

Phonological Awareness and 'silent reading':

**The benefits of intervention and early
intervention in reading for children who have
Down syndrome**

by

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This thesis is presented for the degree of Doctor of Philosophy.

**Australian Centre for Educational Studies
Institute of Early Childhood
Macquarie University**

December 2006



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Abstract

The sight-word reading ability of children with Down syndrome has been well documented through research over the past few decades. Although some research has examined the phonological awareness, phonic decoding and reading comprehension ability of children with Down syndrome, little is known about responses to reading instruction with a specific focus on these skills. Through experimental case studies this research investigated a range of outcomes following reading instruction that included phonological awareness, phonic decoding and reading comprehension ability.

Fifteen children participated in the study, in which two interventions were compared: a Phonological Awareness (PA) intervention in which reading instruction focused on the development of phonological awareness and phonic decoding skills through explicit oral language instruction; and a Silent-Reading (SR) intervention in which reading instruction focused on the development of reading comprehension through silent-reading tasks. Participants were allocated to intervention conditions based on a range of scores including initial assessment for general ability, phonological awareness and reading ability.

Each 10-week intervention incorporated individual instruction in each session followed by homework. Four sets of assessment were conducted. An initial baseline and control pretest was administered, followed by a no intervention control period of 10 weeks. A second pretest was conducted to provide comparison scores for the posttest and to determine effectiveness of the control period, which was used in place of a “no treatment” control group. An initial posttest was conducted following intervention and a maintenance posttest was conducted six months later. Results were analysed for individual case studies, the two intervention conditions, and age groupings (3:0 – 6:11 and 7:0 – 12:0 years).

Evidence from the case studies revealed that, as predicted, the PA intervention facilitated greater development of phonological awareness and phonic decoding skills, while the SR intervention facilitated greater improvements in reading

comprehension. The results were examined in relation to the dual route model of skilled reading, revealing that children with Down syndrome can develop alphabetic reading skills and demonstrate use of both lexical and nonlexical reading routes. The children's improved phonological output postintervention indicates that reading instruction improves speech production in children with Down syndrome. The evidence also demonstrates that a minimum level of auditory short-term memory is not required for successful development of phonological awareness and phonic decoding.

The findings of this study indicate that children with Down syndrome can develop the subskills required for skilled reading. They are not consistent with claims that reading ability develops in the absence of phonological awareness or reading comprehension in children with Down syndrome.

I, Katherine Cologon, certify that this thesis does not incorporate 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 where due reference is not made in the text. Ethics approval was obtained for this research (Reference Number: HE26SEPT2003-DO2626).

Signed: K. Cologon Date: 27/8/07

Acknowledgements

I would like to thank the children and their families who participated in this research for their hard work and enthusiasm, as well as their time and commitment to this research. Without these individuals this research would not have been possible.

I would also like to thank my supervisors, Shirley Wyver and Linda Cupples, for their time, support, guidance and thoughtful criticism throughout this research and the writing of this thesis.

I am particularly grateful to Shirley and Linda for their untiring enthusiasm for this research. I feel privileged to have had the opportunity to work with them both and I have greatly valued their friendship and humour. The advice and expertise of Shirley and Linda has greatly enhanced this research and without Shirley's support from the conception of the research idea, this research would not have become a reality.

Many thanks also to my family for being an inspiration, and for their unfailing support and understanding.

Finally, I would like to thank my partner Adam, for his encouragement, patience, support, and faith in me every step of the way.