

Final Report

For: Dr. Tobin Lopes- Spring 2009
Patrick Osborne

Introduction

Virtual worlds like Second Life seemingly represent the best of what online experiences have to offer. They are the collision of online communities, immersive simulation, and video games. These worlds are often promoted as the next generation of interactive education, potentially offering learners opportunities that would be impossible to experience in the real world.

In a virtual space, geographically distributed learners can not only gather together, but they can hover for a lesson near the ceiling of a computer-generated Sistine Chapel, take a walking tour of the streets of ancient Rome, or gather around the three-dimensional nucleus of a living cell to observe the replicating DNA. Proponents of virtual worlds tout an experience that is an order of magnitude leap from a conference call accompanied by a series of flat PowerPoint slides.

It's easy to get caught up in the enthusiasm and the possibilities as well as the undeniable appeal for the incoming generation of digital natives. In 2008, over 1,200 educational "islands" were created for universities and corporations both large and small. According to Linden Labs website (the technology company that owns and runs Second Life), well-known institutions and companies are using these virtual spaces for increasingly serious activities including job interviewing, business meetings, and

employee orientation training. The Second Life GRID Wiki lists organizations like IBM, NASA, and the U.S. Air Force. It's clear something interesting is going on if major corporate and government organizations are investing millions of dollars to develop a presence in this new environment (Gronstedt, 2008).

It can be difficult for the uninitiated to determine how seriously to take all of this. The purpose of this qualitative study will be to explore and determine the benefits of using online learning via Second Life for corporate training. It will help answer whether Second Life learning is the *next generation*, or only *the next overhyped fad*.

Problem Statement

While there is a lot of popular media coverage and discussion about learning in online worlds like Second Life, this research seeks to address the gap in *scholarly* research available to assist practitioners in assessing its viability as a training tool for their own organizations.

Research Questions

- What's a Second Life learning experience like?
- What types of learning can be undertaken?
- Are these learning experiences effective*?

**I'm defining "effective" as engaging, resulting in useful learning for participants, and perceived by users to be at least as worthwhile as more traditional alternatives.*

Background & Rationale

Since the late 1990's, growing availability and speed of internet access has allowed for increasingly bandwidth-intensive forms of online discussion and messaging (Zakon, 2006). The software tools for people to communicate synchronously have been developing as well. What began with live "chat" evolved into more feature-rich platforms for discussion and collaboration. Today, tools like *WebEx* and *Microsoft Office Live Meeting* allow users from multiple sites to share a real-time linkage of PC desktops.

Meetings of this type typically focus on a PowerPoint presentation and include audio provided over a separate conference call line or over the internet. Many web-based educational and professional seminars (commonly referred to as "web-inars") are offered either for free or for users willing to pay a modest fee to participate. These experiences represent a significant step forward from the plain conference call, especially in situations where the communication is primarily moving in one direction (e.g. speaker to audience).

Spaces for collaboration, as they are frequently used, also have some understandable shortcomings when employed in a learning context. Participants are largely anonymous, and the temptation to multi-task while one is at their desk viewing a learning presentation is difficult to resist. Audience participation too often takes the form of weak polling questions and Q & A segments, despite the fact that most web conferencing tools are capable of more engaging activities.

Meanwhile, the world of electronic gaming in many ways has surpassed the business world in its ability to leverage technology to allow people to connect and collaborate, albeit for a different purpose entirely. Persistent virtual environments, called Massively Multi-player Online Role-Playing Games (MMORPG) like *World of Warcraft* and *EverQuest* offer highly engaging experiences users are willing to pay to participate in. Users communicate and interact with one another through a self-styled character used to represent themselves called an *avatar* (Araki & Carliner, 2008). Millions of game players worldwide devote hours each week in fantasy game worlds. These environments allow users to meet in a three-dimensional virtual space and work together to solve game-based tactical problems and achieve team objectives.

These two universes of online activity ostensibly have little to do with one another. There's one world of game play and social activity, and an entirely separate world of serious online collaboration. Social networking sites like MySpace, Facebook, and LinkedIn (for professional networking) are becoming increasingly popular (Vascellaro, 2007). They allow members to share personal news, post messages, as well as distribute links, videos, and photos. Simple interfaces allow creation of extended networks comprised of friends, family, and colleagues. The line between what's professional and personal, what's public and private are becoming increasingly blurred and entangled (Singh, 2008).

One gets the distinct sense that there are implications for learning, but it's not at all clear what precisely they are. While unique and separate, each of these worlds has something useful to offer the others. Increasingly, non-game online environments are bridging the gap between fun immersive experience, social interaction, and

business/academic collaboration. The premier player in this space is called *Second Life* (Kelton, 2008). It offers a platform for users to engage in a variety of social activities that interest them--from learning to socializing—just like in real life (AKA *First Life*). Atkinson (2008) states that “over 100 educational institutions offer meeting space and hold classes in SL” (p. 18).

