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Second Life: Reaching into the Virtual World for Real-World Learning

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Overview

Educators are always looking for ways to reach those they teach. Until now, nearly all extension methods have been primarily asynchronous. Even those with synchronous aspects are still fairly one-dimensional. But the world of nontraditional delivery methods is changing rapidly.

With the growing popularity of multi-user virtual environments (MUVES) such as Second Life (<http://secondlife.com/>), learners can now be engaged in ways that are not possible outside the virtual world. With the ability to defy the laws of physics and “real-world” realities, and as the technology behind MUVES evolves and matures, the face of teaching, learning, and research is evolving and adapting.

This research bulletin examines the current state of Second Life in relationship to the educational environment. Although literature about virtual worlds can be found dating back a number of years, this bulletin will reflect on more recent works that discuss both technological and pedagogical issues. Content will also be drawn from interviews with educators and innovators who are already involved in building an in-world presence, teaching classes, and providing resources to those using Second Life (see Figure 1). Finally, now that we are instructing in a virtual world, where does pedagogy go from here?

Figure 1. Campus: Second Life



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Highlights of Second Life

The idea of virtual worlds is nothing new. There have been a number of projects over the years in which one creates an “avatar” or character that interacts in a virtual 3D environment. A very popular game, *The Sims*, brought character-driven virtual

environments out of the fantasy or military environment and more into the mainstream. All of these past endeavors have laid a foundation for a concept like Second Life to succeed.

But Second Life is different from many of the projects that have come before it. First and foremost, Second Life is not a game. A game has rules and/or goal-driven intent (New Media Consortium [NMC] and EDUCAUSE Learning Initiative [ELI], 2007). Although there are in-world societal rules, most dealing with individual behavior, Second Life is only what one makes of it. Some games exist in virtual worlds and some are represented in Second Life, but “virtual worlds are not themselves games” (NMC & ELI, 2007, p. 18).

Second Life has attracted the attention of popular culture and has, for both good and bad, become something of a media favorite. As much as the media likes it, so too do some technology people who are known for being forward-thinking. Philip Rosedale, the founder and CEO of Linden Lab (the company behind Second Life), is the former chief technology officer and a vice president for the streaming media giant RealNetworks. Other supporters include Mitch Kapor (Linden Lab chairman of the board and creator of Lotus 1-2-3), Pierre Omidyar (founder of eBay), Ray Ozzie (Microsoft chief technology architect and inventor of Lotus Notes), and Jeff Bezos (CEO of Amazon) (Kirkpatrick, 2007). eBay and Amazon alone have changed the way we do business, and perhaps the visionaries behind those changes see the potential in Second Life.

Second Life has also captured the attention of the general public. Beyond gamers and social networkers, there is a large and growing educational community involved and active in Second Life. According to metrics data published on July 10, 2007, by Meta Linden (employees of Linden Lab are represented by their avatars, which share the last name “Linden”), over 26 percent of those with Second Life accounts are between 18 and 24 years old, and another 38 percent are between 25 and 34. This means that nearly two-thirds of all Second Life residents fall into a demographic population of great interest to higher education.

The *Horizon Report*, a collaborative effort of the New Media Consortium and the EDUCAUSE Learning Initiative, discusses a number of emerging technologies that will “impact higher education within three adoption horizons over the next one to five years,” and it identifies virtual worlds in the second horizon (NMC & ELI, 2007, p. 3).

This speculation focuses on mainstream acceptance, but there are many institutions already involved. According to statistics provided in March 2007 by Pathfinder Linden, there are over 200 universities or academic institutions already involved in Second Life, and a subset of them own over 250 “private islands,” which are plots of virtual land roughly equivalent to 16 acres. Anything, including virtual campuses, can be built on these islands. Some organizations own multiple islands that are joined to form larger virtual landmasses. Information about what is going on in and with Second Life can be found in a number of places, including Linden Lab blogs and a listserv for educators that currently has over 2,300 active subscribers (Second Life Education Web Site, n.d.).

