

**COMPLEX CONTEXTUAL INFLUENCES ON THE COMMUNICATIVE
INTERACTIONS OF STUDENTS WITH MULTIPLE AND SEVERE
DISABILITIES: A QUALITATIVE STUDY**

TANIA DE BORTOLI

B.App.Sc. (Speech Pathology)

B.A. (Hons)

**A thesis submitted to the School of Education, University of Newcastle, in partial
fulfilment of the requirements for the degree of
Doctor of Philosophy**

January, 2012

STATEMENT OF ORIGINALITY

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

ACKNOWLEDGEMENTS

This study is dedicated to my parents, Gaetano and Anna Maria De Bortoli, who have always nurtured in me a sense of social equity and respect for the dignity of all people, and encouraged my academic strivings.

Thank you to my partner Josh Dodson and my daughter Alana for their untiring support and patience as I spent precious family time working on this project.

Thank you to Associate Professor Micheal Arthur-Kelly for not only inspiring this work initially, but also constantly supporting and encouraging me to continue deepening my understanding of the project. Associate professor Bernice Mathisen has challenged me to reflect on the implications of my findings, and to be both contemporary and forward thinking in my interpretations. I am indebted to Emeritus Professor Phil Foreman for his generous attention to detail in editing successive drafts of chapters. Finally, to Professor Susan Balandin, who has accompanied me on this journey from the very beginning, my sincere thanks for shaping the project in its early form, providing invaluable input into the methodology, and continuing to freely provide feedback.

I thank Genevieve Powell at the University of Newcastle who generously worked on the graphic production of diagrams included as figures in this thesis and in publications. Similarly, I thank Damon Baker of Nomad Graphics in Katoomba who also worked on the graphic presentation of figures included in this thesis. Thank you also to Jennifer Clements for independent coding of data used in the calculation of inter-rater reliability measures.

I thank the staff of the New South Wales Departments of Education and Training and Human Services (Aging, Disability and Home Care), who provided both support and encouragement in conducting this project. To the participants, teachers and speech-language pathologists, a sincere thankyou for giving so generously of their time. I was touched by their openness and willingness to share their perceptions and experiences

Amanda Turner and staff within The University of Newcastle, School of Education also merit a thankyou for their assistance with administrative and funding issues. Similarly, staff at the Huxley Library provided invaluable support with accessing literature.

It would not have been possible to complete this work without the generous, patient and untiring support of these people. It seemed to me at times that no request or question was too difficult.

TABLE OF CONTENTS

	Page
Title Page	i
Statement of originality	ii
Acknowledgements	iii
Table of Contents	v
List of Tables	xvi
List of Figures	xviii
List of Publications	xix
List of Appendices	xx
Frequently Used Acronyms	xxii
Abstract	xxiii
CHAPTER 1: LITERATURE REVIEW	
Introduction	1
Best practices in communication intervention for students with MSD	2
<i>Enhancing students' communication skills</i>	3
<i>Functional communication in natural contexts</i>	3
The role of teachers in the classroom	4
Frequencies of communicative interactions	5
Limited implementation of best practices	5
Influences on implementation of best practices	6
<i>Teachers' knowledge and skills</i>	6
<i>Communication education for teachers</i>	7
<i>A traditional approach to professional development</i>	7
<i>An emergent model for professional development</i>	9
<i>Other potential influences on implementation of best practices</i>	11
<i>Teachers' attitudes, perceptions and beliefs</i>	11
<i>Broader contextual factors</i>	13
Summary	20
CHAPTER 2: CONCEPTUAL FRAMEWORK	
Introduction	21
Existing conceptual frameworks for the communicative interactions of students with MSD	21
Social discourses about disability	23
<i>Discourses about disability as socio-cultural constructions</i>	23
<i>The medical model of disability</i>	23

