

Barriers to Student Learning in Second Life

One of the most frequent criticisms of Second Life is that it has a high learning curve. In this chapter, I will examine several aspects of the user experience that, when combined, create the perception that Second Life has a high learning curve. In addition, I will discuss how I use the affordances of Second Life, particularly in regard to creativity, to reframe the user experience in order to break through the learning curve.

Understanding the User Experience in Second Life

In the fall 2006 semester, a group of eighteen undergraduate students enrolled in a world literature course that used Second Life for several projects. During the semester, students created avatars, wrote and published papers as interactive books within Second Life, and worked in groups to build a model university campus. At the end of the semester, I held a focus group with the students in order to understand the student user experience. In the focus group they were asked to respond to this question: “Tell me about your experiences in Second Life.” Students were provided with stacks of index cards and were asked to write one thought or experience per index card and to fill out as many cards as they wanted.

After a few minutes, students were asked to tape the note cards to the wall. Then each student proceeded to explain his or her cards to the group. Once each card was described, the students as a group categorized the cards and finally labeled the categories. They created a total of 215 note cards, which they categorized into 10 affinities, seven of which are applicable to a general audi-

ence. This chapter discusses seven of the affinities and how they combine to create one view of the Second Life learning curve.

The Second Life Learning Curve

Most users of Second Life agree that a high learning curve exists for new users of the virtual world. An unintended outcome of the focus group held for this particular group of students was a road map detailing the issues that prevent new users of Second Life from learning the tool. Four themes emerged from the focus group that, when combined, expose the learning curve: technical issues, interface issues, and user expectations. Each of these themes confront new users when they create an account in Second Life, and without intervention, they will likely become part of the 90 percent of users who do not return to Second Life. As a caveat, when reading the comments of new users of Second Life, experienced users need to think back to the first days of their Second Life use before thinking, “They should have just Alt-Clicked.” Many obvious solutions and work-arounds for experienced users are not intuitive to new users.

Interface Difficulty

Students in the focus group reported that they had a difficult time using the interface within Second Life. As a final project in the course, students worked in small teams to build their ideal college campus. Students had a difficult time creating their buildings because they felt the interface of Second Life was counterintuitive. A student explained, “So many of the controls were counterintuitive;

if the lines of the buildings would snap together it would have been so much easier.” Students were required to use the Second Life building tools known as prims to construct their buildings. They found the prims—shapes such as spheres, boxes, and cylinders—very difficult to use: “It’s hard to create 3-D objects using such simple shapes. I had an idea for my buildings but I couldn’t make them using such simple shapes.” Due to the design of the user interface and user controls, students noted additional problems with controlling avatars: “It is hard to control. I couldn’t get my avatar to do the things I needed to do”, building: “Little clicks are annoying”, and navigating the island: “walking slowly, it took me a really long time to get from building to building.”

Technical Difficulties

Several software issues became apparent with Second Life during the course of the semester. The software required to run Second Life was very computer-processor-intensive and required a persistent and fast Internet connection. While most students have access to high-speed Internet connections at home, they typically share the Internet connection with several roommates who are also using high-bandwidth applications. Exemplifying the intensive processing required to use the Second Life software, a student recalled, “I couldn’t run any other programs while Second Life was running.” Another student said, “Second Life took up all the RAM on my personal computer.”

Within the program itself, students noted other technical problems such as avatars appearing without their clothes on and objects disappearing while they were building. Students also mentioned the inconsistencies of how their buildings appeared when looking at them from different distances: “When you are different distances from buildings or walls they would blur and unblur.” Students had a difficult time creating buildings in Second Life because the buildings changed their appearance based of the position and distance of their avatar from the buildings.

World Expectations

When students first learned they were going to be using Second Life in their class, many had preconceived notions of what they were going to do. Students were excited by the marketing pictures of Second Life that they viewed on the Internet: “On the website they made it all look fun and interesting and you get into the real thing and it’s not at all.” Students also expected to “play” something similar to the popular computer game *The Sims*. Students, who were used to playing games like *Grand Theft Auto*, wanted to be able to drive the nice cars they saw or expected to play with the objects they encountered. Not being able to play with any of these items frus-

trated students and led many to say that Second Life was boring and lacked a purpose.