Virtual worlds like Second Life seemingly represent the best amalgamation of what online experience has to offer. This collision of online communities, immersive simulation, collaboration, and video games and has the potential to make learning both fun and social (Gronstedt, 2008). These worlds are often promoted as the “next generation” of interactive education, potentially offering learners opportunities that would be impossible to experience in the real world.

In a virtual space, geographically distributed learners can not only gather together, but they can hover for a lesson near the ceiling of a computer-simulated Sistine Chapel, take a walking tour of the streets of ancient Rome, or gather around the three-dimensional nucleus of a living cell to observe the replicating DNA. Proponents of virtual worlds tout an experience that is an order of magnitude leap from a conference call accompanied by a series of flat PowerPoint slides. Users are “present” during learning activities through their avatars. People equipped with microphones can speak to each other as well as correspond via text chat. There are even volunteer tour guides to help newcomers get oriented (Waters, 2009).

It’s easy to get caught up in the enthusiasm and the possibilities as well as the undeniable appeal for the incoming generation of digital natives. In 2008, over 1,200 educational “islands” were created for universities and corporations both large and small.

According to Linden Labs website (the technology company that owns and runs Second Life), well-known institutions and companies are using these virtual spaces for increasingly “serious” activities including job interviewing, business meetings, and employee orientation training. The Second Life GRID Wiki lists organizations like IBM, NASA, and the U.S. Air Force. It would appear “the Web 3D train is leaving the station” (Gronstedt, 2008, p. 22), and major corporate and government organizations are investing millions of dollars to develop a presence in this new environment.

It can be difficult for the uninitiated to determine how seriously to take all of this. Practitioners with long memories will recall how both computer-based learning and learning management systems received at least as much attention when they were introduced as the “next generation.” One might also argue that in many ways those technologies fell far short of their advertised potential to completely transform the practice of learning for a digital age.

Further, decisions regarding use of new technologies involve high stakes for organizations. Choices about when to commit to a technology and which technology to choose involve dollar amounts from thousands to millions, and can have long-lasting implications for organizational effectiveness. As part of due diligence, consulting scholarly research is a helpful and trustworthy guide. The difficulty is that very little current research is available since the use of these technologies for learning is relatively new. Other than press releases and trade magazines, there’s little of substance to rely on.

The purpose of this qualitative study will be to explore and determine the benefits of using online learning via Second Life for corporate training. It will help answer whether Second Life learning is the *next generation*, or only *the next overhyped fad*.

Problem Statement

While there is a lot of popular media coverage and discussion about learning in online worlds like Second Life, this research seeks to address the gap in *scholarly* research available to assist practitioners in assessing its viability as a training tool for their own organizations.

Research Questions

- What's a Second Life learning experience like?
- What types of learning can be undertaken?
- Are these learning experiences effective*?

**I'm defining "effective" as engaging, resulting in useful learning for participants, and perceived by users to be at least as worthwhile as more traditional alternatives.*

Research Method

Qualitative data for this research project was gathered through a series of interviews utilizing opportunistic sampling (Creswell, 2008). All three research participants selected have been learners in one or more structured learning experiences in Second life. Two of the research participants responded to a call for volunteers posted to the Second Life Educators forum (SLED) listserv group. The third participant is an

employee of Massachusetts Mutual Insurance Company located through a general request for volunteers among OppenheimerFunds employees.

Each participant was briefed on the general purpose of the research and consent for an interview was obtained via e-mail. Interviewee privacy was maintained by identifying each participant only by a reference name rather than their actual name in transcripts and other documentation.

Due to geographic distribution, interviews took place by phone. Each lasted about 45 minutes. Interviews were recorded using an inline microphone and captured and stored as an mp3 computer file. The recorded interviews were then transcribed. In addition to the transcription, the interviewer also captured reflective notes with any additional insights from the conversation not otherwise captured in the text.

General/demographic questions

1. Subject reference codename
2. Interview date/time
3. Gender
4. Level of education
5. Age
6. Length of time using Second Life
7. Self-reported level of comfort with technology

Open-ended interview questions

1. What was the subject matter and purpose of your Second Life learning experience?
2. Would you please describe what your learning experience was like as a participant?
3. At what points did you feel most/least engaged during the event?
4. What, if anything, did you learn?
5. How would you compare the experience to other types of learning in which you've participated?

Elaborating probing questions were used to illicit further information where possible (i.e. Tell me more, Can you share more details? What did you mean by XYZ? And then?).

Data was analyzed using multiple methods. Transcription text of the three responses for each question were analyzed by computer to discover keyword frequency and commonly used phrases. Subject interviews were also individually coded using a simple rubric (table 1) to help reveal emergent themes. Final analysis consisted of a compilation of trends and themes revealed through these methods.

