

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

Strategy Instruction and Teacher Professional  
Development to Aid the Reading Comprehension of  
Year 4 students.

Andrea Vosslander

2007

Strategy Instruction and Teacher Professional Development to  
Aid the Reading Comprehension of Year 4 Students.

A thesis presented in partial fulfilment of the requirements for the degree of  
Doctor of Philosophy in Education at Massey University, Palmerston  
North, New Zealand.

Andrea Vosslander

2006

## ABSTRACT

The ability to understand what one reads is fundamental to much school learning and is part of the school curriculum. The processes used by expert readers to comprehend text can be analysed and used as a basis for comprehension instruction. Such expert readers use particular mental strategies such as rereading, paraphrasing, and predicting, and adapt these to assist them in understanding various texts.

This study investigated whether the implementation of reading comprehension strategy instruction to classes of Year 4 students would result in significant gains in metacognitive abilities, standardised reading comprehension, and reading self-efficacy. The quasi-experiment involved a treatment group of 48 students in two classes who were taught by one teacher, a treatment control group of 61 students in three classes taught by three teachers, and a non-treatment control group of 41 students taught in three composite Year 3 and Year 4 classes taught by three teachers. In total, 150 Year 4 students from eight classrooms in three suburban primary schools were involved in the study.

Results from 2 x 3 analyses of variance (ANOVA) with repeated measures revealed differences between the treatment group and control groups in several aspects of reading comprehension ability. The treatment group performed significantly better than either control group on the Jacobs and Paris (1987) measure of metacognitive awareness of strategies (Index of Reading Awareness). Treatment group students were also more confident about their ability to perform tasks related to reading comprehension than one of the control groups. Though they also made greater gains in confidence than the other control group, these gains were not statistically significant. Gains in reading comprehension as measured by a standardised reading comprehension

measure (Progressive Achievement Test of Reading Comprehension) were marginal in comparison to one of the control groups, and not significant in comparison to the other.

Secondly, this study also investigated whether intensive teacher training would result in successful implementation of reading comprehension strategies. Teachers need to know how to model their own mental processes for students so that students can see the strategies being applied. They then need to demonstrate for students when and how to adapt the strategies to various texts. In addition, teachers need to know whether to target instruction to only the struggling readers in their classrooms, or to students of varying abilities.

A two-year professional development programme was developed and implemented to assist primary school teachers with the implementation of reading comprehension strategy instruction in their classrooms. During the first year a group of 14 teachers participated, and during the second year one teacher remained to implement the programme. This teacher, who taught at the Year 4 level, was provided with additional professional development in the explicit teaching of reading comprehension strategies to her entire class of mixed ability students.

Results from analysis of qualitative data indicated that the teacher had made significant progress in becoming competent in the teaching techniques needed for teaching reading comprehension strategies. These results suggested that the teacher moved from modelling process into content to being creative and inventive. By the end of the intervention, interviews conducted with the teacher and the students, as well as lesson observations and field notes, suggested that she had a good knowledge of the components of strategy instruction and was incorporating these in her classroom practice. Her students became increasingly aware of the teacher's central lesson aims

regarding what she was teaching, why she was teaching it, and how it could be applied to the students' learning.

The findings of the present study indicate that students of varying ability may improve their reading comprehension through instruction in reading comprehension strategies, though the marginal gains in standardised reading comprehension do not support this conclusively. Findings also indicate that a teacher can successfully be trained to implement reading comprehension strategy instruction in an entire class of mixed-ability students. Such findings have important implications for teacher and student education.

## DEDICATION

This thesis is dedicated to my wonderful husband, Rob. Without his constant concern and cajoling I would never have completed this task. His determination that this project would be done brought him many conversations about reading comprehension, many proofreading tasks, and many household chores - while his wife laboured in the study. He is an outstanding man, worthy of double honour.

Soli Deo Gloria

## ACKNOWLEDGEMENTS

I offer my grateful thanks to the teacher with whom I worked over a two year stretch. Her desire to do her very best for each of her students was inspiring. She taught me much.

Thanks to my supervisors, Professor James Chapman, Professor Bill Tunmer, and Doctor Keith Greaney. Their help and guidance was invaluable. Also thanks to Professor Dick Harker for his statistical guidance and support.

Doctor Irene Gaskins and her husband Dick were also a wonderful support to Rob and me during our three month sojourn at Benchmark School in Philadelphia. My thanks go to Irene for her courage in inviting me to spend this time at the school and for being such a wonderful hostess while I was there. I thank Dick for his gracious hospitality, ensuring that our every need was catered for during our stay.

Thanks to my wonderful parents and parents-in-law who have shown great interest in my study over the years. Their concern, support and prayers have been invaluable. Thanks also to our many friends in Hastings and Christchurch who have often enquired about “that thesis” and offered words of encouragement.

Dr Bob Katterns was also instrumental in this thesis and I thank him. He spent many hours assisting me to write in the correct voice as I laboured over my undergraduate research project. He provided a solid foundation on which I could build.

Thanks to the many wonderful children I have had the privilege of teaching over the years. They were the ones who first sparked my interest in this subject. I owe them much.

