

## **Imagine the Real in the Virtual: Experience Your Second Life**

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### **Introduction and Background**

Imagine a learning environment where you can go anywhere, do anything and interact with others in ways never before possible in more traditional distance education settings. Learners can visit such places as gothic cathedrals, cities, museums, libraries, places too dangerous or impossible to go in real life. This three dimensional world exists, created by its residents who are physically located around the world. Second Life has the potential to revolutionize distance education and online virtual communities.

Distance education has made enormous strides over the past decade, made possible largely because of the advances in computing technologies. It is not unusual for distance educators to use tools such as chat rooms, blogs, discussion forums, Web sites, streaming media and, of course, e-mail. These tools, once considered cutting edge, are now quite familiar. With recent advances in graphics, bandwidth and processor speed, there are now other options that are very viable for use in distance education.

Many teachers and parents frown on the use of videogames in the classroom. Although there are a number of very well done interactive educational titles, they are rarely used in a distance education environment. When considering the positive attributes of Massive Multi-Player Online role Playing Games (MMORPGs) we find that,

Gamers come to virtual worlds because in them they find more than a game, they find other gamers. They come to compete with each other, to collaborate with each other, to learn from each other, to profit from each other, to talk to each other in the game, at the coffee machine at work or in chat rooms on the Internet. Players come to MMOs to interact with other players, and in that way, MMOs are a very special form of interactive entertainment, in that they derive their value mainly from the fact that there are other players there". (Ludlow & Wallace, 2006)

Massive Multi-User Online Role Playing Games (MMORPGs) are becoming ever more popular among adolescents and adults due to their social context, while at the same time offering an array of complex activities and objectives that players must accomplish in order to "succeed" in the game. There are several recent studies that examine the teaching and learning potential of this particular genre of video game most specifically to teach science and physics. These efforts are important in that they suggest that there can be sound pedagogical methodology incorporated into MMORPGs and that more researchers are exploring the potential of these environments.

### **The Virtual Environment**

With the aid of increased graphic computing and networking capability over the past 12 months, the "pre-scripted" often rendered versions of the most popular games (note the advanced graphics in games such as Medal of Honor, Grand Theft Auto and Madden Football) have given rise to an even more interactive, completely unpredictable environment called a micro-world.

The term "micro-world" was coined by Joseph Lloyd P. Rieber and is defined as "a small but complete subset of reality in which one can go to learn about a specific domain through personal discovery and exploration" (Rieber, 1992). Furthermore, micro-worlds allow users to interact with others and build objects within the environment, thus adding to the interactive nature of the world as part of a series of programs he wrote for his son who has learning disabilities. Through the creation of a number of environments where Rieber's son could determine his own direction, make decisions regarding his learning that changed based on the decisions he made, Rieber suggested that visually based virtual environments are an extension of constructivist learning theories (Rieber, 1992).

Currently, one of the most advanced of these micro-worlds, developed by Linden Labs, is called Second Life, a multi-user advanced, visually enhanced, interactive environment currently inhabited by over 234,000 residents from around the world. Second Life is not a game but a virtual environment built almost entirely by its "residents" (players who are also referred to as avatars). This "platform" is currently being used by over 60 educational institutions as a way to engage students in a immersive educational experiences. Residents can own property, build and construct almost anything that their skills and imagination allows and interact with objects and residents from all over the world within the environment. Second Life comes with built in tools for building, and scripting (it has a built in compiler), however animation, sound, video and textures can be developed outside and easily brought into the environment.

Translating this idea to distance learning possibilities Second Life offers almost unlimited "teaching moments." Most educators have never experienced an interactive 3D environment such as Second Life which was first billed as an online game but is fast becoming a living, expanding world where anything, including learning, can occur. These Massive Online Environments are yet another tool in the arsenal of those interested in reaching Net-Generation learners in interactive, creative ways.

