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Problem Space: Learning and Behavior In A Global Virtual Community

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Introduction

I remember laughing when my colleague, who is a computer science professor and a long time online game player suggested I look at the Massive Multiplayer Online Roleplay Game (MMORPG) known as Second Life as part of my research into online learning. I was embarking on an academic program in learning technology as a way to enhance my career as a curriculum designer and to make myself more invaluable to Colorado Technical University, where we both are employed. After months of hounding and my protests that I didn't have the time to spend "playing," I relented and created an account over a three-day weekend to see what this virtual environment was all about.

To say I didn't sleep or eat for three days would be an understatement. Not only didn't I sleep or eat, I was so immersed in the environment that I lost all sense of time (Anderson, 2004). Unlike other virtual games where there is a clear objective, path to advanced standing, and award attainment, Second Life is a world created by members. As such, it reflects the collective culture and value system of its inhabitants – good or bad. With just over 7 million members (with 35 to 40 thousand logged in at any one time), Second Life has become a model of social networking, allowing any numbers of activities (including education) to be conducted within its boundaries.

The purpose of this paper is to examine the emerging field of Cyber-ethnography as my problem space, as a way to understanding human behavior in virtual worlds and the impact of that behavior on how effective virtual worlds might be as learning spaces. My conceptual framework includes not only the benefit of virtual worlds in education, but also in cognitive psychology and in the business of running a real-world institution. The questions I hope to answer as part of this effort are: (a) can virtual worlds be a legitimate learning space in terms of interaction and communication, (b) does human behavior significantly differ in a virtual world

than in a non-virtual world?, enough to enhance or inhibit the learning environment, and (c) can virtual worlds help an institution expand their degree programs, enough to consider a virtual learning space a campus. When I wrote my first topic foci paper a year ago, my hope was to compare delivery methods. As my first year as a doctoral student has progressed, I now realize comparing delivery methods is pointless; curriculum is *going* to be delivered online. The key will be how to make that online experience as immersive and interactive as learning in an actual classroom would be. Following a discussion of my problem space will be a discussion of seminal researchers in this very new field, where the field is going and where my research will contribute. My hope is to study and understand human interaction and behavior in cyberspace to such a degree as to become a subject matter expert in the field of Cyber-ethnography, assisting institutions with virtual learning, regardless of the delivery method used.

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“Virtual-ethnography is a special form of ethnography. It involves sustained online presence in a field setting with intensive engagement in the everyday lives of those involved at the same time as the researcher’s *other* life continues.”

-Elizabeth Browne

Educational Lens

As educators, we are used to measuring a program’s success through a series of rubrics and measurable outcomes. If a student works through the motions of completing all the course work that is expected of her, she is rewarded with a letter grade that reflects some degree of competence. A funny thing happened on the way to higher education: MySpace (free personal website networking), YouTube (free video sharing), Flickr (picture sharing), World of Warcraft (massive multiplayer game), and a host of other media-rich sites have captured the interaction and imagination of anyone who uses them. These sites allow users to largely create and manipulate their own content, change their content as it pleases them, and test the limits of their imagination with relatively low risk. These sites are also extremely immersive because they are dynamic—they change constantly and cause the user to continually build on her previous experience.

To expect the students among this group of people to remain interested in traditionally-taught curriculum is not only ignorant of current trends in learning technology, it can actually prevent students from learning much of anything (Schank, 2006). Outcome or scenario-based learning actually develops proficiencies that can be demonstrated as part of a portfolio of work that can then be used by the student long after the particular class has ended. This portfolio is

increasingly maintained in digital format, and might include any type of object, even video of a proficiency being demonstrated. The ability to become immersed to the point of deep engagement opens the door to constructive learning and creates a scaffold by which students can add learning to what proficiencies they have already developed (Anderson, 2004). A challenge for educators is how to provide the environment and the faculty that can be comfortable enough with these new trends to use them constructively in the classroom-wherever that classroom may be (Barbuto Jr, 2000). The use of web-based tools such as MySpace, YouTube, and even virtual environments such as Second Life enable anyone who can learn the platform to use them. They cross cultural barriers, geographic boundaries and have become the social networking tools of the day.

