making Specific Judgements about Importance of Parents’ Involvement with Teachers 240

9.6 Numbers of Parents Before and After Intervention Indicating Specific School Options to be Appropriate for Their Children 243
LIST OF FIGURES

Figure

4.1. Kunce’s “Integrative Model of Effective Educational Intervention” 65
4.2. Simpson, de Boer-Ott, and Myles’ “Autism Spectrum Disorder
Inclusion Collaboration Model” 74
4.3. The structured and collaborative model used in the research. 79
5.1. Status of Group One and Group Two during Period 1 and Period 2. 94
6.1. Full Scale IQ scores of students in each autistic diagnostic category. 132
6.2. Neale Reading Accuracy percentile ranks of students in each autistic
diagnostic category. 135
6.3. Neale Reading Comprehension percentile ranks of students in each
autistic diagnostic category. 135
6.4. WIAT-II Word Reading subtest standard scores for students in each
autistic diagnostic category. 138
6.5. WIAT-II Written Expression subtest standard scores for students in each
autistic diagnostic category. 138
6.6. WIAT-II Maths Reasoning subtest standard scores for students in each
autistic diagnostic category. 138
6.7. Rated Disco Items Self-Care domain scores of students in each autistic
diagnostic category. 143
6.8. Rated Disco Items Communication domain scores of students in each
autistic diagnostic category. 143
6.9. Rated Disco Items Social Interaction domain scores of students in each
autistic diagnostic category. 143
6.10. Rated Disco Items Repetitive, Stereotyped Activities domain scores of
students in each autistic diagnostic category. 144
6.11. Rated Disco Items Maladaptive Behaviours domain scores of students
in each autistic diagnostic category. 144
6.12. Total Rated Disco Items scores of students in each autistic diagnostic
category. 144
6.13. BRIEF Teacher Form Global Executive Composite $T$ scores of students in each autistic diagnostic category. 148

6.14. BRIEF Teacher Form Monitor clinical scale $T$ scores of students in each autistic diagnostic category. 148

6.15. ASEBA-TRF Total Problems $T$ scores of students in each autistic diagnostic category. 157

6.16. ASEBA-CBCL Total Problems $T$ scores of students in each autistic diagnostic category. 157

6.17. ASEBA-TRF Social Problems syndrome scale $T$ scores of students in each autistic diagnostic category. 157

6.18. ASEBA-CBCL Social Problems syndrome scale $T$ scores of students in each autistic diagnostic category. 158

6.19. ASEBA-TRF Attention Problems syndrome scale $T$ scores of students in each autistic diagnostic category. 158

6.20. ASEBA-CBCL Attention Problems syndrome scale $T$ scores of students in each autistic diagnostic category. 158

6.21. ASEBA-TRF Aggressive Behaviour syndrome scale $T$ scores of students in each autistic diagnostic category. 159

6.22. ASEBA-CBCL Aggressive Behaviour syndrome scale $T$ scores of students in each autistic diagnostic category. 159
ABSTRACT

Australian commonwealth legislation and government education policies (Victoria, Australia) indicate a commitment to schools becoming more inclusive and responsive to the diversity of students’ needs. The current study was designed as a model of how policy might become part of practice for primary school students who have an Autism Spectrum Disorder. The implemented model was based on guidelines in the Autism Spectrum Disorder Inclusion Collaboration Model (Simpson, de Boer-Ott, & Smith-Myles, 2003) and the Integrative Model of Effective Educational Intervention (Kunce, 2003). Key elements of the model were: whole school training, ongoing training and support of the teacher (and teacher aide) in relation to a particular student, parental involvement, and involvement of an autism consultant for four months. Particular emphasis was placed on the need for collaborative and equitable relationships between the parties supporting the student and the benefit of structured interventions across multiple domains of student functioning.

Eighteen primary school students (5-12 years) participated in the study across nine mainstream rural and regional schools. The primary aim of the study was to assess the effect of support of teachers on student behaviour. Students were allocated into one of two groups. In the first time period Group One received the intervention and Group Two was a wait-control group. In the second time period Group Two received the intervention. Quantitative measures of the controlled part of the study were undertaken in relation to behaviours specifically related to an Autism Spectrum Disorder using questions from the Diagnostic Interview for Social and Communication Disorders (DISCO). In the first time period results indicated an improvement in Total behaviours specifically related to Autism Spectrum Disorders and particularly Self-care, Communication, Social Interaction, and Repetitive and Stereotyped Behaviours. Similar results were found in the second time period. Measures of executive functioning and clinical problem behaviours using other instruments were also undertaken pre and post each group’s intervention period. No significant changes in executive functioning
were evident. However, teacher and parent report both indicated a significant improvement in Attention Problems and Aggressive Behaviours for the sample. Teacher and parent gains were also measured qualitatively. Teachers reported marked gains in knowledge of Autism Spectrum Disorders and educational interventions and parents reported positive gains in knowledge and especially gains from increased communication with teachers.
DECLARATION

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature:

Date:
ACKNOWLEDGMENTS

The writer would like to thank Associate Professor Verity Bottroff and Dr. Brian Matthews for their generous availability to help, and for their insight and ongoing encouragement in supervising all of this study. I would also like to thank Dr. Lawrence Bartak for his statistical advice and for being such a willing honorary supervisor.

As well, I am indebted to Lynne Kidman who was incredibly willing to travel long distances to facilitate with me the whole school sessions and for being so supportive in general of the project.

There are many friends who have been very kind and understanding throughout, but special thanks to Meg Orton for her reading of an early draft.

Thank-you especially though to my family who have always believed in the process and who have also believed that it was possible to finish the process. A very big thank-you to my mother, Joan Walker, and to Anita Bounds and David Clift for being so gracious, understanding and encouraging, and to Stephen Bounds for always being available for advice and technical help. There are not sufficient words though to thank Vivian Bounds who has been tirelessly supportive in a thousand practical ways and in editing, and without whose love this would not have been possible.

In another sense though, none of this project would have been possible without the dedication of the teachers and parents who took part and the students for whom it was all probably ‘just another day at school’.