

## **Learning to teach in second life: a novice adventure in virtual reality**

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### **Abstract**

Second Life (SL) is a social virtual world, which emphasizes the general use of immersive worlds for supporting a variety of human activities and interactions, presenting a plethora of new opportunities and challenges for enriching how we learn, work and play (Boulos, Hetherington & Wheeler, 2007; Prasolova-Førland, Sourin & Sourina, 2006). SL has opened new opportunities for real time collaboration in immersive, three-dimensional (3D) rich environments regardless of a user's geographical distance, allowing the user to more readily engage with the experiences as disclosed in real time (Gazzard, 2009). In SL, the avatar facilitates movement, choice, and interaction within the virtual environment, which is the key to an immersive experience (Gazzard, 2009).

As higher education faculty members explore options to design and create meaningful methods of instruction to improve the teaching and learning process while meeting the needs of traditional and non-traditional learners, they are faced with many challenges to increase retention and decrease costs. Integrating Web 2.0 technology tools offers options for faculty who are considering adopting an innovative approach to instruction by teaching through an emerging technology such as SL via an In-World environment.

This article describes the experience of two faculty members at the university-level adapting their traditional online courses taught in Blackboard into Moodle and the SL environment. By blending their technology skills and pedagogical knowledge to promote a collaborative, interactive and innovative teaching experience in-world, they focus on the process of adaptation to encourage faculty to explore alternative methods to the traditional online format.

Keywords: Second Life, Web 2.0, Technology, virtual, reality

## Introduction

Higher education faculty members face many challenges as they design instruction and create meaningful opportunities for teaching and learning, while searching for innovative methods to meet the needs of both traditional and non-traditional learners. As a training ground, higher education has a critical responsibility to train and prepare students for the workforce of today – and the future. Capturing the “best of both worlds” of technology opportunities for teaching and learning, higher education faculty are considering the options of using an innovative approach to instruction by teaching through Second Life (SL) via an In-World environment. Coupled with a clear understanding of this emerging technology, faculty members can face a steep learning curve in order to maximize the use of the technology for delivering the content, goals, and objectives of the courses they direct. While it is important to note that teaching a course in Second Life does not guarantee improved learning outcomes (Wang & Hsu, 2009), it does open new possibilities and opportunities for increased learning and teaching experiences.

Second Life is a medium for instructors and students to communicate, socialize, and interact in a globalized, networked world. Many students function as digital natives in Second Life; they are adept at many aspects of technology which are inundating to digital immigrants, often called “digital dinosaurs” (Prensky, 2001). Instructors who use SL are “piggy-backing” off the technology, immersing the students in new and unique applications. Statistics available through Linden Labs, SL creators, show that more than 20 million people have become SL users (<http://secondlife.com/xmlhttp/secondlife.php>).

Wong (2006) reports that many learners perceive that online is void of any requirement or expectation for participation or engagement with course material. In SL, there is real-time interaction, which means learners need to engage in the discussion or other activity—much as if they were sitting in a brick and mortar classroom. John Lester, Community in Education Manager at Linden Lab and the Creator of Second Life, emphasizes to users that there is a real human being behind every avatar and the people are very real. It is critically important that SL users remember that the people are the same, but the medium is different (Wong, 2006).

SL offers prospects for new types of collaborative and participative learning. According to Antonacci and Modares (2005), SL is the ideal setting for collaboration, social construction of understanding, making meaning, and reflection on processes required for learning. The very nature of SL is collaborative (Dalgarno & Lee, 2010); the virtual world can promote many types of supportive peer collaboration and collaborative assignments (De Frietas, Rebolledo-Mendez, Liarakapis, Magoulas, & Poulouvasilis, 2010). There is an increased opportunity for communication and expressions in ways that students may have been incapable previously in different settings (Falloon, 2010). The use of SL attracts 21<sup>st</sup> Century’s “digital natives” who bring new and different learning styles to the post-secondary classroom. SL resembles the real world and allows authentic tasks where learners can explore, solve problems, construct new meaning, and collaborate (Wang & Hsu, 2009).

This paper “tracks” the process of moving into a Second Life environment of teaching, focusing on the work of two faculty members teaching different courses while blending their skills and knowledge to promote interactive and innovative teaching in-world.