I asked my students in the fall 2008 semester to describe their first week’s experience using Second Life in one word. These are words they listed:

- boring
- complicated
- frustrating
- addicting
- awkward
- malleable
- tedious
- porn
- advanced
- empty
- ugly
- friendly
- overwhelming

While not scientific, I think this list of words speaks about the expectations that students have of Second Life. After discussing the list in class, I learned that most of the expectations they have are based on their prior experience with video games. In other words, when compared to a video game, Second Life is boring, tedious, frustrating, ugly, and complicated, yet friendly.

Time-Consuming

Working in Second Life is very time-consuming. Students were surprised and burdened by the amount of time they needed to spend in order to complete their assignments. A student commented about the extraordinary amount of time needed to build in Second Life: “It took hours and hours to do anything, but things didn’t turn out at all.” Another student described the tedious attention to detail required in Second Life in order to finish a building: “After creating a building, I noticed there were a lot of little spaces between the walls and roof and I just couldn’t figure out how to get it right.” The students, who were used to typical software commands like Copy and Paste, expected Second Life to have the same type of functionality. A frustrated student commented, “There was no Undo. Some things take way more time than necessary.” Overall, students indicated that the Second Life activities were very time-consuming: “It really took a lot of time and patience and [the user must] be *willing* to have that time to dedicate to it.” In the end, some students did not want to learn the tool: “A lot of us just didn’t care enough about it.”

Identifying the Learning Curve

The themes of interface difficulty, technical difficulties, world expectations, and time-consuming combine to create the Second Life learning curve. As a diagram, the learning curve for students looks similar to figure 13.

Student users enter Second Life with high expectations for the technology. They expect to be able to play a game similar to *The Sims* or an MMORPG like *World of Warcraft*. Students also get high expectations for Second Life when they visit the Second Life website and see the marketing images provided by Linden Lab. Students see beautiful avatars, futuristic buildings, luxury sports cars, and high-resolution screenshots showing the potential of the virtual world. Students want to experience *that* Second Life, not the default ugly avatar with no place to go.

Once students create their accounts and log in to Second Life, they often report that their computers crash or they experience high lag (latency) within the world. Once students adjust their computers, download new drivers for their graphics cards, turn off all other applications on their computers, and adjust the client settings in their Second Life browser, they are ready to experience Second Life. At this point, students who are used to moving avatars

quickly in video games experience the slow-moving avatars of Second Life. They are also overwhelmed with information presented and duplicated in multiple pull-down menus, pie menus, and green text-based instructions, as well as signs posted in Orientation Island.

The combination of technical issues and interface issues makes it difficult for students to complete their assignments. Students in some cases become trapped in orientation or lost in the vastness of Second Life, thus reporting that everything in the virtual world is time-consuming. A homework assignment that might have taken one hour actually takes several hours by the time they solve their technical issues and overcome interface issues.

This new-user experience is frustrating to students. Students used the words *anger* and *frustration* to describe their user experience in Second Life. One student wrote "meh" on a note card to describe his overall experience with Second Life. When asked to clarify his comment, the student said, "It was really frustrating because [software] updates were really annoying and everything took a long time. I had a slower connection." A second student simply stated, "I was annoyed because it wasn't good at all." Another student described his frustration with Second Life: "I dislike Second Life. I didn't understand how I was supposed to do things in Second Life."