Finally, thanks be to God for the wonderful gift he gave me in a fully supportive husband. Rob has been my counsellor, consoler, and cajoler throughout. I am richly blessed.



## TABLE OF CONTENTS

Abstract	ii
Dedication	v
Acknowledgements	vi
Tables of Contents	vii
List of Tables	xii
Chapter 1: Introduction	1
Chapter 2: Review of the Literature	7
Skills Approach to Reading Comprehension	9
What Does Reading Comprehension Comprise	10
Schema Theory	11
Story Grammar Theory and Analysis	14
Kintsch and van Dijk Model	16
Dual Coding Theory	18
Theory and Research on Comprehension Control	21
Verbal Protocol Analysis	22
Metacognition	23
Motivation	26
The Development of Internalised Cognitive Competence	29
Teaching the Coordination of Multiple Metacognitive Strategies	32
Reciprocal Teaching	32
Informed Strategies for Learning ('ISL')	34
Direct Explanation	34

Transactional Strategies Instruction	38
Teacher Factors Necessary for Reading Comprehension Instruction	39
Lack of Reading Comprehension Instruction	43
Conclusion	46
Chapter 3: Method and Design	49
Sample Group Selection Procedures and Characteristics	49
Sample Selection	49
Treatment Group	49
Treatment Control Group	50
Non-treatment Control Group	52
Ethical Considerations	52
Sample Characteristics of the Students	53
Sample Characteristics of the Teachers	56
Student Measures	59
Metacognitive Awareness	59
Reading Comprehension	61
Word Decoding	64
Reading Self-efficacy	64
Treatment Group Teacher Training	66
Reading Comprehension Strategy Instruction Course (2004)	66
Workshop 1	67
Workshop 2	70
Workshop 3	72
Workshop 4	76

Classroom Work	77
Terms 2 and 3, 2004	77
Term 4, 2004	80
Training of Treatment Group Teacher in 2005	81
Treatment Group Teacher Measures	84
Teacher's Perceived Proficiency in Teaching Reading	
Comprehension Strategies	84
Teacher's Progress as Evinced by Lesson Observations	86
Teacher's Progress as Shown by Student Interviews	89
Hypotheses	91
Students' Ability to Comprehend Text	91
Hypothesis 1	91
Rationale	91
Hypothesis 2	93
Rationale	93
Hypothesis 3	95
Rationale	95
Teacher Training	96
Hypothesis 4	96
Rationale	97
Procedure	99
Student Measures	99
Teacher Measures	102
Design	104

Chapter 4: Results	105
Results	105
Quantitative Data	105
Metacognition	106
Standardised Reading Comprehension	109
Self-efficacy	115
Teacher Data	118
Teacher's Perceived Proficiency in Teaching Reading	
Comprehension Strategies	119
Teacher's Progress as Indicated by Lesson Observations	124
Teacher's Progress as Indicated by Student Interviews	132
Conclusions of Qualitative Data	134
 Chapter 5: Discussion	 136
 Chapter 6: Conclusion	 154
Limitations	155
Further Considerations and Recommendations	157
 References	 160
 Appendix A: Form for Classroom Teacher Observation of Researcher- modelled Lessons	  175
Appendix B: Comprehension Monitoring Lesson Plan	176
Appendix C: Activating Prior Knowledge Lesson Plan	179

Appendix D: Teaching Vocabulary Lesson Plan	181
Appendix E: Note-taking Lesson Plan	184
Appendix F: Summary of 2004 Professional Development	186
Appendix G: Activating Prior Knowledge Lesson Plan	187
Appendix H: Reading Non-fiction Lesson Plan	189
Appendix I: Inferring Lesson Plan	192
Appendix J: Imagery Lesson Plan	195
Appendix K: Inferring	198
Appendix L: Index of Reading Awareness	200
Appendix M: Self-efficacy Student Answer Sheet	202
Appendix N: Components of Transactional Strategy Instruction (R. Brown et al., 1996, p. 19)	206
Appendix O: Nine Points of Progress that Teachers Go Through as They Learn to Teach Strategic Processing (Duffy, 1993b)	207
Appendix P: Pupil Awareness Rating Scale (Duffy et al., 1986, p. 252)	208
Appendix Q: Lesson Observation Form – Reading Comprehension Strategy Research	210
Appendix R: Summary of Strategies Taught by the Treatment Group Teacher	211

## LIST OF TABLES

Table 1	Gender Distribution and Ages (in Months) of Sample Groups	55
Table 2	Ethnicity Distribution of Sample Groups	56
Table 3	Years of Teaching Experience and Number of Hours Spent Teaching Timetabled Reading per Week	58
Table 4	Summary Data for the Index of Reading Awareness Full and Subscale Scores	108
Table 5	Summary Data for PAT Reading Comprehension Scores	111
Table 6	Summary Data for Pseudoword Decoding Scores	114
Table 7	Interaction Effects for Pre-test Means, Standard Deviations, and F-Ratios for the Self-efficacy Test Full and Subscale Scores	117