Students and Teaching

At the end of the day, the institutional decision that needs to be made is the one that provides members of the faculty the tools necessary to educate students. Any decision to become involved in the use of Second Life will hinge, ultimately, on faculty interest and buy-in. Sometimes, however, decisions like this require a “build it and they will come” approach. A few devoted faculty members can spark a fire that will eventually involve many more colleagues. If a few faculty members are already showing an interest, they will move forward and use the application on their own, since at this time anyone is entitled to sign up for free access to Second Life. The real issue becomes the extent to which the institution chooses to provide support for these endeavors.

Those we teach also drive teaching methodology. What the average student looks like has changed and continues to change. Diana Oblinger (2003) talked about these changes in “Boomers, Gen-Xers, and Millennials: Understanding the ‘New Students’” and more recently when including Chris Dede’s chapter on the neomillennial learner in the EDUCAUSE book, *Educating the Net Generation* (Oblinger & Oblinger, 2005). Students today are increasingly nontraditional, with many more working and commuting than in the past (NMC & ELI, 2007). Students have become comfortable using online methods of communication, especially when they need the flexibility to do their work at night and on the weekends (Sreebny, 2007).

It cannot, however, just be convenience that has drawn faculty members and students to Second Life as a teaching and learning tool. Many of those involved in Second Life develop an attachment to their avatar, created from the onset by extensive customization and a suspension of disbelief. Students seem more willing to buy into the learning experience because it feels “real” to them, certainly more engaging than a two-dimensional experience. As Samuel Taylor Coleridge observed, much can happen when one willfully suspends the potential for disbelief. The suspension of disbelief is an “imaginative agreement...not to disbelieve the dramatic fiction of the events, characters, and places depicted...[allowing] the audience to become emotionally involved in the action without losing their own sense of what is real” (Huberman, Pope, & Ludwig, 1993, p. 506). Once student and instructor meet on the common ground of agreeing that they exist, albeit virtually, in an environment in which learning will take place, that agreement is the cement that ties all parties involved to the learning initiatives.

Several aspects of the above definition are important to apply in an educational experience. Perhaps the most important is that the student becomes emotionally involved, which implies a level of engagement that might not be present otherwise. Given that things can be brought about in Second Life that are not possible in real life, the potential exists for creating a learning environment where the student can be engaged in experiences not possible in other environments. According to the *Horizon Report*:

Virtual worlds offer an opportunity for people to interact in a way that conveys a sense of presence lacking in other media. These spaces can be huge, in

terms of the number of people that use them, and they are growing in popularity because they combine many of the elements that make Web 2.0 really exciting: social networking; the ability to share rich media seamlessly; the ability to connect with friends; a feeling of presence; and a connection to the community. (NMC & ELI, 2007, p. 18)

Because Second Life is such a flexible environment, it is a tool that can be applied to many different ends. In that respect, it seems as if each institution is using this tool in a way that reflects of its own perceived need.

For privacy reasons, Linden Lab does not release information regarding its clients. Similar to the early days of the Web, there is yet to be developed a Google-like search function that does a good job of indexing the vast information that makes up the Second Life databases. The combination of these two facts means that being able to state with any certainty what most or many institutions are doing is difficult at best. This is further complicated by the fact that in some instances it is one individual, department, or even academic unit that constitutes the institution's presence.

What each island looks like is less important than how faculty members and institutions are using Second Life as a training, teaching, and research tool. Following is a small sampling of what only a few are doing in Second Life.