<i>Critiques of the medical model</i>	24
<i>Influences of the medical model</i>	24
<i>The social model of disability</i>	25
<i>The International Classification of Functioning, Disability and Health-Child and Youth version: A biopsychosocial model</i>	26
<i>Communication</i>	27
<i>Contextual factors</i>	27
<i>Barriers and facilitators</i>	28
Social policy and legislation	29
<i>General anti-discrimination legislation</i>	29
<i>Legislation and policy pertaining to the education of students with severe disabilities</i>	29
<i>Impact of legislation and policy on educational provision for student with severe disabilities</i>	30
Findings from implementation science	31
Complexity theory: A Conceptual framework for this study	32
<i>Multiple contextual factors at multiple levels</i>	33
<i>Student characteristics</i>	33
<i>Teacher characteristics: Attitudes, perceptions and beliefs</i>	34
<i>School context</i>	35
<i>Government: organisations/departments, legislation and social policy</i>	35
<i>Society</i>	36
<i>Nesting</i>	36
<i>Inter-connections and interactions</i>	37
<i>Collaboration</i>	37
<i>Attitudes, perceptions and beliefs</i>	38
<i>Dynamic processes and particularities</i>	38
Conclusion	39
Methodology	40
Summary and potential contribution of the study	41
Specific research questions	42
CHAPTER 3: METHODOLOGY	
Introduction	43
Definitions of settings	43
<i>Type of educational setting</i>	43
<i>Geographical setting</i>	44
Rationale for participants included	44
Eligibility criteria	44
Recruitment	45
<i>Stages 1 and 2</i>	45
<i>Stages 3 and 4</i>	46

<i>Initial contact</i>	46
Participants	47
<i>Stage 1</i>	47
<i>Stage 2</i>	48
<i>Stage 3</i>	48
<i>Stage 4</i>	49
Procedure for Data Collection	49
Interviews	51
<i>Briefing</i>	52
<i>Audio taping</i>	52
<i>Interview technique</i>	53
<i>Completion of interview</i>	53
<i>The second interview</i>	54
<i>Venues</i>	55
Research journal	55
Transcription	56
Analysis and Data Management	56
<i>Step 1: Initial analysis and preliminary list of categories</i>	57
<i>Step 2: Coding the data</i>	58
<i>Step 3: Assembling text segments into categories</i>	60
<i>Step 4: Writing working definitions for categories</i>	60
<i>Step 5: Applying coding categories to all data collected</i>	61
<i>Step 6: Summarising information about the categories</i>	61
<i>Step 7: Interactions or relationships between categories</i>	62
<i>Step 8: Themes</i>	62
<i>Subsequent analysis: Stages 2 to 4</i>	63
Rigour and credibility	65
Triangulation	65
Verification	65
Inter-coder reliability	66
Results	67
Summary	68

CHAPTER 4

STAGE 1 RESULTS: TEACHERS IN SPECIAL SETTINGS

Introduction	69
Part 1: Personal journeys	69
Characteristics of students	71
<i>Complex medical conditions</i>	72
<i>Complex personal care needs</i>	72
<i>Complex communication needs</i>	72
<i>Challenging behaviours</i>	73
Teacher characteristics	74
<i>Lack of experience</i>	74

