

# Chapter XVI

## New Media Literacy in 3-D Virtual Learning Environments

**Yufeng Qian**  
*St. Thomas University, USA*

### ABSTRACT

*This chapter reviews the use of 3-D virtual learning environments in kindergarten through secondary education in the United States. This emerging new learning environment poses new challenges to learners and requires broader spectrum of media literacy skills. By examining exemplary 3-D virtual learning programs and current state of media literacy education, this chapter reconceptualizes media literacy as integrated learning skills required in the emerging learning environments and identifies new directions to media literacy education to better prepare students to be competent learners and citizens in the digital age.*

### INTRODUCTION

Virtual worlds, evolving from virtual reality technology and expanding on the Internet, are growing at an exponential rate in recent years. Virtual worlds are visually immersive 3-Dimensional (3-D) online environments where individuals, represented by avatars, meet, socialize and interact with each other, computer-based agents, digital artifacts, and the environments in real time, just as they might in the real world (Clarke & Dede, 2005). Unlike in the real world, however, virtual worlds enable people to do things that are impossible or impractical in real life, such as fly-

ing, dressing wild, buying and building a land, teleporting from one place to another, and “physically” (via avatars) showing up in the same room with people from all around the world. Virtual worlds have been said to be a truly innovative medium of the 21st century that provides a brand new communication experience (Craver, 1994; The New Media Consortium, 2007).

Over the last few years, there has been an increasing interest in virtual worlds in education. A variety of 3-D online learning environments has rapidly burst into the limelight in education, including Second Life, Active Worlds, There, River City, Quest Atlantis, and Whyville. Second

Life, in particular, has attracted over 12 million residents (Washington Post, 2008). A growing body of research suggests that virtual worlds are a powerful tool that may reshape teaching and learning in the 21st century (Cross, O'Driscoll, & Trondsen, 2006; Dede, 1995; Pantelidis, 1993; Watson, 2000). Some have argued that 3-D virtual world represents ideal online learning environments where spaces and artifacts, being as realistic and detailed as possible, may engage learners both perceptually and emotionally (Prensky, 2001; Selwood, Mikropoulos, & Whitelock, 2000). The social aspects inherent with virtual worlds may also have tremendous implication in education. Learners' simulation, role-playing, reflection, and collaboration, enabled by the 3-D virtual technology, provide a more learner-centered knowledge building environment (Clarke & Dede, 2005)

Parallel to the new possibilities and potential of 3-D virtual worlds to education, learning in virtual worlds demands a greater degree of participation, thinking, and learning, which poses new challenges to learners. Current curriculum at kindergarten through secondary (K-12) level in the United States has been slow in reacting to the emergence of 3-D learning environments, continuing to operate within a print-based cultural logic despite the technological changes that increasingly influence children's lives (Squire & Jan, 2007), leaving children on their own to "swim or sink" in the pop media sea. This chapter examines and reconceptualizes media literacy skills in the context of emerging virtual world learning environments and discusses new directions for media literacy education that will better prepare this generation of learners for the new media landscape.

## **EXEMPLARY 3-D VIRTUAL WORLD LEARNING ENVIRONMENTS**

To harness the power of 3-D virtual world technology and cater to the needs and preferences of

digital natives, a number of learning organizations and educational foundations have begun to explore the use of this emerging learning environment in K-12 education. While still at an exploratory stage, there exist a few 3-D virtual world learning programs that have shown great potential in engaging learners (Barab, Arici, & Jackson, 2005), fostering deep learning and thinking (Ketelhut, Nelson, Dede, & Clarke, 2006), and developing life-long learning skills (Gee, 2003). Three of such programs that have been widely cited in the literature are Global Kids Second Life, Quest Atlantis, and River City.

### **Global Kids Second Life**

Among the most powerful and popular virtual worlds is probably Second Life. Linden Lab, the developer of Second Life, has dedicated Teen Second Life to youths of 13-17 years old. Global Kids, a New York-based nonprofit organization targeting teen youth, is one of the first to set up educational projects in Teen Second Life. Starting in the summer of 2006, Global Kids has launched Camp GK, Online Educational Leadership, GK Machinima Island, and GK Serious Gaming Island in Teen Second Life. Having received massive press attention from a number of media outlets (see for example, BusinessWeek, 2006; Education Week, 2007), GK Second Life has been regarded as an invaluable, pioneering effort in the use of 3-D virtual world technology in education.

To make use of the vast virtual land available, kids are encouraged to build the facilities and material required for a program, such as meeting rooms, workshop materials, and t-shirts for the program (Second Life, 2007). A workshop in Second Life can start in the GK Clubhouse, move to the factory, transfer to the dance club, and then conclude at the campfire, which greatly enhance kids' sense of ownership of their learning spaces and enjoyment of the learning experience. In this virtual world, multiple channels have been used to add social nuance, and to organize various

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