Chapter 5
Emphasizing Diversity through 3D Multi–User Virtual Worlds

Mary Beth Klinger
College of Southern Maryland, USA

Teresa L. Coffman
University of Mary Washington, USA

ABSTRACT

Integrating three dimensional multi-user virtual worlds into the online classroom is an effective way to enhance instruction and provide real world application to course content. This chapter explores virtual worlds and their ability to promote meaningful interaction, collaboration, and skill based learning. The focus for encouraging new technologies into the teaching and learning environment is to foster creativity and innovation in the 21st century learner so that inventive thinkers, collaborative problem solvers, and transformative leaders can emerge from our global educational system. Concerns regarding diversity, social equality, and accessibility to the technology tools are addressed with emphasis on the need to provide open systems so that our knowledge based global economy can thrive and all students can emerge as competent global citizens.

INTRODUCTION

Today's learner benefits from a myriad of educational opportunities. In rapidly increasing numbers, courses and degree programs are no longer limited to students by distance or time. Online learning is becoming more prevalent as students in academic institutions around the world request this option due to geographical constraints, the need for greater schedule flexibility, and demands placed on the new knowledge workforce that requires lifelong learning.

The Internet has provided a transformational highway for distance learning. Access to information and communication technologies in education has gradually advanced as more schools and universities acquire the technology needed, particularly broadband capability.

Online course enrollments around the world continue to increase. Countries with the highest use of the Internet for educational activities in 2006 included Finland with over 30% of its population,

followed by the United Kingdom, Turkey, Greece, Hungary, and the Netherlands, all with more than 20% usage by their respective populations (OECD Ministerial Meeting, 2008).

In 2007, the United States had 3.94 million online students. Over 20% of all U.S. higher education students were taking at least one online course. This was an increase of almost 13% over the preceding year in 2006. In 2002, there were only 1.6 million students taking at least one online course. The number of online students has therefore more than doubled in this five year period (Allen & Seaman, 2008).

At the same time, online enrollments continue to increase at a rate that exceeds that of overall higher education enrollments. In the United States, from 2002 to 2007, the annual growth rate for online learning was 19.7% compared to 1.6% for overall higher education during that same time frame (Allen & Seaman, 2008).

As the delivery of online courses becomes more main stream, best practices for teaching and learning online are paramount. A basic core requirement is that students must be enveloped in a community environment that is dynamic and rich in learning experiences. Course learning goals are best met through interaction, reflective feedback, and a community of practice.

The integration of online learning within education is providing opportunities for instructors to incorporate new technologies into their teaching and learning environments. These technologies include an array of Web 2.0 tools such as blogs, wikis, social networking, and three dimensional multi-user virtual environments (3D MUVEs). This is the new participatory Web.

Virtual worlds are a relatively new development to the Internet. They can be a text based, online virtual reality system where multiple users (players) are connected at the same time, known as a multi-user object oriented system (MOOS). And they can also be three dimensional, providing a 3D graphical user interface that can resemble actual

Figure 1.

places, such as the Louvre museum in France or a world created with a futuristic presence. (Figure 1)

Virtual worlds allow multiple users to socialize and interact with each other in a dynamic and interactive space. Participants within a 3D MUVE interact synchronously, in real time, through the actions of their online personality or avatar. An avatar is a representation of self. (Figure 2)

Virtual worlds present opportunities to promote student collaboration and learning of concepts. As a learning environment, virtual worlds have the potential to provide a positive learning experience to students by emphasizing real world application and skill based learning.

Here students can manipulate and apply theories in a meaningful context where content can be applied and practiced. The virtual world

Figure 2.

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