## Second Life Initiative

SL is a social virtual world, which emphasizes the general use of immersive worlds for supporting a variety of human activities and interactions, presenting a plethora of new opportunities and challenges for enriching how we learn, work, and play (Boulos, Hetherington & Wheeler, 2007; Prasolova-Førland, Sourin & Sourina, 2006). SL has opened new opportunities for real time collaboration in immersive, three-dimensional (3D) rich environments regardless of a user's geographical distance, allowing the user to more readily engage with the experiences as disclosed in real time (Gazzard, 2009). In SL the user is represented as an avatar, a virtual representation and embodiment of the user, facilitating movement, choice, and interaction within the virtual environment. An individual's personification with his/her avatar is the key to an immersive experience (Gazzard, 2009). A key tenet of SL is a collaborative environment which supports team work.

Although allowing for 'anytime, anywhere' instruction, faculty and students engaged in traditional online teaching and learning frequently complain of feelings of isolation and loneliness. Virtual technologies provide opportunities for increased interactions and reduced isolation by encouraging communication and collaboration. Recent studies of online learning environments indicate that social presence, which offers a feeling of community and connection among learners, improves learning outcomes and learner satisfaction in online courses (Picciano, 2002; Tu & Corry, 2002). The Second Life Initiative at a regional, research-intensive university in the southeast portion of the United States encourages faculty and students to collaborate while immersing themselves in a virtual environment offering a greater social presence with the goal of successful learning experience. Looking beyond learner satisfaction is the idea that collaboration improves learning outcomes and reduces the potential for isolation in traditional online courses. Within collaborative virtual learning environments, faculty and students have the chance to broaden and intensify their learning experiences, test out new ideas by sharing them with a supportive group, and receive critical and constructive feedback (Paloff & Pratt, 2005). "Second Life instructors can design authentic tasks whereby learners can explore the world, solve problems, construct and negotiate meaning, and collaborate with other learners" (p. 80, Wang & Hsu, 2009).

## Lessons Learned



*Figure 1. Web 2.0 Technology Tools & Virtual Teams SL classroom.*

The course for this study is Web 2.0 Technology Tools and Virtual Teams. What better way to teach students about Web 2.0 technologies than to immerse into them through a virtual learning environment? During spring 2010, one faculty member developed and taught a new Web 2.0 Web Technologies & Virtual Teams course in a traditional online environment through Blackboard and a course wiki via Wetpaint <http://wikisineducation.wetpaint.com/page/BITE5389+Web+2.0+Technologies+%26+Virtual+Teams>. As the semester was winding down, the faculty member was quickly imagining how to improve the course by adapting it to SL. She began to explore possibilities for teaching the course within SL and spent a significant amount of time using the resources of her higher education institution to create a unique and interesting SL environment. She attracted the interest of a colleague who teaches different content, and together they formed a partnership to support and encourage one another in the process. They began recording their thoughts and actions, meeting regularly to “debrief” and discuss and plan all aspects of their teaching. The comparison of skills and background of experiences with the two colleagues emerged as a strength for both faculty members as they exchanged different perspectives and ideas for ways to help and support learners within the SL environment.

### Teaching within the Second Life Environment

SL is not without its drawbacks. It can be distracting to have people flying above or walking around aimlessly while an instructor concentrates on leading a classroom discussion or activity. Learners or other “visitors” can distract the leaders’ concentration as they are expected to receive and respond to instant messages or e-mails about the activities of the group. Leaders can find it difficult to be responsive to immediate needs of struggling learners as well as keeping the focus on the activities or discussion of the overall group as a whole. The instructor can find

it necessary to “backtrack” to be sure to include the most immediate needs in the activity while also moving forward.

These “Lessons Learned” form the basis for much of this presentation of information and are designed to assist others in their own journey of teaching within SL.

1. Learn the terminology for SL. Expert users in SL are familiar and understand the terms *becoming a resident, avatars, space, Inworld campus, objects, SLURL's*, and other critical vocabulary for SL. When designing a course, it will be helpful to determine that each term is defined clearly for all users and instructors in advance of any activities or discussions. Many instructors maintain a “Key Terms” page in a corresponding wiki.
- 2.

