From Preservice Teacher Education to the Primary Classroom: An Investigation into Beginning Teachers' Experiences with Information and Communication Technology

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ABSTRACT

This thesis investigates the conditions that may help or hinder beginning primary teachers in using information and communications technology (ICT) in the classroom. A dearth of research exists on beginning teachers’ experience and sense of readiness to use ICT for teaching and learning (and administration). Thus, there is limited knowledge of the challenges beginning teachers face and support they may benefit from to take advantage of the possibilities of ICT. The thesis sought to address this gap in the literature. It seeks to understand the experiences of eight beginning teachers from one New Zealand preservice teacher education institution during their first year of teaching.

An interpretative, qualitative methodology is employed to answer the overarching research question, which considers the nature of beginning teachers’ experiences when they incorporate ICT into the teaching and learning process. Data were collected in 2005 using two main methods: a written questionnaire and two interviews—one a photo-interview.

The findings suggest the meaningful use of ICT requires beginning teachers to possess a high level of complex knowledge, including pedagogical content knowledge. They also highlight the importance of a supportive school culture, strong leadership and induction systems for beginning teachers’ development. Notably, participants report relatively fragile conceptions of the potential of ICT for learning and lack knowledge of national and school policies in this area. Most of the beginning teachers were unable to make connections between their work as teachers and the broader policy goals for education. Although participants report they had limited opportunities to learn about
ICT during their *preservice teacher education*, they all wished they had been better prepared to utilise the potential of technology in schools.

Overall the study offers valuable insights into the experiences of a group of beginning teachers over their first year of teaching, which has implications for tutor teachers, principals, teacher educators and policy makers. Through a new line of research, the thesis reveals the complexity of learning to be an ICT-using teacher and the type of factors that contribute to teacher development. Although the thesis identifies a number of possible future initiatives, it concludes that more substantial research is needed from which generalisable findings may then be applied to beginning teachers, schools and the teacher education sector as a whole.

A postscript describes developments in the field since the fieldwork was carried out. It addresses the currency and contribution of this study to the field in light of the timeframe in which the original data were collected with reference to the stakeholders.
ACKNOWLEDGEMENTS

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I thank my participants who gave so willingly of their time. They allowed me to ‘see’ into their classrooms and try to understand and learn from their teaching practice.

I sincerely wish to thank Meg Davidson for being a critical reader, Shirley Gillett for being willing to ‘talk shop,’ Susan Sandretto for helping me through a sticky patch and Adrienne Bisset for material help.

Lastly, I am grateful to my husband Bales for his unfailing support through thick and thin.
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GLOSSARY OF ACRONYMS

ERO  Education Review Office
Gen Y  ‘Generation Y’ — young people born between the early 1980s and 2000, who are said to have grown up with technology, or, in the words of Tapscott (1996), have grown up as ‘digital natives.’
ICT  Information and Communication Technology
ISTE  International Society for Technology in Education
PCK  Pedagogical Content Knowledge
PRT  Provisionally registered teacher. The status of a beginning teacher during the first two years of teaching after graduation
TELA  Laptops for Teachers Scheme
TKI  Te Kete Ipurangi—A bilingual education portal which provides quality assured educational material for New Zealand teachers, school managers, and the wider education community.
TPCK or TPACK  Technological Pedagogical Content Knowledge or Technological, Pedagogical, and Content Knowledge
### Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Associate teacher</td>
<td>A school-based co-operating teacher.</td>
</tr>
<tr>
<td>Advice and guidance programme</td>
<td>A jointly planned and documented programme of mentoring and professional</td>
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<td></td>
<td>development of a provisionally registered teacher guided by an experienced</td>
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<td></td>
<td>colleague—‘tutor teacher’—and which leads towards full teacher registration.</td>
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<tr>
<td>College of Education</td>
<td>A faculty of preservice teacher education within a university.</td>
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<tr>
<td>Contributing primary school</td>
<td>A school that caters for Year 0 (sometimes referred to as New Entrants) to</td>
</tr>
<tr>
<td></td>
<td>Year 6 students, aged between 5 and 10 years.</td>
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<td>Beginning teacher</td>
<td>Refers generally to a graduate in his or her two first years of teaching.</td>
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<tr>
<td></td>
<td>This thesis has adopted the term ‘beginning teacher’ to signify newly</td>
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<tr>
<td></td>
<td>qualified teachers in his or her first year of teaching.</td>
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<tr>
<td>Education Review Office (ERO)</td>
<td>A government department whose purpose is to evaluate and report publicly on</td>
</tr>
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<td></td>
<td>the education of students in schools and early childhood centres.</td>
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<tr>
<td>e-learning</td>
<td>Learning and teaching that is facilitated by or supported through the</td>
</tr>
<tr>
<td></td>
<td>innovative use of information and communication technologies.</td>
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<tr>
<td>Full primary school</td>
<td>A school that caters for Year 0 to Year 8 students, aged between 5 and</td>
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<td></td>
<td>12 years.</td>
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<tr>
<td>Information and Communications Technology (ICT)</td>
<td>Technologies such as computers, software and peripherals. Includes the</td>
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<td></td>
<td>facilities and features for communication, digital cameras and other</td>
</tr>
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<td></td>
<td>artefacts used in conjunction with a computer.</td>
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<tr>
<td>Intermediate school</td>
<td>A school that caters for students Year 7 and Year 8.</td>
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<tr>
<td>New Zealand Teachers Council</td>
<td>Formerly Teachers Council and Teachers Registration Board. An autonomous</td>
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<tr>
<td></td>
<td>Crown entity. The regulatory body for registered teachers and the approval</td>
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<td></td>
<td>of preservice teacher education programmes.</td>
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<tr>
<td>Pākehā</td>
<td>A term used to describe non-indigenous New Zealanders.</td>
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<tr>
<td>Term</td>
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<tr>
<td>Practicum</td>
<td>A preservice teachers’ school-based teaching experience under the supervision of an experienced teacher—the ‘associate teacher.’</td>
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<tr>
<td>Preservice teacher education</td>
<td>A teacher education programme that leads to provisional registration as a teacher.</td>
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<tr>
<td>School term</td>
<td>The school year in New Zealand runs from the beginning of February to mid-December and is divided into four terms.</td>
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<tr>
<td>Secondary school</td>
<td>A school that usually caters for students Year 9 to Year 13.</td>
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<tr>
<td>College</td>
<td>A secondary school that caters for students Year 7 to Year 13.</td>
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<tr>
<td>Teacher educator</td>
<td>A lecturer who teaches in a preservice teacher education programme.</td>
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<tr>
<td>Tutor teacher</td>
<td>A school-based mentor, usually an experienced teacher.</td>
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<tr>
<td>Web 2.0</td>
<td>A term used to describe a series applications on the World Wide Web that allows interactive experience in the form of blogs, wikis, forums, etc.</td>
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