Table 1: Learning in Second Life Interview Rubric

Question			
Subject/Purpose	Technical	Interpersonal	Informational
What was it like?	Generally positive	Neutral	Generally negative
Most engaged?	When active	When passive	Other
Least engaged?	When active	When passive	Other
Learned what?	Knowledge	Skill	Attitude
Compared to other learning?	As good or better	Same	Not as good

Results and Discussion

My interview subjects were all people who responded to a blind call for volunteers on the Second Life Educators (SLED) listserv. The SLED community is a discussion group for those interested in using Second Life for real life education applications. Interviewees are referred to by their reference names (selected at random) to protect their anonymity.

The chart below summarizes their collected demographic information.

Reference Name	New Jersey	Kansas City	New Orleans
Interview Date	3/11/09	3/12/09	3/12/09
Gender	Female	Female	Female
Education	Master's degree	Master's degree	Ph.D. all but dissertation
Age	56	40	58
Length of time using SL	2.5 years	4 Months	2.5 years
Level of comfort with technology	Early adopter, scout	Comfortable experimenting, not too technically savvy	"Super comfortable"

The interview text was analyzed using a tool called <http://textalyser.net/>. The results of the analysis offered little in the way of useful new information. The top five words, by frequency of their occurrence were: you, just, it's, life, and second. The most frequently used two-word expressions were: Second Life, kind of, going to, and to be.

Each interview was scored using the *Learning in Second Life Interview Rubric*. Results of that scoring appear below.

Each red “X” indicates a unique interviewee.

Question	<i>Actual Results</i>		
Subject/Purpose	Technical X Building objects and teaching in SL. X Building and scripting objects.	Interpersonal	Informational X Introduction to SL for librarians/acclimation.
What was it like?	Generally positive X Less intimidating than real life but still social.	Neutral X Sometimes frustrating. Not the best for all uses.	Generally negative X Presenter was new, delivery was slow due to presenter typing.
Most engaged?	When active X During tours and field trips. X When hands-on doing things. X When hands-on building and scripting.	When passive	Other
Least engaged?	When active	When passive X When it replicates a traditional lecture. (e.g. sit and listen). X During lecture segments.	Other X System problems/slowness resolving presentation slides.
Learned what?	Knowledge X Showing people SL and its uses.	Skill X A completely new software tool. X Linden Scripting Language (LSL).	Attitude

Compared to other learning?	As good or better	Same	Not as good
	<p>X Strongly prefers learning in SL for access and convenience. X Less intimidating, more open.</p>	<p>X Depends on learner.</p>	

What’s a Second Life learning experience like?

The interviewees revealed that their Second Life Learning experiences took three main forms. All reported that there was some sort of presentation or demonstration component to their learning experience. Usually, that took the form of some sort of presentation tool that is the Second Life equivalent of PowerPoint. During this activity the learners were largely passive, while they either read or listened to a presentation of content. In at least two cases, the Second Life surroundings chosen for the training replicated a real world auditorium. The subjects independently reported that to be the least engaging aspect of their learning, but acknowledged it was necessary in some cases.

Another form of delivery was a field trip or tour-type activity. This had a facilitator leading participants to various landmarks or locations of interest. Interviewees stated during these types of activities participants were often “lost” or unable to follow the facilitator to the next destination. This could have been because learners were not all skilled at teleporting themselves from one location to another. On balance, interviewees reported these types of activities as enjoyable and engaging.

A third type of experience was similar to a lab or workshop, where participants were actively engaged in a task, such as building an object or writing scripting code to make an object behave in a certain way. In Second Life, objects can be created, colored,

and textured using software tools built into the software. Those objects can be scripted (think *programmed*) to do things and/or provide information to avatars that come into contact with them (for instance, an object like an elevator could be scripted to allow someone to ride it up or down). Activities like writing scripting code and building objects were consistently reported as the most engaging types of activity.

Are these learning experiences effective? (Engaging, results in useful learning, at least as effective as traditional)

There was no clear yes or no answer to this question. Interviewees reported varying degrees of learning and engagement within the events they attended. All described times when they were highly engaged and other times when they were disengaged almost completely. New Jersey explained when screens were taking a long time to resolve, “At one point I started IM [instant message] chatting with another student like passing notes...nothing to do with the course.”

When compared to other more traditional learning activities, the answers were mixed. One person stated that whether Second Life learning was effective was a function of the type of learner. This made sense in the same way that no one traditional form of learning is preferred by everyone. Two people indicated that the Second life learning experience was preferable to other types of learning, but for different reasons. One cited reasons rooted in the access and convenience Second Life afforded. There’s no need to leave home and endure the hassles of driving, parking, or finding a classroom when your class is on the computer. Another found that she preferred being in a social learning

situation, but found the Second Life platform to be less intimidating than a real-world class.

