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Information Technology in Pre-service Teacher Education within a New Zealand College of Education

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Abstract

This thesis examines the use of Information Technology (IT) by lecturers and pre-service student teachers at the Auckland College of Education to provide a basis for future development of policy and programmes.

The concept of IT is examined and the term defined in terms of a broad range of artefacts, knowledge and skills which includes the use of computers, but also other technologies for handling and storing information. Information skills are also identified as being an important component of IT. The development of IT use in pre-service teacher education is examined in New Zealand, and for comparison in the United Kingdom, the U.S.A. and Australia. The survey demonstrates that the place of IT in pre-service teacher education was originally ignored by education authorities in those countries in favour of in-service teacher education, but in recent years has has become the subject of official concern and, overseas, action. The establishment of goals and standards for pre-service IT teacher education is one reflection of this concern in a number of countries.

The literature indicates a number of issues that need to be addressed if pre-service teacher education institutions are to successfully prepare teachers to work in IT-enhanced schools. These include the development of teacher education programmes which integrate IT and emphasise its pedagogical use, the provision of adequate IT teaching experience for student teachers, the provision of resources and staff development for teacher educators.

A survey of lecturers, first and final year primary student teachers, and graduating secondary student teachers indicates that, while all groups have a high degree of access to computers and many have basis skills in using software, the use of computers and other information technologies within the College curriculum is

limited. All groups believe that skills in using IT are important for beginning teachers but most lecturers do not model its use or teach its use in schools. Students have limited experience in using IT during practicum sessions, and lecturers, themselves, have limited practical experience of IT in education. The importance of strategies indicated by the literature for improving this aspect of pre-service teacher education is supported by the findings of the research. The various factors identified as influencing pre-service teacher education are summarised in a model which draws attention to the different sites in which students develop a range of skills, knowledge and attitudes, all of which affect their understanding and capacity to use IT in their teaching roles.

In the light of these findings, and the absence of any previous New Zealand research in this area, the study identifies areas where there is a need for further research. It is argued that such research is urgently needed in view of growing concern at the ineffectiveness of pre-service teacher education in this area.

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