Big Ideas

Not surprisingly, many of the same attributes that would apply to traditional curriculum delivery methods also apply to virtual learning. First, learning in any environment requires a strong curriculum with clear outcomes and methods for assessing the proficiency of those outcomes (Browne, 2003). Students need to understand how they will be assessed and how their assignments are to be delivered, particularly if some digital medium is to be used. Learning in cyberspace demands students adopt a constructivist position, taking responsibility for their own success and building on what has been learned previously (Beldarrain, 2006). Learners also need to understand the “rules of engagement” or how to interact in a virtual setting. This includes what verbiage to use, how to respond to the threads (asynchronous postings) of another, and how to resolve conflict in an online environment, including the cultural considerations of a global audience. In virtual delivery, there are the additional responsibilities of assuring that every

student understands how to navigate the platform, has the correct hardware and software configuration, and where one can find technical support should they need it.

Previous Research

The field of cyber-ethnography is relatively new. As such, it hasn't enjoyed the academic pedigree or support of more established areas of research. Even so, the roots of cyber-ethnography and learning in virtual worlds have their base in constructivist theory, ethnography as a research methodology and learning styles. These disciplines can set the historical background for learning theory and small group interaction, but they don't answer the question of what people virtual worlds seem to attract and why they are attracted. Edward Castronova (2005), mentions Richard Bartle, who divided user motivations into four categories:

- Explorers – People who come to see what is there and to map it for others.
- Socializers – People who come to be with others.
- Achievers – People who come to build and gather things worthy of social respect.
- Controllers – People who come to dominate other people.

In my own experience, my time in virtual worlds (aside from educational pursuits) has been in creating a venue for live, independent music in Second Life. It started innocently enough-I bought digital land and built a large home with a dance floor on the roof. But my vision didn't stop there. It became the basis for a business model where The House of Flames (the name of my venue) has actually been registered as a legal entity and can conduct real life business in that name. We now have two "islands," have videotaped music events and stream video and audio from clubs in different locations in the US. When I completed my StrengthsFinder profile for the class I took last fall, one of my leadership traits was as an achiever; it has been no surprise to see that I need to achieve, even in a virtual world (Buckingham & Clifton, 2001). An

environment such as Second Life allows users to try different business models with far less risk than a similar venture would require in real life. This can be very valuable as virtual world engines adopt better artificial intelligence models. Even now, there are heart murmur simulations and even a schizophrenia simulation in Second Life, which allows an avatar (the users' digital representation of themselves) to experience the effects of these conditions. There is little previous research with virtual worlds in these areas, as a result I feel as if I am on the leading edge of something with no upper limits.

Important Leaders

According to Dickey (2005), Cyber-ethnography has its root in constructivist theory and the works of Vygotsky (1978) and Jonassen (1999). Given the recent emergence of the medium, the works of not only Dickey, but Browne and Beldarrain need to also be considered. While Schank (scenario-based learning) and Rheingold (virtual community) have been working and writing about virtual learning and human behavior in virtual worlds for years, their lack of empirical research excludes them from most academic research.

Major Gaps

Because this field is so new, there are many gaps in cyber-ethnographic research. Much of the existing research is still focused on process: what tools are used and what affordances (delivery aspects of the medium) are associated with any given platform (Dickey, 2005). Much of the empirical work that has been done has centered on interviews with instructors and completion of tasks. My research will be more user-centered: did using a virtual world make the user feel as if they were more in control of their academic destiny? Did they feel as if they were more immersed and more focused than they would have been other delivery methods? At the end of the term, were they expected to demonstrate a competency in outcomes, rather than just the

completion of tasks? My interest in immersion and the place where students become so much a part of the environment that the lines between what is virtual and what is real become blurred (Freebody & Freiberg, 2006). My goal is to show that this is where deep learning takes place, creating a transformative experience that will be more useful in long-term cognition than many traditional learning methods (Anderson, 2004).