<i>The value of personal attributes and experience</i>	74
<i>Turning point experiences</i>	75
<i>Teachers' attitudes, perceptions and beliefs</i>	76
Relationship with the student	77
<i>Interpreting students' communicative behaviours</i>	77
<i>Knowing the students' preferred objects and activities</i>	77
<i>Enhancing students' communication skills</i>	78
<i>Resolving challenging behaviours</i>	78
<i>Time taken to build relationships with students</i>	78
Part 2: Interactions with context variables	79
Class structure and the classroom context	79
<i>Class structure: Students all with MSD</i>	80
<i>Time constraints</i>	81
<i>Communicative interactions</i>	83
<i>Different class structures</i>	83
<i>The classroom infrastructure and organisation of physical space</i>	85
The school context: "isolation" versus "sense of community"	86
<i>Contrasting school settings</i>	86
<i>School culture</i>	88
<i>Integration</i>	90
<i>The role of the principal</i>	91
<i>Funding and resources</i>	92
<i>Staffing</i>	95
<i>Collegiality: Working with other teachers in the school setting</i>	97
<i>Learning Support Officers (LSOs)</i>	99
<i>Inappropriate practices</i>	100
<i>Attitudes, perceptions and beliefs of other staff</i>	101
<i>Change: Teachers' responses to the context</i>	103
<i>Gradual changes in a supportive school context</i>	104
Part 3: Communication education for teachers	104
<i>Pre-service training</i>	106
<i>Lack of availability of continuing education</i>	106
<i>The model of external courses</i>	107
<i>Inability to meet specific, identified training needs</i>	108
<i>Teachers' attitudes</i>	109
<i>The school culture</i>	109
<i>Mentoring for early career or inexperienced teachers</i>	110
<i>Working with others</i>	110
<i>Exchanges</i>	111
Part 4: Other people outside the school context	111
Geographical region or area	112
<i>Home context (including out of home care)</i>	112
<i>Networking with other special education teachers</i>	113
<i>Support from visiting specialist teachers</i>	113
<i>Collaboration with speech-language pathologists (SLPs)</i>	114
Government departments	117
<i>State education system</i>	117
<i>Other government departments and communication intervention</i>	120

<i>Inter-agency co-operation</i>	124
Part 5: Beyond schools	125
<i>Social inclusion</i>	126
<i>Segregation in school settings</i>	126
<i>Importance of community access</i>	127
<i>Communication goals for accessing communication outside school</i>	127
<i>Accessing community places</i>	128
<i>The impact of social policy and legislation</i>	128
<i>Social discourses about disability</i>	129
<i>Community attitudes and perceptions of students with MSD</i>	129
<i>The persistence of segregation</i>	130
<i>The need for change</i>	130
Part 6: Summary	131

CHAPTER 5

STAGE 2 RESULTS: TEACHERS IN MAINSTREAM SETTINGS

Introduction	133
Part 1: Personal journeys	133
<i>Student characteristics</i>	136
<i>Complex health conditions and multiple disabilities</i>	136
<i>Complex communication needs</i>	137
<i>Teacher characteristics</i>	138
<i>Knowledge and experience</i>	138
<i>Attitudes, perceptions and beliefs</i>	139
<i>Relationship with the student</i>	139
Part 2: Communication education	140
<i>Knowledge gaps</i>	140
<i>Lack of communication education</i>	141
<i>Practical experience</i>	142
<i>Mentoring</i>	142
<i>Visiting other schools</i>	143
<i>External courses</i>	143
<i>The role of support people</i>	143
<i>Internet</i>	143
Part 3: Interactions with the context	144
<i>The mainstream classroom setting</i>	144
<i>Peers without disabilities</i>	144
<i>Class structure</i>	146
<i>Curriculum and instructional practices</i>	148
<i>The school context</i>	149
<i>Staffing and learning support officers (LSOs)</i>	149
<i>The principal</i>	151
<i>Collegiality and communicative interactions</i>	151
<i>Attitudes of other staff</i>	152
<i>The physical environment/ infrastructure of the school</i>	152

<i>Resources</i>	153
<i>Funding</i>	153
<i>School culture</i>	153
<i>Geographical location</i>	156
Part 4: Other people outside the school context	157
<i>Geographical region or area</i>	157
<i>Home context</i>	158
<i>Visiting specialist teachers</i>	159
<i>Speech-language pathologists (SLPs) and other therapists</i>	161
<i>Government departments</i>	163
<i>State education system</i>	163
<i>Other departments and agencies employing speech-language pathologists (SLPs)</i>	165
Part 5: Societal factors	167
<i>Social inclusion</i>	167
<i>Social discourses about disability</i>	168
Part 6: Summary	168