- Northern Illinois University is supplementing both credit and non-credit courses with a handful of instructors in art, computer science, education, and communication..
 - http://www.simteach.com/wiki/index.php?title=Top_20_Educational_Locations_in_Second_Life
 - <http://slurl.com/secondlife/Glidden/88/166/30/>
- The National Oceanic and Atmospheric Administration (NOAA) is the first federal agency to have a presence in Second Life. As an illustration of how teaching and learning objectives can be applied, NOAA has an island on which a number of teaching stations and situations have been created. These include flying into the eye of a hurricane, watching what happens as a glacier melts, and standing on the shore as a tsunami wave comes in. These do not represent passive learning—the learner (through the avatar) actively experiences what these events would be like.
 - <http://www.secondlifeinsider.com/2006/08/18/noaa-comes-to-second-life/>
 - <http://slurl.com/secondlife/Meteroa/116/143/54/?title=Meteroa>
- Sarah Robbins, known in Second Life as Intellagirl Tully but most well-known simply as Intellagirl, not only teaches in-world but also writes often-quoted blogs and is a frequent contributor to listservs, conferences, and workshops across the country.
 - <http://www.secondlife.intellagirl.com/>

- The NMC is introducing aggressive programming for higher education. They have already put together an impressive campus in Second Life and have recently announced a land buy-in program, where an individual or group can save substantially on land acquisition, even over the heavily discounted Linden Lab-sponsored educational pricing program. Figure 2 illustrates a small part of the huge NMC campus in Second Life.
 - <http://www.nmc.org/>
 - <http://sl.nmc.org/>

Figure 2. NMC Second Life Campus



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- Play2Train, a program of the Idaho Bioterrorism Awareness and Preparedness Program (IBAPP), in association with the Institution of Rural Health at Idaho State University, is a virtual training space in which dangerous situations can be simulated and “experienced” without the potential for harm to anyone. The IBAPP program illustrates the real or not-so-real experiences that “offer opportunities for education that are almost limitless, bound only by our ability to imagine and create them” (NMC & ELI, 2007, p. 6).
 - <http://irhbt.typepad.com/play2train/>
- The Modesto City Schools has the PacRimX project, which is an extension of its foreign exchange program with a school in Kyoto, Japan. High school students spend one year sharing space in Second Life, and the Japanese students then travel to the United States to meet, face-to-face, their Second Life counterparts. Although this is not a higher education project, certainly there is application to foreign language programs.
 - <http://pacificrimx.wordpress.com>

- Loyalist College in Belleville, Ontario (Canada) ran a pilot project with students in its eJournalism program. Specifically, they used Second Life in lieu of a traditional chat platform. The pilot project raised the profile of the program and received positive press.
 - <http://www.orion.on.ca/newsfeb07/1loyalist.html>
 - http://www.loyalistc.on.ca/Loyalist/index_e.aspx?DetailID=1053
- The Department of Education at Montana State University–Bozeman has progressed from one student in an independent study to a one-week workshop on Web 2.0 this summer to a planned course on technology in the classroom scheduled for this fall. It is also participating in a space-sharing initiative on EDUisland, which has been designed to assist initiatives that do not require large parcels of land or those that wish to be part of an educational community with other institutions.
 - <http://slurl.com/secondlife/Eduisland%20II/176/160/33>
- The College of Humanities and Social Sciences at Montclair State University in New Jersey purchased an island in April of 2007. From a recreation of the emblematic amphitheater to active learning areas, this island features the Edgar Allan Poe House, Young Goodman Brown Trail, and Willow Springs Project (all a part of a cooperative project with the Literature Alive! Program), as well as several other areas to be used for law, history, New Student Seminar, and other classes in the fall 2008 semester.
 - <http://slurl.com/secondlife/Montclair%20State%20CHSS/215/217/22>
 - <http://literaturealive.wikispaces.com/>
- Vassar College provides an opportunity for a discussion regarding the crossover from real life to Second Life with the recreation of the Sistine Chapel. A must-see of any Second Life tour, this exhibit, along with the spectacular Vassar Castle, are intended to provide an enhanced learning experience.
 - <http://slurl.com/secondlife/Vassar/128/128/0>
- Reported from a variety of sources, some institutions are using Second Life for department meetings, era and location studies (for example, Renaissance Island—in-world coordinates: 80,23,66), information sciences, composition courses, language acquisition, literature and culture studies, and virtual museums (such as the Jewish Historical Museum), just to name a very few.
 - <http://www.secondlifeinsider.com/2007/03/22/holocaust-museum/>
 - <http://slurl.com/secondlife/Cuscus/60/145/91>

