

Chapter 1.13

Virtual Learning Environments: Second Life MUVES to Leverage Student Ownership

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ABSTRACT

The purpose of this chapter is two-fold: first, to present an overview of research related to Second Life, one of several Internet-based multi-user virtual environments (MUVES); and second, to demonstrate that practical applications of MUVES in education and professional development can be merged with an existing model for learning in virtual learning environments. While the three-dimensional environment of online worlds like Second Life exhibit game-like ambiance, there is serious business going on “in-world” as educators experiment with this technology in increasing numbers. In particular, Second Life is being used as a vehicle for university course delivery, conference sessions, informal meetings, collaborative projects, and creative products. As a result, Second Life (SL) and similar platforms have become the subject of recent research attention from those who seek to understand the current and potential educational value of this online phenomenon.

The growing experimentation with multi-user virtual environments for educational purposes demands rigorous examination of all aspects of these digital worlds. While their use appears to enhance and expand traditional distance learning, educators acknowledge that barriers to access remain, including a steep learning curve for orienting users to MUVES navigation and functionality. The application of Adams’s Knowledge Development Model for Virtual Learning Environments provides a framework for the design of in-world learning opportunities and activities, many of which tend to mirror pedagogical best-practices in Real Life (RL).

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INTRODUCTION

As educators seek to expand options for teaching and learning in the digital age, a growing number are testing the educational potential of emerging technology in the form of 3-D virtual environments. Second Life®, an Internet-based multi-user virtual environment (MUVE), has great potential applications in education and professional development. In this chapter, Second Life will be used to ground the dialogue of MUVE's and to demonstrate how educational activities can be accomplished in-world; more importantly, we will explore the idea that education can be enhanced with these cutting edge technologies. As we approached the topic, three questions emerged:

1. What constitutes effective virtual educational delivery options aimed at creating full learning experiences, and are these options available within Second Life?
2. What is required to prepare teachers and students for virtual world classrooms?
3. What learning objectives and outcomes can Second Life help students to achieve?

Literature Review

As in the case of any new technology, researchers often begin by exploring efficacy and application of the innovation; this phenomenon is no different for Second Life (SL) research. Overall, digital technology is impacting how individuals manage and process vast amounts of available information as well as significantly changing traditional ways of communication knowledge. Boland (2009a) suggests that evidence is building in favor of using Second Life as a viable learning environment. Yet, more research and empirical evidence is needed to demonstrate what genuine learning outcomes are possible. Educators must be responsive to the increased demand for informational technology, while simultaneously exploring its implications for teaching and learning. Ultimately, SL research

should help to inform instructional design and connect the findings in a way that will help teachers and learners appreciate the potential of SL as an alternative learning environment.

In recent years, information technology scholars have examined the impact of self-efficacy and cognitive beliefs regarding the effectiveness of technology as learning tool (Venkatesh & Davis, 2000). Additionally, the efficiencies of virtual learning environments (VLEs) have been the focus of much of the technology research. Another path to determining the usefulness of technology has been to examine technology performance predictors (Moore & Benbasat, 1991). The purpose of this inquiry was also one of discovery.

Recognizing that research on multi-user virtual environments is in its infancy, the authors reviewed the current literature in order to identify study variables and categorize recurring educational research themes. Many traditional educational outcomes and variables have surfaced as the focus of early SL research. However, the research framework seems to be moving beyond concrete outcomes such as, impact on student test scores, to process outcomes that recognize a paradigm shift in teaching and learning with technology. For instance, there seems to be a trend towards examining the benefits of SL through the lenses of personal and social engagement. Brown (2009) advanced theories of presence, positioning, and community that inform individual perceptions of social connectedness, the role of the facilitator, and emotional aspects of cognitive activity. In her study, she hypothesizes that cognition and emotion are inseparable and that virtual experiences amplify memory and learning. Brown concludes that Second Life provided a "strong sense of presence.... Communicating synchronously with students and seeing their avatars promotes a sense of being with people in a fixed place and time" (p. 11).

Therefore, a need exists to combine instructional design, which can capitalize on the unique qualities of virtual environments like Second Life,

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