CHAPTER 6

STAGE 3 RESULTS: SPEECH-LANGUAGE PATHOLOGISTS IN METROPOLITAN AREAS

Introduction	170
Part 1: Personal Journeys	172
<i>Student characteristics</i>	172
<i>Idiosyncratic forms of communication</i>	172
<i>Engaging students in communication</i>	173
<i>Challenging behaviours</i>	174
<i>Speech-language pathologists' characteristics</i>	174
<i>Experiences, knowledge and skills</i>	174
<i>Attitudes, perceptions and beliefs</i>	175
<i>Teachers' characteristics</i>	175
<i>Enjoyment, interest and affinity</i>	175
<i>Experience, knowledge and skills</i>	176
<i>Attitudes, perceptions and beliefs</i>	177
Part 2: Professional development	178
<i>Professional development for speech-language pathologists</i>	179
<i>Pre-service training in speech-language pathology</i>	180
<i>Supports in the workplace</i>	180
<i>Ongoing communication education</i>	180
<i>The role of the education system</i>	181
<i>Communication education for teachers</i>	181
<i>Teachers' education needs</i>	181
<i>The role of the education system</i>	182
<i>The role of speech-language pathologists (SLPs)</i>	182

Part 3: Communication intervention/collaboration	184
Communication intervention	184
<i>The paradigm</i>	184
<i>The role of augmentative and alternative communication (AAC)</i>	186
Collaboration with teachers	186
<i>Other benefits of collaboration</i>	187
<i>Speech-language pathologists' (SLPs) experiences of collaborating with teachers</i>	188
<i>Recommendations for effective collaboration</i>	189
Collaborating with families and working in the home context	192
<i>The importance of collaborating with families</i>	192
<i>The importance of communication between school and home</i>	192
<i>The role of the speech-language pathologist (SLP)</i>	193
<i>Home context and family issues</i>	195
Part 4: Teachers' and speech pathologists' workplaces; Contexts and practices	196
Speech-language pathologists' (SLPs) offices	196
<i>Other people in the office</i>	196
<i>Resources</i>	197
<i>The structure of speech-language pathologists' (SLPs) time</i>	198
The school context	198
<i>Comparison of different educational settings</i>	198
<i>Class structure</i>	200
<i>Peers without disabilities</i>	202
<i>Learning support officers (LSOs)</i>	202
<i>Staffing</i>	203
<i>The structure of time in the school context</i>	203
<i>Resources</i>	203
<i>Funding</i>	204
<i>Collegiality</i>	204
<i>Culture and the role of the principal</i>	205
<i>Inappropriate practices</i>	207
Part 5: Government departments	207
Government department employing speech-language pathologists (SLPs)	208
<i>The service delivery model</i>	208
<i>Separate processes of each discipline</i>	209
<i>The prioritization system</i>	209
<i>The waiting list</i>	210
<i>Staff shortages and physical location</i>	210
State education system	210
<i>Changes in schools</i>	210
<i>Limited support for AAC</i>	211
Other services	211
Recommendations for service delivery	212
<i>Collaboration</i>	212
<i>Department employing speech-language pathologists (SLPs)</i>	213
<i>The state education system</i>	214