The potential for Second Life projects is limited only by participants' imaginations. Megan Conklin (2007) from North Carolina's Elon University presented a paper titled "101 Uses for Second Life in the College Classroom." The paper has been revised a number of times and still remains an important work for those interested in using Second Life in higher education.

Challenges and the Future

As with any new information technology product or service (or both, in this case), there are always obstacles to broad-scale adoption. In the case of Second Life, some of these obstacles are technical. In an article for *Money* magazine, *Fortune* magazine Editor David Kirkpatrick notes, "Second Life's software is so hard to use that fewer than one in six who try it are still online 30 days later. Linden's servers frequently falter under the weight of its growing audience, and critical functions such as search sometimes break down" (Kirkpatrick, 2007, para. 11). Although it is true that Second Life has had its share of technical problems, and there does appear to be a certain degree of trial and abandonment, much of that may be the result of exponential growth, predictable human curiosity, and reasonable attrition.

Linden Lab has come under some heavy fire from its community of users. It has been said that the company is not providing the best quality product or focusing efforts in the right places. Linden Lab communicates with its user community via blogs and sometimes leaves commenting open. There is a good amount of abuse in the blog responses, but it typically comes from a small (and usually consistent) subset of users. Given the number of subscribers to Second Life, the commenter-to-subscriber ratio is quite small. As challenging as some of the technical issues may seem, some very smart people, who have a good track record with paradigm-shifting technology, have supported Second Life.

Another issue that has attracted attention is that it seems as if those participating in Second Life are having a good time. A prevailing attitude is that when one is doing serious work it should not seem like play. Work and fun are not things that are immediately thought of in the same sentence. Because those involved with Second Life appear to be having fun, some have come to question it as a serious teaching, learning, or research tool.

As for some of the stereotypes that have developed, they are, to some extent, true. Since Second Life is entirely user created, there are going to be those who are looking for an addition or replacement to real world interests. It is always the more outrageous, more flamboyant, or "sexier" content that gets media attention, but the exception only proves the rule. As this is a commercial venture, we should expect that if we are going to have the right to post the content we desire, others must have that same right. Not too long ago people were raising the same "sexual content" concerns about the Web. There are other similarities between Second Life and the Web. In fact, the *Horizon Report* likens current involvement in Second Life to the creation of Web sites a number of years ago, saying that the "trend is likely to take off in a way that will echo the rise of the web in the mid-1990s" (NMC & ELI, 2007, p. 6).

Even with all these challenges, the future looks bright for Second Life and Linden Lab. In August 2006, there were fewer than 350,000 residents (LindenM) and on August 1, 2007, one year later, there were over 8.5 million. This number is inflated because it represents individual avatars. It is not uncommon for someone to have an "alt" (alternate) avatar. Perhaps a more telling statistic is that as of August 1, 2007, more than 1.6 million

residents signed in over a 60-day period. With these numbers, Second Life is a force to be reckoned with.

Linden Lab does not provide names of academic universities, institutions, departments, or programs involved in Second Life, but a wiki put together by SimTeach allows organizations to list themselves. Currently over 150 institutions have self-identified as being involved in Second Life, representing 35 states in the United States and 13 other countries (SimTeach, 2007). It should be noted that because this SimTeach page is a wiki, and can be freely edited by users, the information should be considered in association with data from other sources.