Professional Impact

My own work in Second Life is not only as an educator; it is as a business person. In my position as the Director of Educational Technology for the university where I am employed, my role is to find efficient uses of technology to deliver and (hopefully) retain learning. The choices we make as a for-profit university have to balance our responsibilities to shareholders with our need to satisfy accreditation requirements and retain our students. Our use of technology has to enable us to be competitive with other institutions, be innovative in the programs we offer, and create an environment where our students feel they have gotten a good value for their dollar (Strang, 2007).

At the same time, we can leverage technology to attract students to our institution in ways we might never have imagined. Through the use of podcasts and other streaming media, we can port our learning materials directly into virtual worlds to be seen on our digital campus (opened in June, 2007). Compared with other media such as television, a campus in a virtual world is far less expensive and may directly target the markets we attract students from. Our challenges in virtual worlds are to create interactive marketing materials and also have the faculty and staff who understand virtual worlds enough to use them (Anderson & Dexter, 2005).

Conceptual Framework

Choosing to use virtual worlds in the learning process involves several distinct areas, each with constraints and opportunities that will ultimately determine the success of any initiative (see figure 1). Learning in virtual worlds (worlds that are web-based and housed on central servers) is global; anyone in the world with an Internet connection can log in and be part of the environment (English is the primary language spoken in Second Life; for those that don't speak English, there are in-World translation attachments that will automatically translate several languages into English).