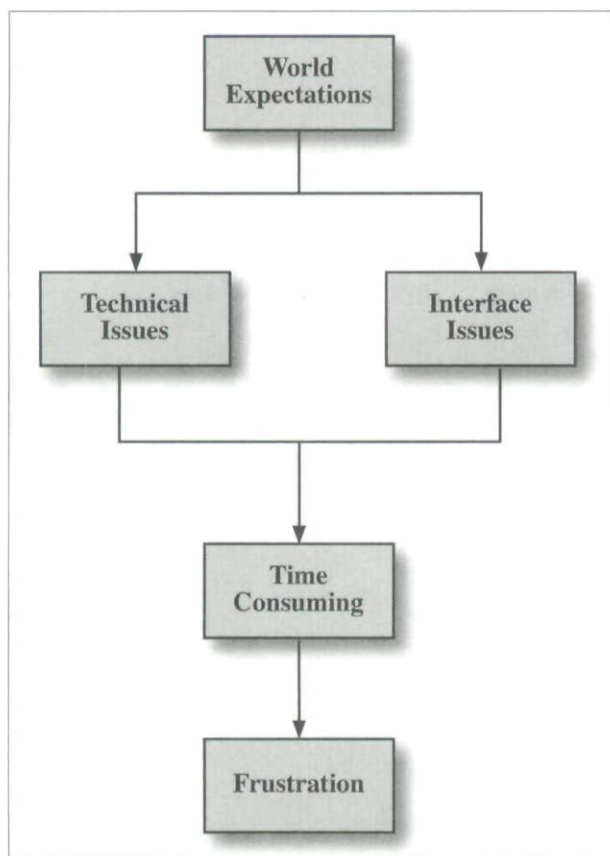


Figure 13
Student user experience diagram of Second Life

Positive Signs from Use of Second Life

Though students identified many problems in their Second Life experience, they did mention a few areas where they found Second Life useful or even fun. The following themes hold promise when designing activities for students in Second Life: avatars, creativity, and accomplishment.

Avatars

Part of the Second Life experience is the creation of an avatar. Every student created and customized an original avatar using the editing features within Second Life. Overall, students felt that creating their avatar was fun: "I thought it was fun to make avatars because you could make them crazy and creepy, and you could make them to represent you." For some students, creating an avatar made the Second Life experience real: "Creating them [avatars] is the only *real* aspect for me." To some students, creating, controlling, and seeing other avatars were the only distinctions between the use of a virtual world and instant messaging.

Some students made an effort to create their avatar in their own likeness, while other avatars more closely resembled caricatures. As students spent more time in

Second Life, they were able to recognize one another by their avatars. One student commented, "We were able to recognize each other on the other side of the virtual environment. I could say, Hey Rachel." While some students were able to create an avatar in their likeness, others had a difficult time. One student said, "I couldn't make my avatar look like me." Playing with their avatars became a source of pleasure on the virtual island: "We would get together on Sundays and we couldn't tell what to do so we would push each other around or off buildings." Watching their avatars and others fall off buildings was an activity that many students participated in.

Creativity

Students felt the Second Life environment perpetuated a sense of creativity. They enjoyed having a class assignment that was visual versus a text-based assignment such as a term paper. The use of Second Life challenged students and forced them to think creatively in order to visualize their work. One student said, "Well, it definitely was interesting because we didn't do a lot of papers in class, so it was kind of neat having something that we could look at and exploring the different buildings that people made was fun." Another student remarked, "It forces you to think outside the box in order to build something with

the tools it gives, you have to use your own ideas and adapt that with the tools you have." Though they did not mention it in the focus groups, observational data suggest that students were very creative during their experience in Second Life. Students built canoes, jack-o'-lanterns, and even traps that they used to capture their classmates. While these objects did not directly lead to the accomplishment of a class goal, they helped to build community and a sense of place in the virtual world.

Feelings of Accomplishment

Even though students mentioned that building was very difficult, they reported an overall positive reaction to the activity. Students were engaged in their work while they created buildings in Second Life. Many worked long hours straight through the night: "I would work really late at night and stay up really late and build a building and keep doing it until it was done. It took a long time but I didn't really think about it." Another student described the experience similarly: "I guess time went by faster while I was building, and I enjoyed building." Overall, students had a positive reaction to building: "It forces you to think outside the box in order to build something with the tools it gives; you have to use your own idea, and adapt that with the tools you have."



Figure 14
Incorporating play: students riding go-carts at a Second Life orientation.