Although it seems as if Linden Lab, and Second Life, have a wrap on the virtual world environment right now, that could certainly change in the future. There is already talk of who is going to step in and knock the king off the mountain. Logic would dictate that, with the head start Second Life has, it will be a mighty force that takes down this giant. Nonetheless, it seems fairly clear that there is a limited level to which the technical backbone of Second Life can grow. The logical step is to go open source and allow external organizations to run the environment on their own hardware. This would distribute the need for backup, electrical supply, and staff time, while allowing the grid to continue to grow.

Efforts are already well under way to move to an open source Second Life application. Even as these efforts progress, and as other MUVes pop up and disappear, Second Life grows and expands. As of the publication date of this bulletin, voice chat is currently beyond beta test and is likely to be released as a functional feature of the main application before the end of the summer. This voice feature allows anyone in an area where the voice chat feature is turned on to speak to others instead of having to type. Part of the Second Life community is champing at the bit for voice chat, including many in the educational community. Some residents are resistant to this change because they believe it will detract from part of what makes Second Life attractive to them—the ability to be what they are not. Residential islands are already moving to ban voice chat on their property, while at the same time vendors are creating ways for voice to be disguised.

Second Life, for all the faults its detractors will point out, has gone someplace that no other application has gone before. Sreebny (2007) notes that, via Second Life, we are finally “harnessing the activities of millions of people using online software as a way of generating intelligence” (p. 4). He goes on to say, “[T]he vision of students and faculty communicating beyond the bounds of distance and time is widely perceived to hold transformative potential for teaching and learning activities” (p. 8).

What It Means to Higher Education

History has proven that higher education incurs real risk when entering into a close alliance with a for-profit company when consistency for academic purposes is such an important issue. Commercial ventures can make corporate decisions that have a profound impact on our educational environment. We have seen what happens when a

company decides to buy or sell, but what happens to classes that are to take place at the same time the vendor decides to take the servers offline for a maintenance update? With millions of users to consider, will a vendor keep a single institution's final exam schedule in mind for this?

Institutions must determine how decisions will be made about whether, or when, or who, or how, or why to use Second Life for academic pursuits. Who owns the Second Life "project"? Individual faculty members? Departments? Central IT? The provost or academic VP? These questions fall into the classic divide between distributed and centralized governance.

Intellectual property rights raise other interesting questions. How are copyrights and academic integrity protected in a world where user-created content can easily be copied and redistributed? Second Life has addressed this question in Section 3.2 of its Terms of Service, which states that end users retain "copyright and other intellectual property rights with respect to Content you create in Second Life, to the extent that you have such rights under applicable law" (Linden Lab, 2007). While the Terms of Service attempt to clarify this, review of their knowledge base and blogs indicates that the conversation is ongoing but that Linden Lab is primarily interested in protecting its own server assets rather than claiming ownership of any intellectual property.

One of the critical challenges identified in the *Horizon Report* is that there will be "significant shifts taking place in scholarship, research, creative expression, and learning, and a profound need for leadership at the highest levels of the academy that can see the opportunities in these shifts and carry them forward" (NMC & ELI, 2007, p. 4). True vision is less about how many things can be counted than about how many ways things can be counted. Between this shift and the difficulties presented regarding issues of assessment (another of the critical challenges identified in the report), higher education must keep one eye on what currently "is" while trying to focus the other on the blurry image of what will be.

Key Questions to Ask

- Is there sufficient proof of educational value to consider, continue, or increase institutional investment in Second Life?
- If MUVES in general, and Second Life specifically, are "the next big thing," how do we have to adapt now, as an educational culture, to this new paradigm?
- In what ways might higher education make use of MUVES to generate revenue? What might be the institutional impacts?
- What are the ramifications of relying on commercial ventures for academic purposes?
- How does one assess the instructional work that will go on in virtual environments, and should the same scale be used for instruction provided face-to-face?

- What issues are there surrounding intellectual property and copyright?
- When creating a learning environment in virtual space, is it best to recreate what exists already in real life (traditional classrooms, replicas of our campuses, and so forth) or work to create new and different learning environments?

Where to Learn More

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