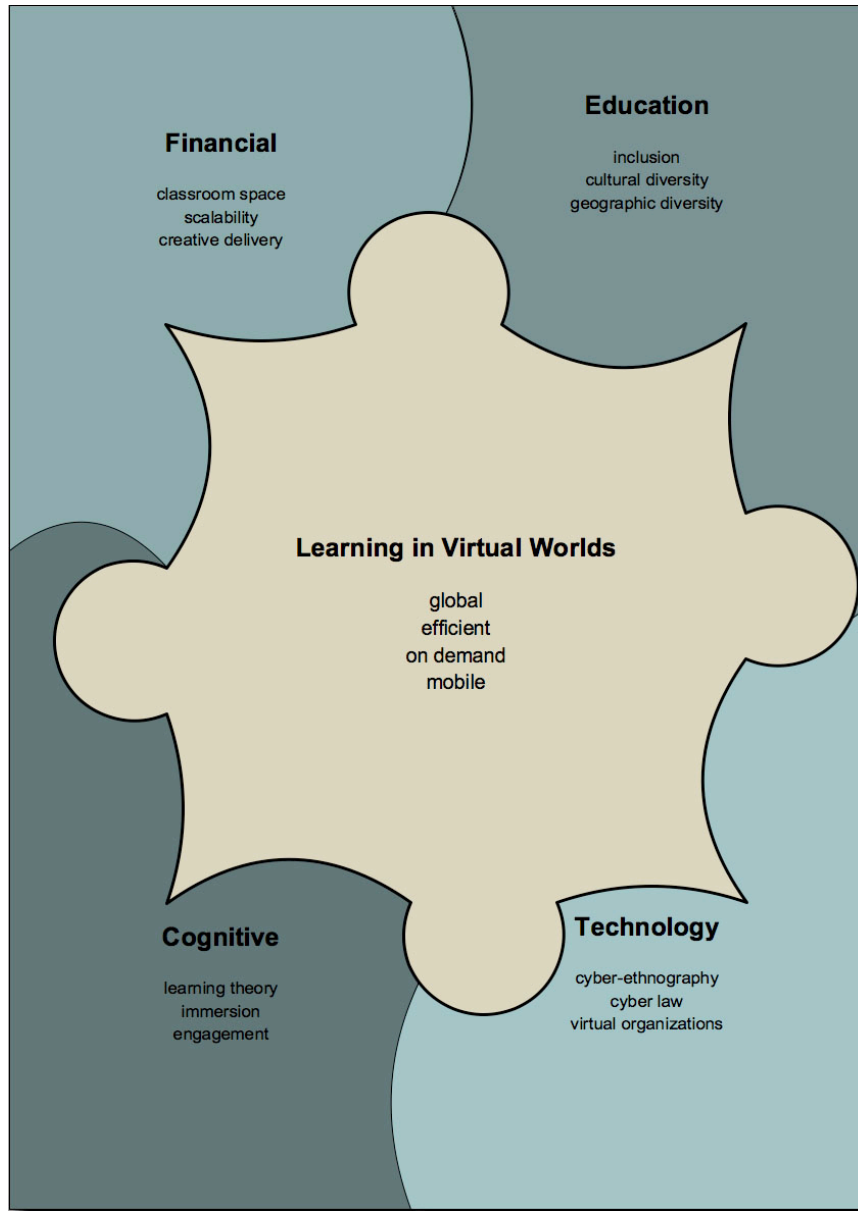


Figure 1. Deborah Wise Conceptual Framework

In education, the use of virtual worlds has both benefits and challenges. MMORPG's by their nature allow a player to create an avatar as that player's digital representation in the game (in the case of Second Life, I use the term "game" loosely, since there are no points or "winning"). This avatar is able to look however the user chooses; it can be of the opposite sex, an entirely different race, or not human at all but an animal, vampire or one of the "undead," someone who looks as if they had been unearthed from the grave. In each case, the user is

anonymous because they have a name different than their given name. In essence, this places everyone on a level playing field; no one is impaired, handicapped or a race other than what they willingly choose (Dickey, 2003). My question is...why do they choose at all? What makes someone choose to be in a virtual world? What motivates them to spend hours in an environment where they can present themselves any way they want? Is it to live out some fantasy that real life doesn't afford them or it is that it is just an alternative form of entertainment, such as watching television or going to a movie? Whatever the reason, my observation is that the level of interaction is important to the level of satisfaction a person experiences when they are in a virtual world (Haythornwaite, 2000).

From the perspective of the University, there are legal and ethical concerns. We can't do business with an avatar; we need to go through the admissions process with our students using their true identities. It is important we know who they are. Also, we have a responsibility to do everything we can to protect our students while they are physically on our campuses; how does that level of protection translate to a virtual world? If an avatar comes to the Colorado Tech campus in Second Life and exposes his digital "appendage" to students, can that be treated the same as if it happened in person? Can an institution honestly view a virtual world as a legitimate campus, or is a virtual classroom merely a substitute for a small group discussion board, with synchronous chat replacing threaded conversation?

As I progress through the program, which I anticipate taking four more years, my suspicion is that learning in virtual worlds will continue its metamorphosis and by then will look nothing as it looks now. My area of interest is truly being formed as I write and my hope is to remain on the leading edge as I complete the EDLI program.

Synthesis

Learners of my generation were taught serially; there was a logical sequence that was to be followed and only one thing was presented at a time, with the assumption that too many inputs at the same time might be distracting. With the advent of the Internet, iPods, Personal Play Stations, TV screens in automobiles, games and web browsing on mobile phones and a host of other ways to transfer data, we have become a society where it is assumed there will be multiple tasks happening concurrently (de Bruyn, 2004). Roger Schank has quoted research that studies this multitasking in young children where one at a time, new stimuli were introduced to children who were watching a learning television show. Even after multiple new stimuli were introduced, the children were able to retain the key points from each stimulus. What we have learned is that our brains never stop the ability to expand and the ability to process in parallel is not a factor of age.