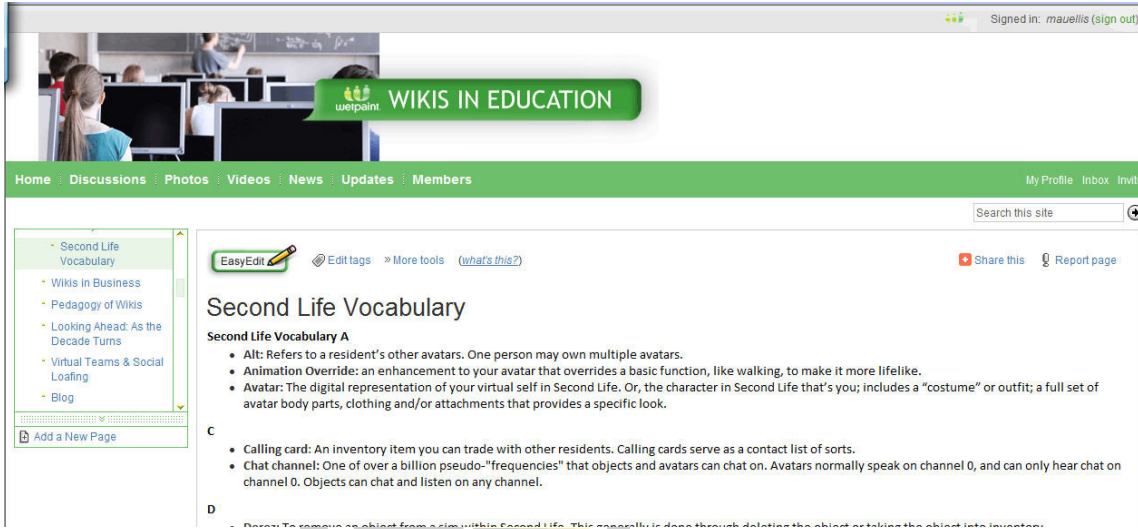


Figure 2. Second Life vocabulary section from Wikis in Education.

3. Plan ahead for SL protocols. Just as it is important in any setting to review the goals and expectations for any discussion or activity, it is equally if not more important in the SL environment to pre-plan the classroom management procedures that are most workable in that learning setting. For example, it is important to know how to handle any personal needs such as restroom breaks, personal emergencies, or telephone interruptions during a SL in-world class meeting or small group experience. As a group process, students can design posters (or other art forms or wiki messages) to post around the classroom as a statement of these expectations. Discussing policies and procedures for handling these possibilities while setting clear expectations for participants will increase everyone's comfort level during this unique experience as a group member. It is important to consider security issues; SL leaders should avoid posting any lists of student names anywhere to be found by “outside” users who may be exploring SL in-world environments.
4. Describe the expected process and plans at the beginning of the SL session. Just as a good teacher explains the goal of any lesson in a traditional teaching session, a SL leader states the expectations in advance of any activity or discussion. Timelines for completion, expected products, or tasks to be completed can be defined early in the SL experience, providing a sense of advance organization for the SL user. An agenda for the next in-world meeting setting goals, objectives, content, media, readings, discussion



questions, and assignments with corresponding time allotments can be distributed to the students so they can be prepared for the in-world session.



Figure 3. Getting prepared for in-world sessions.

5. Prepare a plan for technical difficulties that will inevitably arise. Whether students or instructors, each person is likely to have a technical issue arise. Having assistance available by a “SL expert” in a close by (but inaudible) area of the learning setting would be one way to address these needs. As participants find difficulties with their own technology, they could meet the “expert” and then quickly return to the group when the issue has been resolved. It is important to remember when working in a wholly online, technical environment that there will be system issues and technical difficulties from time to time. The first in-world class session was similar to what a kindergarten teacher might experience; 1) students crying, 2) needing to go to the bathroom; 3) failure to understand/obtain class gestures, 4) inability to dress themselves, 5) speaking out in class without raising their hand, 6) classroom interruptions, 7) coming in late, leaving early, 8) incorrect hardware (audio/ video), and 9) the need for a nap after class (P. J. Anderson, personal communication August 31, 2010).



Figure 4. Preparing for technical difficulties.

Although you cannot prepare for all technical difficulties that come up with students interacting in SL, many issues can be prevented by posting technical requirements in your Moodle classroom. Even with those clearly posted, several students came to the first class without adequate audio equipment, which made it virtually impossible for them to introduce themselves to the class.