Part 6: Societal factors	215
<i>Community Attitudes</i>	216
<i>Professional Discourses about inclusion</i>	216
Summary	217
CHAPTER 7	
STAGE 4 RESULTS: SPEECH-LANGUAGE PATHOLOGISTS IN REGIONAL AND RURAL AREAS	
Introduction	219
Part 1: Personal journeys	219
<i>Student characteristics</i>	222
<i>Students' intellectual, physical and communicative characteristics</i>	222
<i>Responses of communication partners</i>	222
<i>Families' characteristics</i>	222
<i>Teachers' characteristics</i>	223
<i>Teachers' knowledge and skills</i>	223
<i>Teachers' attitudes, perceptions and beliefs</i>	224
<i>Speech-language pathologists' (SLPs) characteristics</i>	226
<i>Speech-language pathologists' (SLPs) personal characteristics</i>	227
<i>Speech-language pathologists' (SLPs) experience, knowledge and skills</i>	227
<i>Speech-language pathologists' (SLPs) attitudes, perceptions and beliefs</i>	227
Part 2: Professional development	228
<i>Speech-language pathologists' (SLPs) professional development</i>	228
<i>Pre-service education</i>	228
<i>Access to continuing professional development</i>	229
<i>Supervision and mentoring</i>	230
<i>Networking with other speech-language pathologists (SLPs) in the region</i>	230
<i>Teachers' professional development</i>	230
<i>Teachers' pre-service education</i>	231
<i>Teachers' access to continuing education</i>	231
<i>Speech-language pathologists' (SLPs) role in providing professional development for teachers</i>	232
Part 3: Communication intervention and collaboration	233
<i>Communication intervention</i>	233
<i>The traditional withdrawal model</i>	233
<i>The paradigm shift</i>	235
<i>Collaboration with teachers and families</i>	237
<i>Benefits for students with MSD</i>	237
<i>Benefits for teachers, families and speech-language pathologists (SLPs)</i>	238
<i>Facilitating effective collaboration</i>	238
<i>Barriers to effective collaboration</i>	240
Part 4: Interactions with contexts	241
<i>Speech-language pathologists' (SLPs) offices</i>	242

<i>Other people in the office</i>	242
<i>Resources</i>	243
<i>The school context</i>	243
<i>Educational settings: mainstream classes, support units and special schools</i>	244
<i>The school culture and the role of the principal</i>	246
<i>Funding, resources and technology</i>	249
<i>Staffing and collegiality</i>	250
<i>Time constraints</i>	251
<i>Classroom context</i>	252
<i>Learning support officers (LSOs)</i>	253
<i>Inappropriate practices</i>	254
<i>Change</i>	255
<i>Home context</i>	255
<i>Time constraints at home</i>	255
<i>Parental exhaustion</i>	256
<i>Cultural and economic factors</i>	256
Part 5: The tyranny of distance: geographical location	256
<i>Recruitment and retention of professionals</i>	257
<i>Access to professional development</i>	258
<i>Impacts on schools</i>	259
<i>Standards</i>	259
<i>Isolation</i>	259
<i>Impacts on families</i>	259
<i>Dissatisfaction with schooling</i>	259
<i>Cultural and economic factors in rural and remote communities</i>	260
<i>Lack of services</i>	261
<i>Outreach speech-language pathology (SLP) service</i>	261
<i>Inequity in service provision</i>	261
<i>Limited nature of the service</i>	262
<i>Working with local support people</i>	263
<i>Community attitudes</i>	263
<i>Attitudes towards people with disability</i>	263
<i>Attitudes towards services</i>	264
<i>The role of technology</i>	264
Part 6: The role of government, social policy and legislation	264
<i>The state education system</i>	265
<i>Organisational culture</i>	265
<i>Capacity building in schools</i>	266
<i>Government departments employing speech-language pathologists (SLPs)</i>	267
<i>Social policy and the evolution of the organisation</i>	268
<i>The service delivery model</i>	268
<i>Number of speech-language pathologists (SLPs)</i>	270
<i>Perceptions of the service</i>	270
<i>Co-operation between government departments</i>	270
<i>Knowledge sharing</i>	270
<i>Limited collaboration</i>	271
<i>Recommendations for service delivery</i>	271

