Enhancing Augmentative and Alternative Communication Use through Collaborative Planning and Peer Modelling

A thesis presented in partial fulfilment of the requirements for the degree of Masters of Educational Psychology

Massey University

Albany, New Zealand

Amy Young

2017
# TABLE OF CONTENTS

TABLE OF CONTENTS _____________________________________________ ii

LIST OF FIGURES AND TABLES ____________________________________ vii

AAC CONVENTIONS ______________________________________________ vii

ACKNOWLEDGEMENTS ______________________________________________ viii

ABSTRACT ________________________________________________________________ ix

CHAPTER ONE: Introduction _____________________________________ _____________ 1

   Autism Spectrum Disorder ___________________________________________ 1

   Augmentative and Alternative Communication ____________________________ 2

      High-tech augmentative and alternative communication ___________________ 2

   Augmentative and Alternative Communication Intervention for Children with Autism Spectrum Disorder ________________________________________________________________ 3

      Peer-support intervention _____________________________________________ 4

      Embedded intervention ________________________________________________ 4

      Collaborative partnerships _____________________________________________ 5

   Research Aims __________________________________________________________ 5

   Structure of the Thesis ________________________________________________ 6

CHAPTER TWO: Literature Review ____________________________________ 7

   Language Development ________________________________________________ 7

      Language development for children who use augmentative and alternative communication ______ 8

      Linguistic competence _______________________________________________ 9

      Operational competence ______________________________________________ 9

      Social competence ___________________________________________________ 10
Strategic competence

Language Intervention for Children who use Augmentative and Alternative Communication

Language intervention for children with autism spectrum disorder who use augmentative and alternative communication

Inclusive Education

Friendships

Peer-Support Interventions

Partnering with Teachers

Summary

CHAPTER THREE: Methodology

Research Design

The Research Question

Setting

Recruitment

Participants

Jen

Alex

Peers

Sophie

Amanda

Researcher

Study Procedures and Timeframe

Understanding phase

Partnering phase
CHAPTER FIVE: Discussion ______________________________________ _____________ 66

Enhancing Participation______________________________________________ 66

Social communication ________________________________________________ 67
Belongingness _________________________________________________________ 68
Visual supports _________________________________________________________ 68

Creating a Communicably Accessible Environment ______________________________ 69

Promoting multi-modal expression ______________________________________ 69
Peer competency ________________________________________________________ 70
Preferred communication partner _________________________________________ 71
Benefits of inclusion for children without disabilities ______________________ 72

Supporting Teacher Agency ______________________________________________ 72

Engaging as experts ___________________________________________________ 73
Equipping teachers for the inclusive classroom ______________________________ 74
Ease of implementation ________________________________________________ 75

Future Considerations ________________________________________________ 75

Visual supports _________________________________________________________ 76
Role of technology _____________________________________________________ 76
Peer social competence _________________________________________________ 77
Teacher aide ___________________________________________________________ 77
Efficacy of the partnership ______________________________________________ 78
Student voice ___________________________________________________________ 78

Implications for Practice ______________________________________________ 79

Final Thoughts _________________________________________________________ 79

REFERENCES __________________________________________________________ 81

APPENDICES __________________________________________________________ 88
Appendix A: Introductory letter to principal .................................................. 88
Appendix B: Principal Consent form ................................................................. 91
Appendix C: Teacher Information Sheet ............................................................ 92
Appendix D: Teacher Consent ........................................................................... 95
Appendix E: Teacher Aide Information sheet .................................................. 96
Appendix F: Teacher Aide Consent ................................................................... 99
Appendix G: Parent Information sheet (Peers) ................................................ 100
Appendix H: Parent consent form (peers) ........................................................ 103
Appendix I: Parent Information sheet (parent of student using AAC) .............. 104
Appendix J: Parent Consent form .................................................................... 107
Appendix K: Supplementary Parent Consent form ......................................... 108
Appendix L: Behavioural therapist information sheet ..................................... 109
Appendix M: Behavioural therapist consent form .......................................... 112
Appendix N: Ethics Approval letter .................................................................. 113
Appendix O: Interview Schedule (initial and follow-up interview) ................. 114
Appendix P: Interview schedule (behavioural therapist) .................................. 116
Appendix Q: Collaborative Conversation Plan ............................................... 117
Appendix R: Intervention Plan .......................................................................... 119
Appendix S: Coding Book ................................................................................ 121
Appendix T: Examples of coding process ....................................................... 125
LIST OF FIGURES AND TABLES