Missing clothing, hair and body parts is common with new avatars. As residents become more comfortable in SL and spend time there, clothing is available to purchase or obtain free from virtual retail stores, organizations or made by the user. A resident's clothing and appearance is a reflection on how much time they spend in SL (Boss, 2007). As one of the researchers for this study found when trying on new hair, you have to remember to remove the old before trying something new.

I knew your SL office hours began at 7:30—so I appeared in the class area early to try to practice my moving around, handling objects, and just overall get settled and comfortable in the environment. While I was waiting for you (it was around 7:15), I looked at my feet—my feet still were not included inside my boots—and that looked strange. I decided to try to edit my appearance—and I began that process. Alas, I think I clicked on the button to discard an item—thinking it was my shoes—but it was actually my hair. I was so upset to suddenly be totally bald that I immediately began looking for a way to put hair back on my head—I was TOTALLY bald and did NOT want anyone else to see me that way. I immediately searched for any kind of hair—not the blond hair I'd had—just ANY kind of hair. So, I did find some brown hair—and selected something like a style that I thought would be presentable—fast forgetting about my feet that were outside of my shoes! I never even thought about looking back to see if my original hair was lying around!

When you and I met in the classroom area, apparently you mistook my missing hair for a squirrel—and life became even more comical at that point. I honestly don't know how you were able to control your laughter as we talked (or rather, as you talked since my microphone wasn't working) about what had happened. Needless to say, I tried to “cover up” my error—and immediately “took” my hair from the floor and put it on my head—making a strange combination of brown hair with my previous blonder, longer hair—and that's when you took a picture. (P. J. Anderson, personal communication August 31, 2010)

6. Use multiple computers during group SL activities. The leader of the SL experience would likely benefit from having two separate computers “running” at the same time. The SL program tends to run less efficiently when there are multiple programs on the computer at the same time; SL can be open on one computer at the same time. It may be helpful to have a separate computer running e-mail or other software programs needed for the in-world lecture; this would be beneficial from both a technology and a logistical point of view. E-mail is a critical program to have running on a second computer so that

students can communicate with the instructor if they are unable to log in or cannot find the correct SLURL and need to send a private message outside of the SL environment.

7. Be cognizant of individual perceptions of all participants. SL requires a unique way to interacting with others. Although each user has his/her own avatar, it is not possible for the avatar to speak without using the voice of the user or to be controlled by the user. The emotions and reactions of the user remain intact, although the avatar is the only public component for others in the group. For example, it's possible for a user to be "embarrassed" by a vocal identifying feature such as a lisp or a strong dialect; these become evident to other listeners/avatars and may be a source of pride or shame for some users.

"When I "jumped" off the classroom and landed in the fields behind the football field, I had a moment of thinking I'd lost my group—where did they go? Was I all alone? Would they leave me? These basic emotions are good reminders for me of the assumptions teachers make about how learners perform—whether in kindergarten or in virtual worlds. I'm learning and learning and thinking and feeling—it's an amazing process—a perfect way to get me back into teaching mode! (P. J. Anderson (personal communication, August 27, 2010)

8. Encourage questions from all participants. Some users may appear reluctant to ask questions or participate in significant ways, just as in a traditional classroom. The SL instructor should add Sloodle classroom gestures, which is a script written to provide students with similar gestures used in a face-to-face classroom such as: a) raising their hand, b) nodding in agreement/disagreement, c) clapping