<i>State education system</i>	271
<i>Collaboration</i>	272
<i>Department employing speech-language pathologists (SLPs)</i>	272
<i>The process of change</i>	273
Summary	273
CHAPTER 8: DISCUSSION	
Introduction	275
Communicative interactions of students with MSD	275
The themes	276
<i>Teachers' and speech-language pathologists' (SLPs) attitudes, perceptions and beliefs, and their relationship to communication practices</i>	276
<i>The school context</i>	279
<i>The classroom</i>	279
<i>Type of educational setting</i>	280
<i>School culture</i>	281
<i>Capacity building</i>	283
<i>Communication intervention: Implementation of best practice</i>	285
<i>Professional development support role: sense of community</i>	286
<i>Role in capacity building in schools</i>	286
<i>Supports and obstacles to collaboration</i>	286
<i>Professional identities and conflicting models</i>	287
<i>Impact of school context</i>	287
<i>Organisational issues</i>	288
<i>Families and the home context</i>	288
<i>Teamwork and family-centred practice</i>	288
<i>Families' attitudes, perceptions and beliefs</i>	289
<i>Families' capacity or resources and support needs</i>	289
<i>Geographical location</i>	290
<i>Access to professional development support</i>	290
<i>Impacts on schools</i>	290
<i>Impacts on speech-language pathologists (SLPs)</i>	291
<i>Impacts on outreach speech-language pathology (SLP) service</i>	292
<i>Community attitudes</i>	292
<i>The role of technology</i>	293
<i>Government departments: Organisational cultures and structure of services</i>	293
<i>The state education system</i>	293
<i>Department responsible for speech-language pathology (SLP) services</i>	295
<i>Limited collaboration between departments</i>	297
<i>Societal factors: discourse, inclusion and equality</i>	298
<i>Social discourses about disability</i>	298
<i>Social inclusion</i>	299
<i>Social change</i>	299
<i>In conclusion</i>	299

A model for enhancing the communicative interactions of students with MSD	300
<i>Principles of the model</i>	300
<i>Changing individuals' attitudes and practices</i>	301
<i>The school context</i>	302
<i>The classroom context</i>	302
<i>School culture</i>	302
<i>School capacity</i>	302
<i>Communication intervention: Implementation of best practice</i>	304
<i>Capacity building in schools</i>	304
<i>Shared meanings</i>	304
<i>Support for collaboration</i>	304
<i>Geographical location</i>	305
<i>Professional development support for teachers</i>	305
<i>Support for schools</i>	305
<i>Support for speech-language pathologists (SLPs)</i>	305
<i>Outreach speech-language pathology (SLP) service</i>	305
<i>The role of technology in rural areas</i>	306
<i>Government departments: Organisational culture and structure of services</i>	306
<i>The state education system</i>	306
<i>Government department employing speech-language pathologists (SLPs)</i>	307
<i>Co-operation between government departments</i>	308
<i>Societal factors: discourse, inclusion and equality</i>	309
Limitations of the study	310
Directions for future research	311
<i>Students with MSD, their peers and peer interaction</i>	311
<i>School cultures</i>	311
<i>Communication intervention/collaboration</i>	311
<i>Families</i>	311
<i>Speech-language pathology (SLP) service delivery</i>	312
<i>Social discourses and inclusion</i>	312
<i>Community development and participatory action research</i>	312
Summary and conclusions	313
REFERENCES	315
APPENDICES	335

