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Chapter XVIII

Creating CoPs During the Development of an Online Classroom-Based Simulation

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Abstract

The purpose of this chapter is two fold. First it reports on the research associated with the development and implementation of prototype versions of an online classroom simulation. It looks at how the use of these simulations helped to develop a community of practice among pre-service teacher users. Second, it reports on how a team of researchers, an instructional designer, programmers and graphic artists worked within a community of practice as the simulation software was created.

Introduction

It is widely accepted that instructional designers play a significant role in enhancing teaching and learning in universities, distance education and corporations. The purpose of this chapter is two fold. First it reports on the research associated with the development and implementation of prototype versions of an online classroom simulation. It looks at how the use of these helped to develop a community of practice among pre-service teacher users of the simulation. Second, it reports on how a team of researchers, an instructional designer, programmers and graphic artists worked within a community of practice as the simulation software was created.

The purpose of the simulated classroom was to enhance the initial practicum experience of pre-service teachers enrolled in their first-year of a primary teacher education degree. The pedagogical focus of the simulation was on the teaching of literacy skills in primary schools, skills that are considered one of the keys to success in schooling (Cambourne, 2001; Comber, Badger, Barnett, Nixon, Prince, & Pitt, 2001). Our research was conducted using five prototype versions of the simulation over a period of two and a half years; and to date it has involved more than 220 users (Kervin, Ferry, Carrington, Turbill, Cambourne, Hedberg, & Jonassen, 2005). Our research findings have consistently shown that pre-service teacher understandings of complex classroom situations associated with the teaching of literacy were enhanced by interaction with the software. In particular, the opportunities provided in the software to slow down or accelerate classroom events, revisit and reflect on critical decision points and replay events in the light of new understandings supported the pre-service teachers. These design affordances appeared to provide pre-service teachers with the time to think critically about complex teaching situations, which relied on their ability to identify and respond to the virtual children's experiences. Further, they were required to engage in dialogue and negotiation at key decision-making opportunities, as well as employ a range of indirect classroom strategies such as questioning, modelling and prompting when making decisions. Pre-service teachers have consistently reported that their experience with the simulation enabled them to appreciate the complex role of the teacher, specifically the impact of a subtle decision that experienced teachers made during lessons.

In addition, we report on how the research associated with each version of the simulation prototype software helped team members to more fully understand each other's role in developing and improving the simulation. Initially the instructional designer, content experts and researchers were leading the development process, while the other members were legitimate peripheral participants. Over time, the other members of the team developed into legitimate participants, and formed a viable community of practice as ways to support initial teacher education were examined. We describe the processes that we used to assist all members of the design team to enter the communities of practice and understand the context and purpose of the project.

A community of practice is defined as groups of people who accumulate and share their collective learning (Wenger, 2002). Lave and Wenger (1991) first used this term in relation to situated learning. In more recent years, the term "communities of practice" has typically been connected to knowledge management as it is a way to cultivate or nurture new knowledge. It focuses on the sharing of tacit knowledge within an organization. Throughout the project two distinct communities of practice emerged. The first involved the pre-service teachers