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Second Life: An Interactive Qualitative Analysis

Abstract: This paper is an Interactive Qualitative analysis of the user experience in Second Life, an online Metaverse, in an undergraduate literature class. A focus group of eighteen students produced a systems model including ten affinities with one primary driver and one primary outcome. The results of this analysis indicate the importance of the use of socio-technical systems when deploying gaming in the classroom. This presentation will include a discussion of the affinities and share recommendations for implementing an online game such as Second Life in other institutions.

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Introduction

The last twenty years have produced a considerable amount of research involving the use of computer game technologies to support learning in classroom environments. Within this area, it has been particularly interesting for researchers and educators to study the effects that videogame technology may have on students' motivation during class work and learning tasks (Lepper and Malone, 1987; Prensky, 2000). Research into writing and composition has also suggested that writers who are highly motivated by the tasks they are writing about tend to produce richer and higher quality texts (Bereiter & Scardamalia, 1985; Pajares, 1994).

Based on these assumptions, an undergraduate literature course was designed with the intent of using Second Life as a tool to motivate students and to help them visualize the writing process. Students participated in Second Life on a private island; only members of the course along with the instructor and two technical support staff could access the island. This paper is an Interactive Qualitative Analysis of the experience of students using second Life in Composition and Reading in World Literature.

Methodology

The process to evaluate the student experience in Second Life is an inductive method using grounded theory as a foundation. The method to analyze the data, Interactive Qualitative Analysis, was developed by Northcutt, Miles, et al (1998) at the University of Texas at Austin and uses a systems approach to qualitative research. The class members are consistent with Interactive Qualitative Analysis (IQA) intensity sampling. They are participants who have the ability to reflect and are willing to participate as experiential experts with the issue. IQA combines the tradition of phenomenology, which asks what is the structure and essence of the experience of the phenomenon for the people in the study, and systems theory whose central question is: how and why does this system function as a whole (Patton 1990). The systems perspective is gestalt in origin, which views relationships as interconnected parts with the whole being greater than the individual parts. Change in one-part leads to changes among all parts and the system itself.

A focus group was conducted with eighteen students. The focus group began with a mental imagery warm-up activity. During the warm-up, students were asked to close their eyes and visualize themselves interacting in the world of Second Life. They were asked to notice their surroundings, imagine themselves at home logging in to Second Life and to see themselves "in world". After a five-minute warm-up, each student was asked to write down their thoughts on note cards. Each note card was then taped on to the walls where students then categorized, named, and defined their group affinities. The research question posed to the students was "Tell me about your experiences in Second Life. Write one thought or experience per card. Feel free to record a word, a phrase, or a sentence to capture that thought and tell me what it is like to experience Second Life".

Affinity Analysis

The purpose of affinity analysis is to categorize and refine the generated data into common themes. The students who used Second Life in Composition and Reading in World Literature created a total on 215 note cards,

which they categorized into 10 affinities. The numbers and the order of the affinities are not by importance or frequency. The number assignment is simply a tool in the process of grouping and linking the data.

- | | |
|-------------------------|----------------------------------|
| 1. Purpose | 2. Avatars |
| 3. Anger | 4. No instructions |
| 5. Interface difficulty | 6. Technical difficulties |
| 7. Creativity | 8. Positive reaction to building |
| 9. Time consuming | 10. World expectations |

Purpose

Students did not understand the purpose of their Second Life activity. They had a difficult time relating the activity of building in Second Life to the course material, “Why are we doing this in a world lit class” they asked. Students failed to make connections between Second life activities and their traditional course work, “I don’t relate this to our reading, we weren’t actually doing anything, we were just there”. The majority of the students enrolled in the course consistently questioned the purpose of the Second Life building activity. Although they didn’t understand the purpose of the activity, the Second Life component was completed because it was a part of their grade, one student indicated she was “willing to give time to it, but, we didn’t care about it. I don’t get any of it”.

