Chapter 4.4

ClassSim:
An Approach to Educator Development Through a Simulation

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ABSTRACT

This chapter presents one approach to educator development through games and simulations. The goal of the authors' project was to enhance pre-service teachers' ability to bridge the gap between the theory and practice of teaching. Some criteria that the authors regarded as indicators of success were the facilitation a professional dialogue, an emerging understanding of content delivery and the articulation of workplace culture in the teaching profession. The chapter describes the theory underpinning of the design and the research approaches used. In particular, the authors explain how cognitive load theory was applied to the design of the key features of this virtual learning environment. They also summarize six years of research that has consistently found that the virtual learning environment of ClassSim provides an effective way of introducing pre-service teachers to their future work in classrooms.

INTRODUCTION

As teacher educators, we are always looking for more effective and relevant ways to bridge the gap between theory and practice, to develop pedagogical content knowledge, and ultimately to enhance the development of pre-service teachers' (PSTs') professional identities so that they can be confident and effective teachers when they graduate.

One approach that we have tried has been to use a virtual learning environment (VLE), known as ClassSim, as a tool to experiment with practical scenarios while providing explicit links to the theory that PSTs are exposed to during training.

ClassSim is a walk though, scenario-based simulation in which the user assumes the role of the classroom teacher of a class of five-year-olds during a literacy learning session. A number of virtual episodes (or lessons) are included for the user to explore and, as each episode unfolds, PSTs make a number of decisions regarding the management of the classroom and the organization of the literacy learning session. Until recently limited research has been conducted on the use of VLEs in PST education and how engagement with such environments can support the learning and development of future teachers. This project gave us an opportunity to gain some insight into PSTs' engagement with a VLE designed to assist them to make connections between the theory and practice of teaching.

The objectives of this chapter are to describe the theory that informed the design of ClassSim and to report on our research with PSTs over the past six years. In particular we draw upon cognitive load theory (CLT) to clarify how we operationalized some of the recent key recommendations of evidence-based research into the organization of instruction in order to facilitate effective learner processing of information (Pashler, et al., 2007).

BACKGROUND

Researchers report that when teachers reflect upon their role in the profession, they are not necessarily focused on what they know and what they can do (Allen, 2005; Sachs, 1999). Rather, they are more likely to question their own role within a situation. Thus, teachers appear to be more interested in understanding their immediate professional situation in connection with their previous personal and professional experiences. Instead of the question what do I know, or what can I do, for many teachers their interest is in the question who am I, what relationship do I have with the learner, what is my relationship with school administrators, and how have my personal experiences contributed to my development as a teacher. These questions demonstrate the role played by both the physical workplace and the individual's networks in the development of a teacher's professional identity.

Learning a profession means learning about the culture of the occupation and each profession has its own disposition and learnt behavior that is often referred to as the culture and practice of that profession. Teaching, as an example of such a profession, involves specific knowledge and skills related to pedagogical understandings, knowledge of workplace culture and awareness of their responsibilities within the profession. In exploring the culture and practice of teaching Sachs (1999) identifies the need for retrospective and prospective identities; retrospective identities use the past to explain the present within the profession, while prospective identities examine the future nature of the profession. We hypothesized that a VLE, such as ClassSim, affords opportunities for users to consider retrospective and prospective identities as a simulation allows users to observe and investigate what is happening at a moment in time, but it also allows the user to pause and reflect upon what has happened, with opportunity to change and redirect the future sense of story presented in the simulation. Allen (2005) asserts that such aspects of teacher professional growth are not taught, rather they are shaped by teachers' past critical incidents including the workplace and an individual's professional networks. As a result Allen's work, we also hypothesized that a VLE has the potential for PSTs to experience a series of workplace events and critical incidents that may help to shape their developing pedagogy.

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