

Chapter XI

Building the Virtual into Teacher Education

Gloria Latham

RMIT University, Australia

Julie Faulkner

RMIT University, Australia

ABSTRACT

This chapter describes how two lecturers in teacher education (with the assistance of critical friends) developed a virtual primary school as a digital tool to help preservice teachers at the theory/HCI practice interface. The development and future directions of their online virtual environment will be discussed and will detail how scenario building in online learning communities fosters an alternative way of thinking about teaching and learning. Developing the virtual primary school was not based on a course requiring flexible delivery in distance education. The primary school was created to provide a place of learning not often available to preservice teachers on their professional practice placements. While the concept for a virtual school is not a new one, our goals for its design were different, and application was specifically oriented toward inquiry learning and new learning philosophies involving HCI. We will explore how a narrative-based scenario approach has been assisting our work at the edge of the traditional and the new.

INTRODUCTION

The process of restructuring and revisioning our teaching and students' learning was given prominence with the reconceptualization of the Bachelor of Education program, in line with the principles of new learning. New learning ideals have been filtering into educational debates and challenging

what is worth knowing. The proponents assert that schools need to prepare students for jobs/careers that are yet to be created; that jobs/careers will change every five years; that information and communication technologies impact upon the way we think and learn. According to the Australian Council of Deans of Education (ACDE, 2001), schooling must reflect the notion of New

Learning: that schooling in the 21st century must embrace the need for learners to be interdisciplinary, navigate change and diversity, to learn as they go, to solve problems, collaborate, and be flexible and creative. The challenge for teacher education programs is to excite beginning teachers to think deeply and critically about teaching and learning in the 21st century, that is, to encourage critically reflective teaching (Zeichner & Liston, 1996). Our challenge as lecturers is how to make the prospects and needs for change tangible in our teacher education program.

Too often our preservice teachers are unable to experience New Learning practices in their professional practice sites. As novice teachers enter the teaching profession they have had at least 12 years of being a learner in schools and have intimate knowledge of the practices of schooling. Understandably, teachers tend to trust what they experience, which in turn confirms their expectations and prior experiences (Orlofsky, 2001). We wanted to contest these expectations and prior learning experiences, offering alternative ways of conceiving practice (Crocco, 2001).

Learning occurs most effectively when it is authentic, situated, and meaningful to the learner (Duffy & Cunningham, 1996). To allow for effective learning and 21st century needs, we created a virtual primary school that we named Lathner Primary. Preservice teachers have a placement in this school in a Year 4/5 classroom with a teacher mentor, Anna Jones. Through this virtual school we pose scenarios that seek to challenge outmoded ways of teaching. Simulations as learning environments are often being used in teacher education (Ferry, Kervin, Cambourne, Turbill, Puglisi, Jonassen, & Hedberg, 2004; Gibson, 2002; Risco, 1995). Existing simulations seek to replicate school settings in order to have preservice teachers study them in some detail through role-plays. However, as these simulations are pre-programmed, they often become static representations of schools. Our virtual primary school differs in that it is a dynamic environment

that seeks to reflect what schools might become in response to new learning challenges.

Advances in educational software in the past decade are allowing educators to develop simulations that provide new kinds of learning experiences in an evolving context. Thus the introduction of information communications technologies (ICT) in schools over the past 20 years has offered educators rich opportunities to rethink curriculum and pedagogy, or what we teach and how we teach it (Loveless & Ellis, 2001; Papert, 1993; Snyder, 1997). The potential of digital technology to transform learning has yet to be realized for a range of pragmatic and human reasons. Developing and maintaining up to date digital infrastructure is costly; the technology and software programs are challenging to learn; their reliability can be frustrating; and teachers (not unlike other professionals) can be resistant to change. However, the imperative to change grows. The massive social and economic upheavals of the past decades, largely wrought by technological change, have become embedded in our lives and must precipitate change in our learning institutions. We cannot continue maintaining 19th century classrooms and teaching practices while new generations enthusiastically explore the powerful learning and creativity offered by ICT (Heppell, 2001; Papert, 1993). Moreover, we need to acknowledge the shift in young people's use of digital technology from emphasis on information to communication. However, the ultimate value of ICT in education remains heavily contingent on the ways that curriculum and pedagogies work through the new technologies (Brennan, 2001; Lankshear, Snyder, & Green, 2000).

The design of the Web site is a school with a building over 100 years old, housing a new addition. From the outside, the building looks much like a school our preservice teachers may remember from their Primary School days. Yet we confront the familiar by deliberately fashioning elements of the future with environments and students and teachers learning in new ways. We began by using

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