Chapter 4

Increasing Student Engagement through Virtual Worlds:
A Community College Approach in a Diversity Course

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ABSTRACT

Virtual worlds allow for an immersive 3D experience with rich content and interactive potential for students. Through this richness and interactivity, educators have abundant creative power to design and facilitate meaningful learning experiences and collaboration opportunities. In this chapter, we discuss one such initiative using Second Life as an educational space for a community college course activity as a means to enhance student engagement. A brief literature review on education using virtual worlds will be presented, which underpin our pedagogical methodology for the project framework. Focusing on a community college course titled "Diversity in a Technological Society", the course goals and project requirements will be discussed. The chapter concludes with a detailed description of the proposed methodology for the next phase, recommendations and future work.

INTRODUCTION

Student engagement is one key component that assists in the process of learning and often coincides with attaining learning outcomes (Carini, Kuh, & Klein, 2006). There are many techniques to engage students and to spark additional interest in course topics. Some methods are aimed at classroom activities, while others are more aligned as homework or outside activities for practice and discovery. This can be achieved through the gamification of activities (Domíngues, Saenz-de-Navarrete, de-Marcos, Fernández-Sanz, Pagés, & Martínez-Herráiz, 2013), through flipped classrooms (Roehl, Reddy, & Shan-

non, 2013), augmented reality (Dunleavy, Dede, & Mitchell, 2009) and mobile applications (Arnone, Small, Chauncey, & McKenna, 2011), which are just a few methods using technology to engage students through active learning. Selecting the specific technology that best supports student learning depends on the instructional content and core learning outcomes. Certain course topics demand extra focus on specific skill sets and skill levels, while others are designed to sharpen skills in a more general sense. Technology in these courses can greatly enhance an educator's ability to reach students and provide them with unique learning opportunities.

Within the community college environment, teaching a general education course can be challenging due to the diverse set of student skill levels, varied technology literacy, and workload balance. This is compounded by differences in age and enrollment statuses compared to students enrolled in more traditional four-year institutions (Cohen & Brawer, 2003). Adding to this complexity is the many challenges faced when dealing with underprepared (Gabriel & Flake, 2008) or at-risk learners (Zheng, Warschauer, Hwang, & Collins, 2014). Reaching all students and keeping them engaged in the content and context of the class becomes increasingly complex and dynamic.

With the many available technologies and web 2.0 sites available today, educators have a wide array of tools to use in the classroom. Social media for instance now permeates many facets of everyday life and social interaction. Society has grown accustomed to everyday reliance on many forms of digital information (Pew, 2009; Lenhart, Purcell, Smith, & Zickuhr, 2010). However, some technologies do not work or fit well in some contexts, nor are they always appropriate for education. Using technology in the classroom poses its own set of problems and challenges. Instructors may not have knowledge about a particular technology, or even have the resources available. Computing resources, space and internet connectivity all pose potential problems. In some cases, the students may be apprehensive of learning with a new technology, or may have limited use of a particular resource outside of a school setting. While some schools may have open labs or computing resources available through the library, these can be a challenge to maintain or monitor since they are often outside of the instructor's domain of control.

Despite these challenges, for this project the virtual world of Second Life (SL) was selected as the technology of choice. Second Life is a 3-dimensional (3D) virtual world created by Linden Lab that can be accessed through the Internet via a downloadable client application. Users are represented in this world through an *avatar*, where one can interact with other users, content, and explore their surroundings. This online world has seen a large influx of users over the last several years, with an estimated number of "residents" reaching over 36 million accounts worldwide and over 700 square miles of virtual landmass (Linden Lab, 2015).While there are many categories of virtual worlds other than Second Life, each can be defined by their main goal or focus area. Some worlds are designed to be very open-ended and creative, while other worlds are designed to be more game-like or specific for a particular age group. Second Life in particular is not a game in the traditional sense, but an open and collaborative space that lends itself to much potential.

Students are accustomed to working with interactive media for learning and using educational games. While Second Life itself is not a game, it does have several game-like qualities that work well in teaching certain types of content or topics. As students are often attracted by games and other forms of interactive media, Second Life was an intriguing medium to use. Some studies have shown that many users of games also enjoyed being immersed in a simulated environment (Yee, 2006). Following Csikszentmihalyi's research on flow (1990) and applying this into areas of virtual environments to create an engaging and immersive space for learning is a useful goal. Using this approach for assignments can create engaging educational material for students. Additionally virtual environments can provide students with a sense

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