Implications for practice

Many positive aspects of learning in Second Life were uncovered during the interviews. Technically adept students may find the three-dimensional environment adds to their level of enjoyment and engagement with the course content. Second Life offers learners the convenience of attending classes from home, but that still includes a social component. This seems especially helpful when learners are highly decentralized, or are unwilling/unable to participate in live courses.

While this is an interesting technology and one that holds great promise, I don't think I'll be implementing it in my practice in the near future. Drawbacks include:

- System/simulation slowness
- Steep learning curve for both users and designers
- Cultural mismatch with my organization

Interviewees mentioned that to effectively use Second Life requires a high-end machine with a fast processor, above average graphics capability, and a very fast internet connection. Even with that, waiting for graphics to resolve themselves on the users screen from Second Life servers is, at times, frustratingly slow. Time spent waiting was unanimously reported as annoying and counter-productive.

To participate in Second Life learning events as a user requires an above average sophistication with technology in general. People familiar with other three-dimensional software and gaming applications may intuitively understand Second Life, other users

will need to spend significant amounts of time learning the basic system interface to accomplish even the simplest tasks. For example, one must learn how to move about, sit, communicate, and interact with objects. For my organization (which struggles at times with even the proper use of e-mail) Second Life would be a quantum leap in complexity and aggravation for less sophisticated users. Developing adequate skills to create and deploy useful learning within Second Life would require significant up-front investments of time and resources.

The interviews also revealed many aspects of Second Life, originally designed for fun and socializing, that may be incompatible with the culture of my organization. This is particularly notable in the use and styling of avatars. Interviewees reported many people, even professionals, who select unusual avatars to represent themselves. This would not be a good fit with my company's current culture, which is best described as conservative, bordering on *very conservative*.

New Orleans asserted that 3-D worlds are the direction the internet is headed, but that Second Life could turn out to be "the AOL of Virtual worlds." She was referring to the fact that America Online (AOL) was one of the first popular online communities with its private community of users and content. After a big initial splash, subscribers increasingly migrated away to other internet providers and distributed communities of users and content throughout the Internet.

I believe that as 3-D environments mature they will become more common and accepted will undoubtedly make further inroads into corporate organizations. It's also likely they will become more flexible and configurable to the needs of different

organizations. Until then, virtual worlds are an interesting emergent trend I intend to monitor and observe as they evolve.

References

Araki, M., & Carliner, S. (2008). What the Literature Says About Using Game Worlds and Social Worlds in Cyberspace for Communicating Technical and Educational Content. *Technical COMMUNICATION*, 55, 251-260.

Atkinson, T. (2008, March/April). Second Life™ for Educators: Inside Linden Lab. *TechTrends*, 52, 18-21.

Atkinson, T. (2008, March/April). Second Life™ for Educators: Inside Linden Lab. *TechTrends*, Volume 52, 18-21.

Creswell, J. W. (2008). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (3rd ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.

Facebook Factsheet. (n.d.). Retrieved February 11, 2009, from

<http://www.facebook.com/facebook?ref=pf#/press/info.php?factsheet>

FACTSHEET: Education and Nonprofits. (2009). Retrieved February 11, 2009, from

<http://lindenlab.com/pressroom/general/factsheets/ednp>

Gronstedt, A. (2008, April/May). Making Learning Fun and Social. *Elearning! Magazine*, 26-28.

Gronstedt, A. (2008, December). All Aboard! The Web 3D Train is Leaving the Station. *Training and Development Magazine*, 22-24.

Institutions and Organizations in SL, (2009). Retrieved February 5, 2009, from http://www.simteach.com/wiki/index.php?title=Institutions_and_Organizations_in_SL#NATIONAL_ORGANIZATIONS

Kelton, A. J. (2008, September/October). Virtual Worlds? “Outlook Good”. *EDUCAUSE review*, 15-22.

Singh, S. (2008). Web 2.0 Opinion: How Facebook Blurs Our Professional and Personal Lives. *Social Computing Magazine*. Retrieved February 20th, 2009, from <http://www.socialcomputingmagazine.com/viewcolumn.cfm?colid=290>

SL Educators: The SLED List. (n.d.). Retrieved March 3, 2009, from <https://lists.secondlife.com/cgi-bin/mailman/listinfo/educators>

Vascellaro, J. E. (2007). *Social Networking Goes Professional*. Retrieved April 10, 2009, from <http://online.wsj.com/article/SB118825239984310205.html>

Waters, J. (2009, January). A 'Second Life' for Educators. *T H E Journal*, 36 (1), 29-34.

Zakon, R. H. (2006). *Hobbes' Internet Timeline v8.2*. Retrieved April 14, 2009, from

<http://www.zakon.org/robert/internet/timeline/>