Chapter 14

A Pedagogical Odyssey in Three-Dimensional Virtual Worlds:
The SECOND LIFE® Model

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ABSTRACT

Schools based in the United States are trapped in a Henry Ford factory model of education that is focused on high-stakes testing. This model was effective when factories needed workers who possessed the same skill set. But the world has changed and societal demands on student learning have increased. Moreover, millions of students are failing to graduate from high school, which is a problem that continues to escalate. In an attempt to prepare students for work in the 21st century and to address the dropout crisis, educators are examining ways to integrate virtual worlds, including digital games, into the curriculum. This chapter begins by summarizing some of the theories that commonly frame the discussions about these worlds. Next an examination of the issues surrounding virtual worlds is presented. The concluding sections outline and describe the pedagogical mnemonic known as the "SECOND LIFE" model.

INTRODUCTION

The demand for education is on the rise. Between 2006 and 2015, the National Center for Educational Statistics (2006) anticipates a 13% increase in college enrollment alone. But for the most part, our academic institutions continue to follow a trajectory put forth in the 19th century (Herz cited in Foreman, 2004) – a path based on rote learning and high-stakes testing. While the Henry Ford model of education

may have been effective when factories needed workers, today's world is different and the societal demands on student learning are higher. Students in the 21st century are tech-savvy and claim that they are bored with school (Prensky, 2001). At the same time, school dropout rates in the United States have risen to crisis levels (e.g., Spellings, 2008). For students who do graduate from high school and college, the reports about their on-the-job performance are not positive. In fact, many employers note dissatisfaction with the young people that they hire (Cassner-Lotto & Wright Benner, 2006).

In an attempt to rectify this situation, individuals are investigating ways to make education more appealing and relevant to students by integrating fun into the curriculum (Barab et al., 2005; Quinn, 2005). To do this, educators are exploring a variety of technological options including virtual worlds such as *Second Life* (SL). This chapter begins by acknowledging the theoretical perspectives that inform teaching and learning initiatives that take place in virtual worlds. Constructivist, situated learning, and digital game-based learning theories will serve as the framework for this discussion. Next, the discussion explores the educational possibilities afforded by these spaces and the challenges teachers and students may face in-world. And finally, the chapter concludes with an outline of a pedagogical structure to support teaching and learning in virtual worlds - the SECOND LIFE model.

BACKGROUND

The Move Toward Student-Centered Education

There are different schools of thought associated with the concept of learning. According to the behaviorist perspective, learning is viewed as an activity that takes place inside the head of a person: an inaccessible black box. The assumption put forth by philosophers John Locke and David Hume is that the child's mind is like a blank slate waiting to be written on or an empty container ready to be filled. Drill and skill techniques and the standardized tests that accompany them often underlie this theory, yet they may not be able to account for higher-order thinking found in society.

Currently, there are a number of individuals who recognize that Americans need different skills to compete in the global marketplace. School reform advocates claim that it is time to cross the "yawning chasm" that separates the classroom from the real world (Wallis & Steptoe, 2006). They

believe that what is needed is a "renewal and reconsideration" of "school culture" (Bruner, 1997, p. 84). In this participatory learning age (Brown & Adler, 2008), the focus is shifting toward more student-centered approaches. The use of emerging Web 2.0 technologies like three-dimensional virtual worlds is often part of this discussion. Frameworks used to support the incorporation of virtual worlds into these teaching and learning models draw from constructivist (e.g., Vygotsky, 1978) and situated learning theories (e.g., Brown, Collins, & Duguid, 1989).

Starting with constructivist theory, this approach argues that students construct their own learning. In other words, students take an active role in their learning. Papert (1993) describes the difference between behaviorism, or "traditional" education, and constructionism in the following manner:

Traditional education codifies what it thinks citizens need to know and sets out to feed children this 'fish.' Constructionism is built on the assumption that children will do the best by finding ('fishing') for themselves the specific knowledge they need…The kind of knowledge children most need is the knowledge that will help them get more knowledge. (p. 139)

Because learning and intelligence are distributed in a person's world (Brown, Collins, & Duguid, 1989; Bruner, 1997; Cole & Engeström, 1993), students must find meaning within a cultural context (Bruner, 1997). It is through these interactions with others that that children learn about the world around them (Bruner, 1997). For example, educational activities such as learning to read do not reside solely with the individual; rather, the process of learning to read is distributed among the teacher, other students, and cultural artifacts (Cole & Engeström, 1993). It is through this course of exploration and interaction that students attempt to reproduce what they observe (Bruner, 1997; Piaget, 1952) and may even imitate behav-

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