Avatars

Part of the Second Life experience is the creation of a user’s avatar. Each student in the course created an avatar and modified the avatar to their own specifications. 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 and I thought that part was fun”. When discussing their avatars, some students went beyond describing their avatars as being fun, creating an avatar made the second life experience real, “creating them (the avatar) is the only real aspect for me”. To some students, avatars were the only difference between the use of a virtual world and instant messaging.

Some students made an effort to create their avatar in their own likeness. As time went by during the semester, students were able to recognize each other by their avatars, “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 and other avatars fall off of buildings was an activity that many students participated in.

Anger

Students used the word anger to describe their user experience in Second Life, sources of their anger were software updates, network lag, unannounced updates, lack of direction, and usability of the tool. One student wrote “meh” on a note card to describe his overall user experience with Second Life. When asked to clarify his comment the student said “It was really frustrating because, Updates were really annoying because updates took a long time and I had a slower connection, two hours to update”. A second student simply stated, “I was annoyed because it wasn’t good at all”. Another student describe his frustration with Second Life, “I dislike second life, I didn’t understand how I was suppose to do things in second life and that led to anger and frustration”.

No instructions

Students felt that they weren’t given adequate instruction to complete the tasks assigned in Second Life. One frustrated user said “Instructions might be helpful, I didn’t know how to do anything so it was really frustrating”. Students often would get frustrated on the Second Life campus because they couldn’t find anyone to help them when they needed it

“We didn’t really have any help and we were totally ignorant about the whole thing. We couldn’t go anywhere (to find it)”. At the end of the semester after students had created their buildings, they felt the virtual campus they had created should have been completed; they felt the directions for the assignment left them with an incomplete vision. The students said, “we never unified the campus, it was always separate”. A second student add, “we turned the environment into this ugly place with nonsense everywhere, there was so much crap everywhere, boxes, you couldn’t walk around”. Lack of instructions includes technical instructions as well as instructions for an assignment.

Interface difficulty

Students had a difficult time creating their buildings because they felt the interface of Second Life was counter-intuitive. 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", which were 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 with 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 program required to run Second Life was very computer processor intensive and required a persistent and fast Internet connection. 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 lots of space on my personal computer".

During the fall semester of 2006, Second Life had frequent software downloads and suffered from unannounced downtimes. In some instances, Second Life would be offline for hours at a time and would boot all users from the grid with as little as sixty-second notice. Students noted "there were frequent downloads, once or twice a week, and patches take a long time to download".

Within the program itself, students noted other technical problems such as avatars appearing without their clothes on and objects disappearing while they were building. While describing some of the technical problems experienced during the semester, a student recalled, "Using notes (note cards) only worked temperamentally, some people could see your notes and others can't". 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 on the position and distance of their avatar from the building.

Creativity

Students felt the Second Life environment perpetuated a sense of creativity. Remarks from students show an appreciation for the visual creative outlet afforded by the virtual world environment. The immersive tool challenged students and they explained how Second Life forced them to visualize their work. When discussing the experience of working in Second Life, a student said "It forces you to think outside the box, because it (Second Life) 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". Students also mentioned an appreciation for the challenge of representing their work visually and the enjoyment of exploring other student's projects, "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".

Positive reaction to building

Though the building process was difficult, students said they had an overall positive reaction to building. Through the building activity students applied concepts from geometry and architecture. 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".

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 along time but I didn't really think about it". Another student similarly described the experience, "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".

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 perfect 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”. Students, who are use 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”, and, students did not desire to spend the necessary time in the tool, “A lot of us just didn’t care enough about it”.

World expectations

When students first learned they were going to be using Second Life in their class many developed preconceived notations 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 its not all”. Students also expected to “play” something similar to a popular computer game called “The Sims”.

Because of the island’s private status and restricted user accounts, students were not allowed to leave the virtual campus. Students were disappointed with their lack of interaction with other Second Life residents, “It would have been more fun in the real SL rather than the UT island, the actual second Life game, there is more stuff to do, its not just a campus, it’s a whole world”.