Figures

Figure 1: Intervention phases and timeframe 35

Figure 2: Sample section from drafted intervention plan 40

Figure 3: Example of data cleaning of observation, device and field note data 47

Tables

Table 1: Matching the strengths of AAC with characteristics of ASD 14

Table 2: Data collection sources across intervention phases 43

Table 3: Themes identified throughout chronological phases of study 51

AAC CONVENTIONS

Please note: When describing an interaction where both spoken language and speech output from an AAC system occurred, the following conventions were used:

Spoken language: italicised, quotations marks, e.g. “Do you have anything to share?”

Speech output from AAC system: italicised, no quotations marks, e.g. I went to snow.
ACKNOWLEDGEMENTS

Firstly, I would like to thank my participant school, and its leadership team, for being so quick to jump on board with this project, and allowing me to work with your wonderful staff and students.

To ‘Jen’ my participant teacher: your continued energy, and enthusiasm for this project were hugely motivational, and I could not have hoped for a better collaboration partner to implement this intervention.

To ‘Alex’ and his classmates, thank you for letting me become part of your class for a term. It was so cool to see the way you took on the challenge to become AAC experts.

To my supervisor, Sally Clendon, I am in constant awe of the amount of work you put in for your students, and your support this year has been invaluable. Thank you so much for all the Skypes, the reassurances, and for staying positive and encouraging through the many brain-dump-drafts it has taken to get to this stage.

Also thank you to my second supervisor, Liz Doell, for helping me wade through my messes of data- your guidance and store of articles were a huge help.

To Nic and Brett, you and your children are the reason behind all of this. Thank you for all your support over the last five years, and I hope this can be of some use.

To my parents, thank you for the pep talks and the constant belief that I would see this through. You continued to answer the phone when you knew it would just be a thesis rant, and Dad, I promise this is the last thing I’ll ever ask you to proofread.

And finally, to my friends: thank you for the dinners, the investment in terrible TV programmes, and all the Squealing Pig. I couldn’t have done without any of it.
ABSTRACT

Communication difficulties are a core feature of autism spectrum disorder (ASD). It is estimated that 30-50% of children and adults with ASD do not develop sufficient spoken language to meet their daily communication needs. As well as difficulties with producing spoken language, children with ASD exhibit challenges with social-communication, for example, they may use a limited range of communicative functions and/or have difficulty initiating and responding to social interactions.

For children who have difficulty producing spoken language, augmentative and alternative communication (AAC) systems can provide an accessible and functional means of communication. In order for children who are learning to use AAC to become competent communicators, they must have frequent exposure to high quality language interactions with skilled communication partners. While there is an evidence base showing that behavioural, requesting focussed interventions can be effective in some circumstances for children with ASD, concerns about generalisability, and the lack of socio-communicative focus have led to calls for more naturalistic, social communication interventions.

This study focused on investigating ways of supporting a child’s social communication using AAC within an interactional activity in the natural environment of his classroom. A descriptive case-study design was used to document the implementation of a four-phase, peer-mediated AAC intervention in an inclusive classroom. The focus was on social communication, and the intervention was developed and enacted in a collaborative partnership with the classroom teacher.
In conducting this study, multiple sources of data, including interviews, observations, and data from an AAC system, were collated and analysed. From this analysis, three key themes emerged: a) enhanced participation, b) creation of a communicably accessible environment, and c) increased teacher agency. These themes suggest positive outcomes for a naturalistic, social-communication intervention, adding to the calls for further research development in this area.