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Making links between theory and practice : an investigation into pre-service teacher learning experiences with an online simulation

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Making links between theory and practice: An investigation into pre-service teacher learning experiences with an online simulation.

A thesis submitted in fulfilment of the requirements for the award of the degree

Doctor of Philosophy

From the

University of Wollongong

by

Lisa A. Carrington

Bachelor of Education (Hons)

Faculty of Education

2009

Declaration

I, Lisa A. Carrington, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Education, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at this or any other academic institution.

Signed:

Lisa A. Carrington

November, 2009

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Current research in teacher education identifies a gap between what teachers are taught during their pre-service teacher education and what they are expected to do at the ‘chalk-face’ in their professional career (Cole & Knowles, 2000; Ramsey, 2000; Sorin, 2004). In response to the perception that theory is often irrelevant to practice, various studies assert that there is a need to integrate the various components of pre-service teacher education (for relevant studies see Brady, Seagal, Bamford & Deer, 1998; Lanier & Little, 1986). An integrated approach is advocated to enable pre-service teachers to gain a better understanding of the theory/practice nexus (Educational Training Committee, 2005; MACQT, 1998). In response to such studies, teacher educators are motivated to investigate strategies that might more effectively and relevantly bridge the gap between theory and practice.

One approach has been to use simulations as a tool to experiment with practical scenarios while providing explicit links to the theory of pre-service teacher training. Simulations have the potential to enhance a learning experience by providing authentic and relevant scenarios in which learners apply their newly-acquired knowledge by experimenting and making decisions within a safe, virtual environment in which mistakes have no consequences, such as they have in the real world (Carrington, Ferry & Kervin, 2006; Aldrich, 2004; Jonassen, 2000). Limited research has been conducted on the use of simulations in pre-service teacher education and how engagement with simulations can support the learning of pre-service teachers.

The purpose of this inquiry was to investigate how pre-service teachers make use of a virtual learning environment provided by an online simulation - *ClassSim* - to link knowledge from university coursework with field experiences, in particular, whether and how experience with an online simulation contributed to the development of pre-service teachers’ emerging professional identity. A comparative case analysis was adopted, as this design was considered most appropriate as it allowed for an in-depth comparison of two cohorts of pre-service teachers. Andragogy (Knowles, 1970, 1980,

1984; Knowles, Holton & Swanson, 1998) provide a theoretical framework through which the learning of pre-service teachers was examined and assumptions about their learning drawn.

The findings indicate that virtual learning environments, such as *ClassSim*, provide significant potential for teacher education as theory is integrated with virtual practice. It was found that in order to facilitate an adults' learning within a virtual learning environment, educators must embrace the opportunities afforded by the technology. Virtual learning environments provide flexibility as learners engage with the learning environment anytime, anywhere, and at their own pace. To respond to the needs of adult learners, a virtual learning environment should have an interactive design, be learner-centred and able to facilitate and motivate self-direction in learners. Furthermore, the inclusion of practical real-life scenarios in conjunction with relevant learning/teaching theories is essential if a user is to develop an understanding of the theory-to-practice connection as they develop their professional identity.

Overall, this inquiry has highlighted a number of important learning design principles an adult educator should take into consideration when designing and implementing virtual learning experiences for adult learners. It highlights the importance of a strong theory-to-practice connection in the development of a professional identity, which is explored in this inquiry via reflection.

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