When students first entered Second Life, they were introduced to a wide-open space with only three structures, a replica of the university clock tower, a small Greek style amphitheater, and a replica of a campus building. Students indicated feeling isolated when they entered Second Life. In one word a student described their first impression of Second Life, “Hell”, he elaborated further, “Eerie, nothing was there”.

Students mentioned feeling restricted on the Second Life campus. One student said, “The whole island was really restricted; I think it would have been better if it were more open. More interaction with the outside world”. Adding to the general feelings of being “restricted”, another student said he felt “Isolated. The island is so isolated”. Students expected to be able to access the entire world of Second Life and to be able to interact with a large community. Instead, they were kept on a small island with out any outside influence.

Creating a system

Using qualitative analysis, ten dimensions or themes were identified as exemplifying the student experience in Second Life. After defining and describing the dimensions, theoretical coding (creating hypotheses for each possible pair to establish possible causality or “drivers and outcomes”) investigated the relationships between each theme and creating a path diagram. Students were asked to vote on how each affinity effected one another or if no relationship existed between the two. For instance, each student was asked, does “No instructions” effect “anger”, does “anger” effect “no instructions”, or is there no relationship between the two? After the votes were tallied, one primary driver, no instructions, was identified along with one primary outcome, anger, illustrating a similar user experience for all students participating in Composition and Reading in World Literature. The Systems Influence Diagram (*figure 2*) demonstrates the nonlinear relationships through recursions or feedback loops. Recursion is not a classic feedback loop as previous loops create successive terms. Recursive codes change themselves. This model presents the significant factors, lack of direction, and technical and usability issues leading to a feeling of anger and frustration amongst students participating in Second Life in an undergraduate literature course

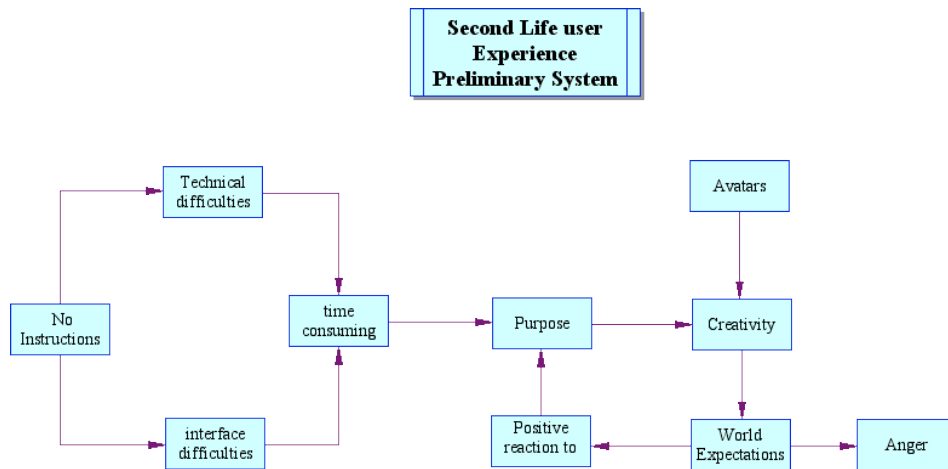


Figure 1. Systems diagram of Second Life Student Experience

Conclusion

The student experience of Second Life can be summarized as follows, a lack of instructions within this Second Life implementation along with technical and interface difficulties coupled with student's not understanding the purpose of the activities led to feelings of anger. Although students were angry with their overall experience with Second Life, students felt a sense of accomplishment when they completed their projects and indicated an ability to express their creativity with the tool. Students also indicate a preference to social learning activities and find it enjoyable to interact with other avatars while learning in this space.

The next phase of this research project is to design learning activities for the Spring 2007 semester incorporating lessons learned from the Second Life user experience. In the spring, social learning activities will take the place of building activities, the instructor will express to students exactly how the Second Life activities are anchored with the course goals, and detailed instructions will be provided to students to ensure they have the skills needed to complete their assignments.

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