

## Chapter 5.2

# Adult Learning and Virtual Worlds Simulations

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### ABSTRACT

This chapter will explore conditions for meaningful adult learning and explain how virtual environments and in-world simulations enable or discourage the development of intellectual skills in adults. Adult learners possess particular characteristics that should influence instructional designs. Issues that affect learning in the real-world are also found in the virtual world. Particular problems of cognitive and cultural dissonance in the virtual environment, finding and creating meaningful simulations, and protecting the fidelity of authentic simulations in a public space are discussed. Recommendations and future research directions are provided.

### ADULT LEARNING AND VIRTUAL WORLDS SIMULATIONS

This chapter will explore conditions for adult learning and explain how virtual environments and in-world simulations enable or discourage meaningful adult learning. To describe adult learning we will consider what is known about the learner, learning process, meaningful contexts for learning, and concepts important to adult educators (Kiely, Sandmann, & Truluck, 2004). We will situate adult learning in the context of the Second Life virtual world and in-world simulations that respond to the underlying theories, practices, and issues of contemporary adult learning.

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## **BACKGROUND**

### **Adult Learning**

Kiely, Sandmann, and Truluck (2004) describe the theoretical and practical facets of adult learning as a “vast territory” (p. 19) deserving of a conceptual framework that is both useful and holistic. Adding to an earlier framework proposed by Merriam and Cafarella (1999), the authors offer a four-lens approach for understanding the theory and practice of adult learning that considers process, learner, educator and context.

Learning is a lifelong process. It is not limited to childhood, for “if no biological mechanism operates to set the limits of development, then it should go on throughout life” (Driscoll, p. 213). The process of adult learning is interactive, reflective, dialogical, experiential, and even transformational (Kiely, Sandmann, and Truluck, 2004). It does not contradict stages of learning that occur earlier in life (Brookfield, 1995) although adult learners do have unique traits that should be considered when designing virtual learning experiences.

Malcolm Knowles (1970) differentiated pedagogy, “the art and science of teaching children,” (p. 40) from andragogy, “the art and science of helping adults learn” (p. 43). Andragogy is grounded in the belief that adult learners tend to be independent and self-directed. With years of experience adult learners possess expertise and a wealth of knowledge that should be recognized respectfully, and used as a basis for constructing new knowledge. He described adult learners as having a sense of immediacy for practical knowledge as one might have in the workplace, and an intrinsic motivation for knowledge that supports adult social roles (Knowles, 1980; Knowles, et. al, 1984; Merriam and Cafarella, 1999).

Throughout the twentieth century technology has played a key role in allowing adults access to college course work and degree programs at home and in the workplace. The demands for distance learning, and the options for delivery, are

growing. Busy adults are well suited for learning through innovative delivery technologies given the intrinsic motivation and just-in-time learning needs we experience. Modern technologies like virtual worlds and in-world simulations extend our capabilities as learners and educators because they offer immersive experiences, transform reality, and enable self-directed and social learning.

Meaningful learning can be addressed with innovative technologies given thoughtful instructional design. For instance, an instructor in Second Life chose to allow students to self-assess. Students typed chat responses to questions while sitting on mushrooms, and received instant feedback as their mushroom raised or lowered in height for correct or incorrect responses. The assessment was motivating, engaging and self-explanatory given the physical experience of movement in-world. Virtual world simulations are well-suited for experiential and transformational learning theories. Issues of learner preference, personal philosophy, power, and diversity will continue to contextualize the adult learning experience (Kiely, Sandmann, and Truluck, 2004) and the approach and response by educators will be important.

### **Virtual Worlds Simulations**

Second Life, a virtual environment designed for adults and popularized by the general public since its inception in 2003 (Rosedale, 2007), currently maintains a strong user-base with nearly one million residents logging in during the thirty days prior to the writing of this chapter (economic statistics available at <http://secondlife.com/statistics/economy-data.php>). It was not designed specifically for educational purposes and it is unclear how many educators are using the virtual environment for the purpose of teaching and learning (Kelton, 2008). The significant presence of educators in-world is evident (Harris, Lowendahl, and Zastrocky, 2007) though, with hundreds of institutions represented in searches, educational listservs (ex. Second Life for Educa-

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