Some students mentioned that the act of building led to the use of skills that were part of the original curriculum. As an example, a student noted, "I was able to apply a lot of different concepts that I used in math, even though it was real simple geometrical stuff." Another student described her ability to link the course content through Second Life: "I got a much better appreciation for architecture. I made a relationship to architecture, writing, and Second Life. I realized all the pieces that were involved." Students were proud of their work: "I felt accomplished after making my building. We got to go into other people's buildings. I thought that was cool."

The Role of Creativity

Overall, the students in this focus group reported having a terrible user experience in Second Life. Yet, with all the problems, they still felt a genuine sense of accomplishment after they finished their projects. They also reported feeling a connection with their avatars. During the focus group, the students were very aggressive while reporting the technical and interface issues of Second Life. They would clench their hands as they described their computers crashing, and they would try and interrupt each other to make sure their problems were addressed. But once the conversation shifted into the areas of avatars and creativity, the students relaxed and were all smiles. They laughed and made jokes as they described how they altered their avatars or how they learned to work around the technology of Second Life. The students were resilient in overcoming the barriers to Second Life because of the creativity the tool inspired.

Breaking the Second Life Learning Curve

Based on the user experience reported by students in this focus group, I have designed Second Life activities that place creativity and play at the center. When I orient students to Second Life, I build a carnival or a tropical beach resort, and I let students discover the Second Life interface through play. For example, if I'm using a carnival theme, students learn avatar controls by riding go-carts, playing soccer, or playing carnival games (see figure 14). They learn how to attach objects to their avatar by winning prizes such as glow sticks or by visiting concession booths to get free slices of pizza. I use this method as opposed to the typical tutorial or instructor-led, step-by-step instruction currently used by most Second Life instructors. Along with creativity, I also emphasize the social element of Second Life by creating group activities and projects.

My students learn how to build by participating in skills challenges. A skills challenge might be to build, in a set amount of time, a bench or a flag that waves. I also incorporate group activities in the skills challenges. For example, one of the skills challenges I assign is to work in a small group to build an interactive themed area that can be used for at least fifteen minutes. To encourage creativity, I provide very little guidance. Assignments tend to look like this:

In your teams I want you to create something with your land. You will need a theme, an entry point, some type of navigation, and something interactive or a "feature." What will be your group feature? How will people know where to go? How will they know what to do? How will you make your place a "living structure"? We will spend 15 minutes in your space on . . .

My students have created a variety of themes for this assignment. They have built a Wild West town, tiki beaches, a winter wonderland, and a football tailgate party complete with streaming video highlights of Texas football.

Librarians and educators have three tools that can help us design a positive user experience for students: the avatar, creativity, and play. I have implemented several projects using this strategy in Second Life with K-12, university, and professional audiences that all report having a positive user experience. In fact, the students I have worked with in the K-12 area were able to create spectacular interactive exhibits in Second Life in just under four days by following a curriculum based on creativity and play. Though Second Life has a high learning curve, designers can create a user experience that will build on the strengths of the virtual world while overcoming the obstacles.

Machinima of student projects

www.youtube.com/watch?v=RFzFqqBHE-Y

www.youtube.com/watch?v=vewhhIN4Lj0

Resources

This chapter is based on research reported in the following articles:

Mayrath, Michael, Joe Sanchez, Tomoko Traphagan, Joel Heikes, & Avani Trivedi. "Using Second Life in an English Course: Designing Class Activities to Address Learning Objectives." In *Proceedings of World Conference on Educational Multimedia*,

Hypermedia and Telecommunications 2007, edited by Craig Montgomerie & Jane Seale, 4219-24. Chesapeake, VA: AACE, 2007.

Sanchez, Joe. "Second Life: An Interactive Qualitative Analysis." In *Proceedings of Society for Information Technology and Teacher Education International Conference 2007*, edited by Caroline Crawford, Dee Anna Willis, Roger Carlsen, Ian Gibson, Karen McFerrin, Jerry Price, & Roberta Weber, 1240-43. Chesapeake, VA: AACE, 2007.

Sanchez, Joe. "Virtual Worlds: New Spaces for Service Learning." In *Service Learning: Linking Library Education and Practice*. Edited by Loriene Roy, Kelly Jensen, & Alex Hershey Meyers. Chicago: American Library Association, 2009.

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