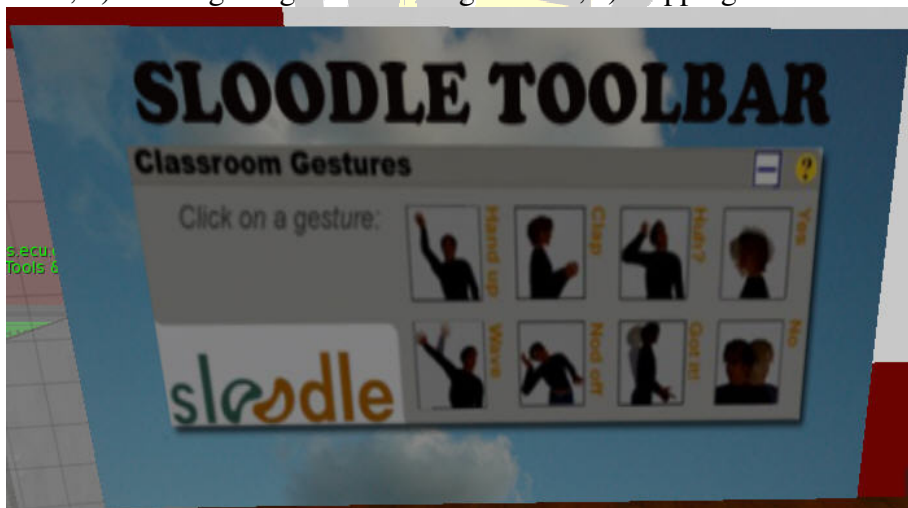


Figure 5. Sloodle toolbar with classroom gestures used in SL classroom.

so that students have the ability to mimic common classroom gestures. For this study, students were given the Sloodle Toolbar, asked to Click on the picture, and then were given a "feather" to "Keep", which provides their avatar with the script to complete the gestures during class for the instructor and fellow students to communicate. For any instructor, it would be wise to include motions to indicate simple agreement, disagreement, method of responding to a yes/no question, raising a hand to be recognized to speak, or other nonverbal gestures that allow communication within the in-world environment. Additionally, having the SL instructor react positively to questions and



being sensitive to the “newness” of the environment for many users will help increase the likelihood of users asking questions when needed. It may be valuable to the success of the in-world meeting to create small group discussions for interactions where students are assigned roles for participation (i.e., secretary, summarizer, spokesperson, timekeeper, etc.).

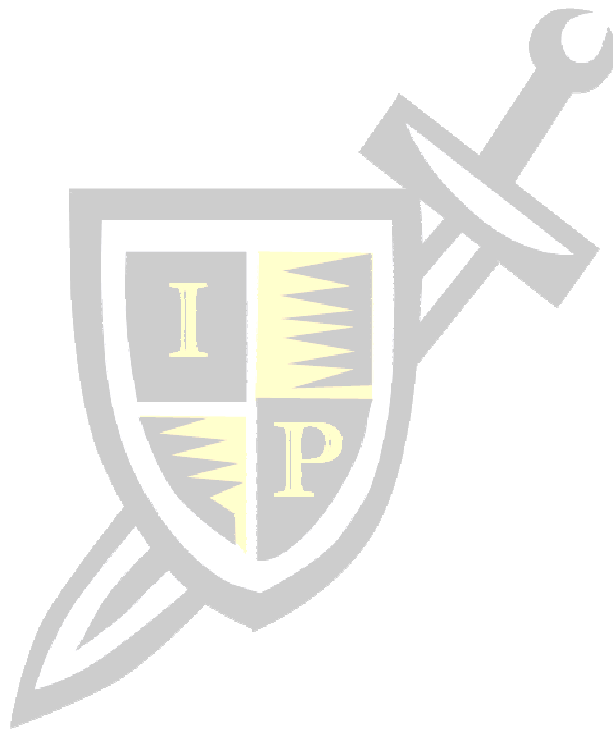
9. Don't underestimate the amount of time it takes to become proficient in all aspects of SL. Whether learning the skills of walking, sitting, standing, jumping, flying or speaking, the user must become familiar and comfortable with the overall requirements of this unique environment. Learn the terminology of SL. Take time to explore, explore, explore—look around the environment itself. Practice, practice, practice--take tutorials on any skills needed to be proficient In-World. It is important to visit other SL classrooms as an observer or “shadow” another SL instructor after gaining permission from the SL instructor. Only after that occurs can a leader emerge to do a proficient job of planning for other users. It is this process that is most critical and should not be ignored in initial planning efforts.



*Figure 6. Learning from your mistakes in SL – practice, practice, practice.*

10. Avoid “reinventing the wheel.” Talk with colleagues, visit other SL settings, read professional literature, attend conferences, request training sessions, or do anything possible to extend your own knowledge and skill base before beginning to teach in SL. Many useful and effective ideas already exist within SL, so following the path of other successful SL users and instructors will be a tangible way to reduce the work and stress associated with SL instruction. Don't start from scratch—choose to adopt a current online course to SL. Since there is such a huge learning curve, it may not be wise to struggle with curriculum issues and technology at the same time. As an example, at the researchers' institution, faculty opting to teach in SL must switch from the Blackboard platform to the Moodle course management system because Moodle directly interfaces with SL within the SLOODLE© presenter system.
11. Do EVERYTHING in advance. Try to do everything you ask your students to do so that you can find glitches ahead of time. Put yourself in their shoes—how did you feel when you were a “newbie”? Think like a student. Many faculty members have beginning reactions of feeling overwhelmed and frustrated, feeling like they have been “dropped in

a foreign country and couldn't speak or understand the language" (M. Ellis, personal communication, August 31, 2010). Convey to students that everyone experiences similar feelings and how difficult it is to learn but that the benefits from the experience are likely to be immeasurable because they will be technology leaders in the workplace.



