Chapter 6

The Reality of Virtual Reality: Second Life as a Tool for Online Peer–Teaching Activities

Karen Lybeck
Minnesota State University, Mankato, USA

Dana Bruhn
Century College, USA

Solen Feyissa
University of Minnesota, USA

ABSTRACT

In order to improve teacher preparation courses offered online, a study of the use of Second Life virtual world for peer-teaching activities was conducted. The research period was over one year and the sampling group consisted of 25 Teaching English as a Second Language (TESL) students. The methods practiced during the study follow the suggestions and implications given in previous research in hopes that an informed design would be the means to overcome the published limitations of Second Life. Despite this, the authors were not able to overcome previous difficulties, and did not find Second Life to be useful as a tool for classroom role-playing in online teacher-development courses. Virtual reality, however, has promise for facilitating teacher development; thus, further investigation is needed to find an appropriate virtual venue for this purpose.

INTRODUCTION

Offering teacher-education courses online is a current trend in teacher education meant to meet the needs of in-service teachers who are working in outlying districts, and of pre-service teachers who are working full time in other professions. While this change makes it easier or even possible for these students to fulfill their licensure or professional development requirements, the loss of immediacy is more directly problematic than in many other fields since K-12 teaching requires...
close physical contact with highly diverse groups of real children. While content expertise, knowledge of pedagogical best practices, and appropriate teaching materials can be developed in the online setting, students miss the important learning that happens when they experience the professor as a model teacher, and when they practice teaching using their peers as the target-student audience. One way to make these peer teaching experiences more immediate for online learners may be to utilize online virtual reality sites where developing teachers can practice in a virtual classroom with virtual students.

Little more than a decade ago, researchers (Brown, 1999; Katz, 1999) reported that the use of virtual reality (VR), in the form of special headsets, goggles and gloves, to immerse users in a simulation had the potential to do for education what it had done for NASA and the military, namely, facilitate simulations largely indistinguishable from the physical experiences that users would encounter in the physical world (Brown, 1999, pp. 311-312). Katz (1999), for example, used this classic VR technology to place pre-service teachers into the shoes of kindergarteners. He found that those who participated in the VR experiment showed greater understanding of the child’s perspective during their student-teaching experiences than did those who only read about and discussed child perceptions. While classic VR was shown to have potential applications for teacher education, it has not, as yet, achieved adequate development in this direction. Instead, developers have concentrated on a more cost-efficient and accessible form of virtual reality known as multi-user virtual environments (MUVEs), such as Second Life (SL), which are hosted online and accessed through software downloaded to one’s personal computer. Despite the differences in the two forms of technology, it appears that the goals of researchers (e.g., Cheong, 2010; Hixon & So, 2009; Perez-Garcia, 2009) interested in the use of MUVEs for educational purposes parallel those of researchers who experimented with classic VR technology (Brown, 1999; Katz, 1999), specifically, to create an electronic environment that enhances pre-service teachers’ experiences prior to student teaching.

When Linden Lab released SL in 2003, it quickly became one of the most popular of the MUVEs available on the Internet. Linden Lab presents SL as an immersive electronic space where countless people interact, and build communities both socially and economically (2009, p. 6). Educators have looked to SL for the potential to bring to fruition the dream of a low-cost, virtual reality program capable for serving student and instructor needs. Inman, Wright, & Hartman’s (2010) review of 27 SL educational projects, conducted since SL’s inception, illustrates the immediate interest of educators to experiment with the possible uses, such as facilitating role-play activities and experiencing simulations.

The purpose of this project is to understand the feasibility of utilizing Second Life as a venue for peer teaching activities in online teacher-education courses. To this end, we asked the following questions:

- How do education students respond to the use of Second Life for peer teaching activities, as opposed to teaching in either the two-dimensional online environment or the traditional classroom?
- By implementing the suggestions given in previous studies in the use of Second Life, will we be able to overcome the published limitations?
- Do student and teacher experiences support the use of Second Life as a suitable venue for peer teaching?

PREVIOUS RESEARCH

In one such study of pre-service teachers in an educational technology course, Cheong (2010) investigated whether his students teaching self-