LIST OF TABLES

		Page
3.1	Characteristics of participants in Stage 1	48
3.2	Characteristics of participants in Stage 2	49
3.3	Characteristics of participants in Stage 3	50
3.4	Characteristics of participants in Stage 4	51
3.5	Preliminary list of categories for coding data	59
4.1	Supports and obstacles at the level of individuals (Stage 1)	71
4.2	Supports and obstacles in the classroom context (Stage 1)	80
4.3	Supports and obstacles in the school context (Stage 1)	87
4.4	Supports and obstacles associated with communication education (Stage 1)	105
4.5	Supports and obstacles located in the geographical region or area (Stage 1)	112
4.6	Supports and obstacles associated with government departments (Stage 1)	118
4.7	Societal factors (Stage 1)	126
5.1	Supports and obstacles at the level of individuals (Stage 2)	136
5.2	Supports and obstacles associated with communication education (Stage 2)	141
5.3	Supports and obstacles in the mainstream classroom setting (Stage 2)	145
5.4	Supports and obstacles in the mainstream school context (Stage 2)	150
5.5	Supports and obstacles located in the geographical region or area (Stage 2)	157
5.6	Supports and obstacles associated with government departments (Stage 2)	163
5.7	Societal factors (Stage 2)	167
6.1	Supports and obstacles at the level of individuals (Stage 3)	173
6.2	Professional development for speech-language pathologists (Stage 3)	179
6.3	Speech-language pathologists' perceptions of communication education for teachers	181
6.4	Supports and obstacles associated with communication intervention (Stage 3)	184

6.5	Supports and obstacles associated with collaboration	187
6.6	Supports and obstacles in speech-language pathologists' offices (Stage 3)	197
6.7	Supports and obstacles in the school context (Stage 3)	199
6.8	Supports and obstacles associated with the government departments (Stage 3)	207
6.9	Recommendations for service delivery (Stage 3)	212
6.10	Supports and obstacles at the societal level (Stage 3)	215
7.1	Supports and obstacles at the level of individuals (Stage 4)	221
7.2	Supports and obstacles associated with speech-language pathologists (SLPs) professional development (Stage 4)	228
7.3	Supports and obstacles associated with teachers' professional Development (Stage 4)	231
7.4	Obstacles and supports associated with communication intervention and collaboration (Stage 4)	234
7.5	Supports and obstacles in speech-language pathologists' (SLPs) offices (Stage 4)	242
7.6	Supports and obstacles in the school context (Stage 4)	245
7.7	Supports and obstacles in the home context (Stage 4)	256
7.8	Supports and obstacles associated with geographical location (Stage 4)	257
7.9	Supports and obstacles associated with government departments (Stage 4)	265
7.10	Recommendations for service delivery (Stage 4)	271

LIST OF FIGURES

	Page
2.1 Students with MSD and their teachers nested within complex systems	34
4.1 Systemic factors identified by teachers in special settings	70
5.1 Systemic factors identified by teachers in mainstream settings	134
6.1 Systemic factors identified by speech-language pathologists in metropolitan areas	171
7.1 Systemic factors identified by speech pathologists in regional and rural areas	220
8.1 Model for enhancing communication access of students with MSD	277

LIST OF PUBLICATIONS

De Bortoli, T., Arthur-Kelly, M., Mathisen, B., Foreman, P., & Balandin, S. (2010).

Where are teachers' voices? A research agenda to enhance the communicative interactions of students with multiple and severe disabilities at school.

Disability and Rehabilitation, 32(13), 1059-1072.

De Bortoli, T., Arthur-Kelly, M., Foreman, P., Balandin, S., & Mathisen, B. (2011).

Complex contextual influences on the communicative interactions of students with multiple and severe disabilities. *International Journal of Speech-*

Language Pathology, 13(5), 422-435/

De Bortoli, T., Balandin, S., Foreman, P., Arthur-Kelly, M., & Mathisen, B. (In

press). Mainstream teachers' experiences of communicating with students

with multiple and severe disabilities. *Education and Training in Autism and Developmental Disabilities* (to be published in June, 2012).

