Chapter III
Teaching IT Through Learning Communities in a 3D Immersive World:
The Evolution of Online Instruction

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ABSTRACT

The development of learning communities has become an acknowledged goal of educators at all levels. As education continues to move into online environments, virtual learning communities develop for several reasons, including social networking, small group task completions, and authentic discussions for topics of mutual professional interest. The sense of presence and copresence with others is also found to be significant in developing Internet-based learning communities. This chapter illustrates the experiences with current learning communities that form in a 3D immersive world designed for education. Faculty at Appalachian State University (ASU) have developed and taught the graduate instructional technology program in an award-winning 3D world setting for several years. Additional ASU faculty and program areas are currently transitioning into this environment. Further, colleagues from major universities in other countries are using this environment for their students to work and to collaborate across time and distance. Telecommunications technologies in education (exposing the graduate students to the breadth of IT experiences and knowledge required), hypermedia, and advanced Web design are examples of IT-related courses offered in the graduate program. The results of these experiences highlight the efficacy of this tool toward the formation of authentic communities within 3D Internet-based worlds as online distance education environments continue to evolve.

INTRODUCTION

New technologies for collaboration have generated increasing interest in the formation of various kinds of online learning communities for distance education. A wide range of distributed learning communities are currently involved in training, education, gaming, social networking, and other emerging online endeavors. These distributed learning communities are available in different forms and demonstrate underlying frameworks that include collaborative text-based environments, Web-based text and graphical multiuser domains, and the more sophisticated CAVEs (projection-based automatic virtual environments). Each of the above presents its own unique technologies and possibilities for online distributed collaboration and learning. Each presents opportunities for group interactions in different ways that bring a sense of community to the task. This chapter will focus on the findings and experiences of various communities of learners formed within a 3D immersive Internet-based virtual world developed for graduate education.

Descriptions of a 3D Internet-based learning environment—called Appalachian Educational Technology Zone (AET Zone)—used by the instructional technology program in the Department of Leadership and Educational Studies at Appalachian State University have been noted in other research (e.g., Bronack, Riedl, & Tashner, in press; Riedl, Bronack, & Tashner, 2005; Tashner, Bronack, & Riedl, 2005). An Active Worlds universe server (http://www.activeworlds.com/) serves as the current platform for AET Zone, and provides a means to build virtual worlds for students, instructors, and other invited guests to meet and to work together in ways not found in other learning environments currently available. AET Zone may be characterized by significant components of space, movement, physical presence and copresence, conversational tools with small and large group shared workspaces, and metaphors and artifacts that assist with collaboration and learning online in unique and powerful ways. Students, faculty, and guests, graphically represented by avatars, move through the 3D world spaces interacting with each other and with artifacts within the worlds. These artifacts may be linked to different resources, Web pages, and tools necessary to provide content and support for various kinds of synchronous and asynchronous interactions. Small and large group shared workspace tools enable interactive conversations in text chats, threaded discussion boards, and audio chats. Group sharing of documents, Web pages, and other types of application software also are available within the virtual world.

Typical students in this graduate program are mid-career K-12 classroom teachers who want to learn more in-depth ways to integrate technology into their curriculum, or who want to become instructional technology specialists in their schools or chief technology officers (CTO) at the district level. Many of the students in the program teach within a 100-mile radius of the institution. However, recent initiatives have expanded opportunities to enroll K-12 teachers in a totally online experience. For example, several Mexican teachers from the D'Amicis School in Puebla, Mexico, and faculty and students in Griffith University in Brisbane, Australia, are working within AET Zone. Without the ability to depend on face-to-face contact, these international collaborations are challenging us to rethink the way we develop and enhance the sense of community in distance educational settings.

The instructional technology program at Appalachian State University uses a cohort model, where students enroll and move though the program together through a specific sequence of courses. Students and faculty currently meet face-to-face regularly at the beginning of the program, with reduced numbers and frequency of meetings as the members of a cohort become more comfortable working within the virtual world and gain understanding of course structures and expectations. While the virtual world is used for