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LEARNING AND COMPUTERS:

A STUDY OF PROFICIENT COMPUTER-USING TEACHERS

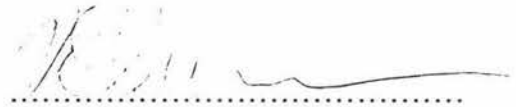
A thesis submitted as partial fulfilment of
the requirements for the degree of Master Education Massey University
Palmerston North New Zealand

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1995

DECLARATION

I declare that this thesis represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation or report submitted to this University or to any other institution for a degree, diploma or other qualification.

A handwritten signature in cursive script, appearing to read 'Mark E Brown', written over a horizontal dotted line.

Mark E Brown

ABSTRACT

This thesis examines how primary school teachers use computers to create conditions for better learning in the classroom. The claims about computers and learning are reviewed and teachers are shown to have a crucial role in realising the potential benefits of educational software. In the past there has been a tendency to ignore the voice of teachers in their efforts to integrate the computer into the curriculum. The study addresses the problem that without documenting the experiences of teachers in the regular classroom, many assumptions about the computer may become uncritically enshrined in both theory and practice. A number of methodological issues related to the area of educational computing are considered and a strong argument made for a multi-dimensional research paradigm.

The research is designed over three phases to identify and systematically investigate a purposive sample of proficient computer-using teachers. The first phase of the study involves a survey method in which a questionnaire is used to document the background characteristics, experiences and practices of teachers 'nominated' as proficient at using computers in the classroom. In the second phase, the survey method is extended through an informant interview. A sample of 'perceived' proficient computer-using teachers are interviewed on their beliefs about teaching and learning and the ways the computer supports these processes. The final phase culminates with microethnographic case studies on two teachers 'judged' to be proficient at using computers within the classroom programme.

An analysis of data shows that the computer is perceived to be a social experience. It is predominantly used for word processing, but there are a diverse range of teaching practices and the computer is not a uni-dimensional machine. The participating teachers have considerable teaching experience and many are frustrated in their attempts to successfully integrate the computer into the classroom. Lack of resources, time and teacher education are key inhibitors of computer use. There appears a second wave of proficient computer-using teachers who are enthusiastic beginners, and largely women, confident in their ability to use educational software for learning. Although the common orientation of teachers is towards a learner-centred philosophy, a considerable gap remains between theory and practice. The thesis concludes that theory needs to be more responsive to the demands of using the computer in the classroom, but also that teachers have much to gain from a better understanding of contemporary educational theory.

ACKNOWLEDGEMENTS

This research was inspired by the commitment that many teachers have made in the last decade towards integrating a new educational innovation in the classroom. The integration of computers in such a short time has demanded a lot from teachers, and without their expertise the use of educational software would not be so prevalent in New Zealand schools.

I owe a particular debt to the teachers who participated in this study for their time and willingness to converse with me. The research was dependant upon their participation and I sincerely thank the teachers for sharing so much rich information about their teaching practice. In particular, I would like to thank Anne and Barry from whom I learnt so much!

Many other people have contributed both formally and informally to this thesis in different ways. I would like to thank the members of the Research Advisory Committee for the dedication and professionalism they showed to their task. I acknowledge the invaluable contributions of both Dr Ken Ryba and Dr Janet Burns in the supervision and compilation of this thesis. Their attention to detail, guidance and scaffolding at different phases of the research process was gratefully received. I would also like to thank the Department of Educational Psychology for the resources and secretarial support that has helped me to complete this research.

Finally, I extend special thanks to my partner Denise and the rest of my family including Michael, Joshua, Melinda, and David for the sacrifices that they made during the course of this research. Without their unfailing support, encouragement and considerable patience this research would not have been possible.

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