LIST OF APPENDICES

		Page
Appendix A	Copy of published article. De Bortoli, T., Arthur-Kelly, M., Mathisen, B., Foreman, P., & Balandin, S. (2010). Where are teachers' voices? A research agenda to enhance the communicative interactions of students with multiple and severe disabilities at school. <i>Disability and Rehabilitation</i> , 32(13), 1059-1072.	335
Appendix B	Letter to principals	349
Appendix C	Advertisement for schools	353
Appendix D	Eligibility criteria for teachers	355
Appendix E	Letter to DADHC managers	357
Appendix F	Advertisement for speech-language pathologists	359
Appendix G	Participant information sheet for speech-language pathologists	360
Appendix H	Eligibility criteria for speech-language pathologists	363
Appendix I	Consent forms	364
Appendix J	Participant information sheet for teachers	367
Appendix K	Interview outlines for teachers and speech-language pathologists	370
Appendix L	Transcription rules	373
Appendix M	Excerpt from research journal: Notes about topics for development of coding categories in Stage 1	374
Appendix N	Excerpt from research journal with examples of memos	379
Appendix O	Example of memos noting the emergence of new categories	380
Appendix P	Definitions of categories for analysing data	381
Appendix Q	Copy of a printed out category folder from Stage 1	388
Appendix R	Example of the thematic analysis summary table	391
Appendix S	Calculating inter-coder reliability	395

Appendix T	Copy of published article. De Bortoli, T., Arthur-Kelly, M., Foreman, P., Balandin, S., & Mathisen, B. (2011). Complex contextual influences on the communicative interactions of students with multiple and severe disabilities. <i>International Journal of Speech-Language Pathology</i> , 13(5), 422-435.	408
Appendix U	Copy of accepted article. De Bortoli, T., Balandin, S., Foreman, P., Arthur-Kelly, M., & Mathisen, B. (In press). Mainstream teachers' experiences of communicating with students with multiple and severe disabilities. <i>Education and Training in Autism and Developmental Disabilities</i> [to be published in June, 2012].	422

FREQUENTLY USED ACRONYMS

MSD	Multiple and severe disabilities.
SLP	Speech-language pathologist or speech-language pathology.
AAC	Augmentative and Alternative Communication.
SSP	School for Special Purposes or special school.
SU	Support Unit in a mainstream school.
LSO	Learning Support Officer. NB. This term has replaced the use of the term teachers' aide.
TA	Teachers' Aide
NSW	New South Wales, Australia
ICF-CY	International Classification of Functioning, Disability and Health-Child and Youth version.
KLAs	Key Learning Areas.
IEP	Individual Education Plan.

ABSTRACT

Although researchers have reported for more than two decades low frequencies of communicative interactions for students with multiple and severe disabilities (MSD), little is understood about reasons for the persistence of this situation. The purpose of this study was to explore reasons for the restricted communication access of these students, from the perspective of complexity theory which states that individuals, their activities and interactions are embedded within and influenced by complex systems. This thesis reports on research about the contextual factors influencing the communication opportunities of students with MSD. The study was conducted in four stages involving a total of 32 participants. Stage 1 involved interviews with 11 teachers working in segregated classrooms in metropolitan or regional areas, while in Stage 2 there were five teachers working in mainstream classrooms in rural schools. Stages 3 and 4 involved interviews with speech-language pathologists (SLPs) who visited students with MSD in different educational settings. Stage 3 involved eight SLPs based in metropolitan areas, whereas Stage 4 involved eight SLPs based in regional or rural areas. During two in-depth interviews, participants were each given the opportunity to talk about their perceptions and experiences of: (a) communicating with students with MSD, (b) supports and obstacles to communication opportunities for these students, and (c) professional development. Interviews were audio-taped and transcribed verbatim. Transcripts were subjected to thematic analysis and coded according to categories representing factors that acted as supports or obstacles to communication opportunities. Themes emerged from the relationships or interactions between the categories. Issues of rigour and credibility of the findings were addressed through triangulation of data from different groups of participants, verification through member checking, and inter-coder reliability measures. Participants identified a broad range of contextual factors, operating at a number of levels from individuals to society that influenced the communicative interactions of students with MSD. Results of the study suggested that the influences on students' communication opportunities, and therefore reasons for restricted communication participation, are complex. These findings led to the development of a model for enhancing the communicative interactions of students with MSD that recommends changes at multiple, systemic levels. The findings also highlight several important areas for future research.