### **Social Learning**

Well-designed social learning environments foster increased opportunities for collaborative activities. Socialization between humans uses many clues to provide the intended message. Without facial expressions, heads nodding or tilting, and or eye contact, it is often difficult to get the true or complete message across. With the latest developments in 3D virtual environments, which are now available to anyone with a relatively recent model computer, and a high-speed connection to the Internet, technology is reaching a new level of immersive experience, incorporating rich visual elements and animations that provide a full-featured social learning environment. When enhancements to virtual environments are made that mimic real life, users become more enmeshed with the content and less focused on user interface issues that sometimes plague advanced virtual environments.

Communication in Second Life currently takes place using textual chat (visual cue that an avatar is talking is that the hands move as if typing the chat), scripted note cards or external audio communication programs such as Skype, Gizmo, Ventrillio and Vivox Servers or other VoIP programs, outside of Second Life. However body communication also contributes the the experience. For example, how close avatars stand to one another, if an avatar is facing in the direction of another avatar in which he or she chatting with, even where the eyes are focused, as the avatar's focus follows the curser movements. Clothing and appearance provide additional information about how one wants to be approached and groups he or she may belong to. Avatar's can demonstrate synchronously their abilities such as building, scripting, fashion, and marketing. Communication can be further enhanced by activating gestures, animations and poses. These visual clues provide a much different dimension of social interaction capabilities in comparison to text-based or even audio-based communication tools, which can greatly increase the quality of community among online students.

## Engaged Learners

Educators face a common and perplexing question; that is, how to engage online students. Students need opportunities to feel safe to learn in an environment that provides them with learning experiences that allow them to apply existing knowledge and succeed in successive steps. Games and simulations can provide such a “world” for students (Gredler, 2001). Simulations have been used to enhance adult learning in corporate and military settings for over a half-century, but the use of games in traditional educational settings has only recently received attention (Thompson & Rodriguez, 2004). Recognizing the motivational and instructional power of games and simulations moves educators into a new realm for delivery of learning outcomes (Jenkins, 2005). Jenkins recently proposed several aspects of games that make them a viable approach to promote student academic learning. He suggested that games:

- Lower the threat of failure
- Foster engagement through immersion
- Manage levels of attainment to prevent feeling overwhelmed
- Link learning to goals and roles
- Create a social context with shared interests
- Present multimodal learning environments
- Support a framework of inquiry (Jerkin, 2005).

The use of games and simulations capitalizes on the motivational factors necessary to engage the learner. Embedding learning activities into games and simulations in an online environment will offer students socially acceptable and personally gratifying opportunities to learn (Thompson & Rodriguez, 2004).

## Future Plans

Currently CMSU and NIU are collaborating on developing a campus in Second Life where students come to learn from the environment and each other. The space hopes to take advantage of constructivist learning activities, social interactions and exploration. We hope to develop a community of learners who come back long after the class is over, as alumni, to interact with and mentor new students. Additional plans include measuring performance through an activity theory lens. According to Yrjö Engeström, activity theory is "the relationship between human agent and objects of [an] environment [that is] mediated by cultural means, tools and signs." Second Life provides the "culture" that will be mediated in various ways through this project. We will test Engeström's notion that the “human mind comes to exist, develops, and can only be understood within the context of meaningful, goal-oriented, and socially determined interaction between human beings and their material environment."

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### Biographical Sketches

**Bryan Carter** is an assistant professor of literature at Central Missouri State University. He specializes in African American literature of the 20th Century with a primary focus on the Harlem Renaissance and has a secondary emphasis on visual culture. He has published numerous articles on his doctoral project, Virtual Harlem. In the spring of 2004, he served as Professeur Invite at the University of Paris IV-Sorbonne where he taught Digital Communications and Cultural Studies. "Using digital communications helps to expand the world-view of my students in ways that, prior to the evolution of these tools, was more difficult. Students love it."

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**Aline Click** has B.F.A in Electronic Media in 1984 and a M.S. Ed. in Instructional Technology in 1999. She has been a leading influence in online education at Northern Illinois University for the past 12 years having built one of the first web servers on campus off her Macintosh workstation in 1994. As Director of eLearning her role is to research emerging technologies for education that meet the needs online students different learning styles. In addition she has been heavily involved in developing online simulations and community building methods such as Massive Multi-Player Online Game (MMOG) environments to provide quality online experiences.

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