Chapter 14
Learning in Second Life:
Developmental Theory of Avatar Growth and Change

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ABSTRACT

As technology natives, 21st Century students are dramatically different than their counterparts of the previous century when many university educators were learners themselves. Piggy-backing off of the technology that students already use, the use of Second Life as an immersive instructional tool offers innovative opportunities for simulation, collaboration, and virtual field trips not easily replicated in the traditional online classroom. As an online manifestation of self in a virtual world, a Second Life avatar enhances interaction in a virtual space, facilitating movement, choice, and interaction within the virtual environment, allowing the user to take on a visible persona (Falloon, 2010; Peterson, 2005). An individual's personification with his/her avatar, ranging from human form to animal form to robot form, is the key to an immersive experience and affords the user the opportunity to engage in surreal and imaginary experiences transcending the actual world in which they live (Deuchar & Nodder, 2003). This chapter describes the characteristics and skills comprising maturation for the five stages of avatar development, along with matching pedagogy for facilitating the teaching and learning process for avatars and users in Second Life.

INTRODUCTION

Over the last few years, the emergence of 3D virtual environments to facilitate an immersive educational experience has become more commonplace. This change in learning environment stems largely from a set of socio-technical transitions such as wider access to broadband, the development of powerful Web 2.0 technologies, platforms and computer graphics capabilities, the emphasis upon social and experiential interactions, and advances in the uses and applications of the Internet. Together, these tools allow for a range of options in the context of education for enhancing teaching and learning (De Freitas, Rebolledo-Mendez, Liarokapis, Magoulas, & Poulovassilis,

2010). These forces have led to greater challenges and opportunities for the learning and teaching communities that may broadly be categorized in terms of social, pedagogic, institutional and technological advantages. Second Life, the social virtual world developed by Linden Laboratories, emphasizes the use of immersive worlds for supporting human activities and interactions while presenting new opportunities and challenges for enriching how we learn, work and play (Boulos, Hetherington, & Wheeler, 2007; Prasolova-Førland, Sourin, & Sourina, 2006). The creation and use of a unique and interactive environment provides access to users through Second Life settings, using real time interactions in a unique 3D multi-user educational environment (Bignell & Parson, 2010). Lambert (2007) has created a series of four introductory videos introducing people into the world of Second Life:

- **Part 1:** http://www.youtube.com / watch?v=6b6WnMA3qgo&list= UU6FJ_ dtjciniEnlRJ-LFrFA&index=11& feature=plcp
- **Part2:**http://www.youtube.com/watch?v= AvsG45597cA&list=UU6FJ_dtjciniEnl-RJ-LFrFA&index=10&feature=plcp
- **Part 3:** http://www.youtube.com/ watch?v=UhwMI1ybNm8
- **Part 4:** http://www.youtube.com/ watch?v=bWhYUizovqk

New opportunities for real time collaboration in this immersive environment have been the result of these changes, regardless of a user's geographical distance or personal circumstances, allowing users to engage with the virtual experiences as they are divulged in real time (Gazzard, 2009). Leonard, Withers, and Sherblom (2011) explained that Second Life provides unique opportunities for online group collaboration, especially as it stretches and connects geographically dispersed locations. Since Second Life requires no additional hardware or software costs, it can foster professional task orientation to group participation and collaboration. Participating in a virtual environment helps students use communication in avatar-to-avatar settings, providing a greater sense of social presence. Users in Second Life will likely find their experiences in Second Life challenging while at the same time engrossing and engaging (Childs, Schnieders, & Williams, 2012). Vasileiou and Paraskeva (2010) contrasted virtual worlds as persistent Internet-based settings where they continue whether or not an individual is involved in the setting at any point in time. Virtual worlds using online role playing games do not have missions, levels of difficulty, or goals for specific players. Second Life is a unique virtual world ecosystem that fosters interactions with others in the involvement; it has pedagogical advantages over teaching in a traditional manner and incorporates learning styles and a sense of community. There is a clear sense of excitement that comes from just being there with other avatars in the virtual world (Wiecha, Heyden, Sternthal, & Merialdi, 2010).

Wagner and Ip (2009) explained that using virtual worlds for exploring real business and other problems is of great value, since failure in Second Life has relatively few and inexpensive consequences. Learners are faced with situations they may not have encountered before or even considered before. Users have the opportunity to exercise new behaviors and observe the outcome, then adjusting their behaviors based on the outcomes. Macedo and Morgado (2008) explained that Second Life encourages interaction and collaboration in ways that convey a sense of presence, a phenomenon not found in other settings.

The objective of this chapter is to identify stages of avatar development to facilitate the teaching and learning process in Second Life. Similar to identifying a student's learning style, assessing and considering the avatar's current stage of development, the instructional leader can design instructional content and supporting activities most appropriate to maintain learning.

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