## Conclusion

Just as any new experience requires special planning and preparation, teaching in the SL environment requires a careful and systematic approach to this unique and exciting learning environment. Leaders and instructors in SL must be aware of the potential opportunities for both success and failure in the SL environment. Focusing on the positive aspects of this technological tool will provide the motivation and drive for learners and leaders in this technological marvel.



*Figure 8.* Teaching class in SL.

## References

- Antonacci, D.M., & Modaress, N. (2005). Second Life: The educational possibilities of a massively multiplayer virtual world (MMVW). Paper presented at the Kansas Technology Leadership conference. Retrieved September 10, 2010 from <http://www2.kumc.edu/tlt/SLEDUCAUSES2005/SLPresentationOutline.htm>
- Boss, S. (2007). Even in a Virtual World, Stuff Matters. *New York Times Online* September 9, 2007 from <http://www.nytimes.com/2007/09/09/business/yourmoney/09second.html>
- Boulos, M. N. K., Hetherington, L., & Wheeler, S. (2007). Second life: An overview of the potential of 3-D virtual worlds in medical and health education. *Health Information and Libraries Journal*, 24(4), 233-245.
- Dalgarno, B., & Lee, M. (2010). What are the learning affordances of 3-D virtual environments? *British Journal of Educational Technology*, 41(1), 10-32.
- De Freitas, S., Rebolledo-Mendez, G., Liarokapis, F., Magoulas, G., & Poulouvassilis, A. (2010). Learning as immersive experiences: Using the four-dimensional framework for designing and evaluating immersive learning experiences in a virtual world. *British Journal of Educational Technology*, 41(1), 69-85.
- Falloon, G. (2010). Using avatars and virtual environments in learning: What do they have to offer? *British Journal of Educational Technology*, 41(1), 108-122.
- Gazzard, A. (2009). Teleporters, tunnels & time: Understanding warp devices in videogames. *Proceedings of the Digital Games Research Association (DiGRA). 2009.*
- Palloff, R., & Pratt, K. (2005). Learning together in community: collaboration online. *Proceedings 20<sup>th</sup> Annual Conference on Distance and Teaching and Learning*. University of Wisconsin, Madison, Wisconsin, August, 2005.
- Picciano, A. (2002). Beyond student perceptions: Issues of interaction, presence, and performance in an online course. *Journal of Asynchronous Learning Networks*, 6(1), 21-40. Retrieved September 10, 2010 from [http://www.aln.org/publications/jaln/v6n1/v6n1\\_picciano.asp](http://www.aln.org/publications/jaln/v6n1/v6n1_picciano.asp)
- Prasolova-Førland, A., Sourin, A., & Sourina, O. (2006). Cyber campuses: Design issues and future directions. *The Visual Computer*, Springer, 22(12):1015-1028.
- Prensky, M. (2001). Digital Native, Digital Immigrants. *On the Horizon*, 9(5) October 2001.
- Tu, C., & Corry, M. (2002). eLearning Community. *Quarterly Review of Distance Education*. 3(2), 207-218.
- Tu, C., & Corry, M. (2002). Research in Online Learning Community. *Electronic Journal of Instructional Science and Technology*. 5(1).
- Wang, S., & Hsu, H. (2009). Using the ADDIE Model to Design Second Life Activities for Online Learners. *TechTrends*, 53(6), 76-81.
- Wiley-Blackwell (2010, July 13). Avatars as lifelike representations and effective marketing tools. *ScienceDaily*. Retrieved September 5, 2010, from <http://www.sciencedaily.com/releases/2010/07/100712102808.htm>
- Wong, G. (Executive Producer). (2006, Nov. 13). *Educators explore 'Second Life' online* [Television broadcast]. CNN.