Chapter 2.6
Virtual Learning Environment (ClassSim) Examined Under the Frame of Andragogy

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ABSTRACT

ClassSim, an online simulation, was developed to support existing teacher education programs by providing pre-service teachers with access to additional classroom experience. This research reports on how pre-service teachers make use of the virtual learning environment to link knowledge from university coursework with field experiences and through this, we are able to examine affordances the virtual environment offers pre-service teacher learning. Andragogy provides a theoretical framework to review and make assumptions about the nature of learning for the participants. A comparative case study approach allows for in-depth comparison of two cohorts of pre-service teachers (first and final year) as they interact with the ClassSim environment.

INTRODUCTION

The ClassSim learning environment was conceptualised by Ferry, Kervin, Cambourne, Turbill, Hedberg, and Jonassen and was developed with the support of a large grant from the Australian Research Council. It was anticipated that the software would support existing teacher education programs by providing additional classroom experience through a virtual environment. This chapter looks to explore first and final year pre-service teachers' engagement with ClassSim though the lens of the assumptions of Andragogy as the nature of their learning is examined.

BACKGROUND

Achieving balance between the theoretical and practical components of teacher education is a challenge currently facing those involved in the design, delivery and accreditation of teacher education (MACQT, 1998; Educational Training Committee, 2005). An unmistakeable gap is claimed between what teachers are taught during their university studies and what they are expected to do at the 'chalk-face' in their professional career (Cole & Knowles, 2009). The Ramsey (2000) review of teacher education in New South Wales, Australia highlighted that pre-service teachers do not understand how classroom practice produces effective student learning, and Kervin and Turbill (2003) found that many beginning teachers find it difficult to adjust to classroom life because they are often unable to retrieve important theoretical knowledge when they need it. Therefore it seems reasonable to suggest that teacher education should have stronger links between field experience and theoretical studies.

There is a considerable body of literature supporting the claim that there is a need to integrate these aspects of pre-service teacher education to address the perceived irrelevance of theory to students (for example Brady, Seagal, Bamford, & Deer, 1998; Darling-Hammond, 1999; Lanier & Little, 1986; Sorin, 2004), thus enabling pre-service teachers to gain a better understanding of the theory/practice nexus (MACQT, 1998). An early integration of field experiences would enable pre-service teachers to gain a better understanding of the theory/practice nexus (MACQT, 1998). Further, a philosophy of reflective practice will help pre-service teachers articulate the theory to practice relationship (Brady, Seagal, Bamford, & Deer, 1998).

Herrington and Oliver (2000) have suggested that educators need to look for ways to create authentic environments that allow learners to develop integrated knowledge that is retrievable in real life settings in addition to tradition field experiences. Modern technologies, such as simulations, have the potential to provide pre-service teachers with a safe authentic environment in which to explore possibilities and experiment with decision-making opportunities while drawing upon their theoretical and practical knowledge before entering a classroom. Researchers such as Reigeluth and Schwartz (1989) and Breuer and Kummer (1990) argue that a virtual environment such as a simulation enables learners to master cognitive processing skills by allowing them to apply the theory of their training within a realistic environment. Therefore the skills that are acquired during the use of a simulation can transfer to real life situations. Further, Gatto (1993:154) contends that "students who use simulations, manipulate variables and so on would be better prepared to perform in real situations than those students who rely on other instructional media, such as text, which can only provide information and hints on how to do something". Thus, simulations have the potential to enhance the connections made between theory and what this might look like in practical situations. Furthermore it can be argued that learners who use simulations in their training may be better equipped to transfer the knowledge and skills they acquired during their education to a real life scenario.

Virtual Learning Environment

ClassSim (Faculty of Education, 2005, University of Wollongong) enables the user to assume the role of a teacher in a virtual classroom. Throughout the running time of the simulation the user is required to make decisions about the structure and sequence of a teaching block, classroom management and respond to individual students. A number of design features have been included: the incorporation of targeted students, an embedded reflective tool called the 'Thinking Space', support materials and decision-making opportunities.

The targeted students were designed to represent the more challenging students teachers

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