Philisophy

My own children have influenced my philosophy on learning and innovation. I had three daughters, all very different in terms of how they learned and what motivated them. The oldest was very task-driven; her goal was to complete a task according to the rules of engagement at the time, to the best of her ability. This has proven to be a successful strategy for her, as she is in graduate school and hopes to pursue a Ph.D. in the future. My second child couldn't pay attention in a traditional classroom; she was technically adept and as soon as we had Internet access in our home, she was scanning the globe (much to my dismay). The level of interaction and control the Internet gave her made it difficult to learn in a traditional lecture-based classroom environment and I ultimately home-schooled her. Since I was going to teach at home anyway, I also decided to bring my youngest daughter home for her learning. The difference in how the two of them learned was amazing, given the same set of circumstances, curriculum from the

same company, and my teaching style. The youngest had an approach that was similar to her oldest sister; she was very task driven and her goal was to finish assignments well. Grades were important to her. My middle daughter however, did what as minimally necessary to consider the assignment completed, not caring about either the quality of her work or her grade. In a word, she was bored. She needed a higher level of interaction and immersion that what the materials (and I) could give her. If mobile technology, virtual worlds and streaming media can create a thirst for learning in people like my daughter, I want to be part of that solution.

Professional Goals

My work in Second Life and my research into human behavior in virtual worlds is timely. This is an emerging area of research and activity that I find absolutely fascinating. And unlike some researchers who write only about the work that others have done in the field, my field research is from my own experience over this last year, living and working in a virtual world community. My firsthand observation as a woman, business owner, and music promoter (as well as an educator) will enable me to speak as a subject matter expert from experience. Since August of last 2006, I have truly lived a double life.

Research Questions

Most of the research I have read in my first year has to do with scenario-based learning, small groups in asynchronous environments and the need for strong curriculum and structure. It has only been in the last few months that I have begun to read literature about learning in virtual worlds. What I have read in this area is more about the teaching side of the equation and the constraints placed on learners in these environments than on whether or not the student actually feels the experience was beneficial. My hope is to focus on the learner side of this equation and what recipients feel they get as a result of the environment. In their own estimation, do they feel

they learned more? Did they believe they were better engaged and immersed in the learning process than they would have been using other delivery methods such as an on ground, hybrid or fully online, asynchronous class? Did they actually retain information that they can immediately put to use in their daily lives?

Living in a virtual community also includes addressing the ethics, moral compass, and value system of individuals who can be anonymous (O'Toole, 1993). Can an environment that enables us to look perfect, dress suggestively, buy an "appendage" that can be erected with a click, and engage in behaviors we might not engage in if our identities were known, hinder our ability to learn – or liberate us? In my own case, I found the latter to be true. The first time one of the "undead" tried to engage me in conversation, I found myself extremely uncomfortable. Now, after a year, I am able to do business with vampires, furry creatures, and even robots without considering whether they should be included in "my" community. It has truly been a liberating experience.

If everyone is included, and thousands of people from around can exist in the same space at the same time, then what potential is there for a university to use this space as an alternative to a traditional classroom? If the right curriculum can be designed, with proficiencies for the right outcomes demonstrated, is this the learning space for the next generation? Will we see hand held computers, where students can be sitting at a beach in real life, while their avatars learn an accredited curriculum in a virtual life? There is no limit to what can be accomplished, as long as the data can be delivered. It is the infrastructure that will determine how fast this area will grow, not the desire to use it.

Anticipated Changes

If there is one thing that is consistent in technology, it is change. If I have learned anything after living for a year in a virtual world, it has been that technology will drive the platform. Within Second Life, the last year has seen concurrent users rise from 12,000 avatars on a great night to 40,000 concurrent users now. This requires a massive infrastructure and it will also create a situation where those costs have to be shared with users. There will be competitors who will create new virtual worlds, and those who will even partner with others to create cross-worlds, where your avatar can be the same person in more than one world. That will create a huge opening for business and education, as costs won't need to be duplicated for every new world. In the last month, Second Life has introduced the ability to speak to one another within the platform via voice. Using a headset and microphone, you can activate either open chat or private channel discussions.

I expect my philosophy and goals to continually evolve as I progress through the program because the discipline itself will change and progress. My expectation is that virtual worlds like Second Life will not only become accepted in the mainstream of education, business and social networking, they will look nothing like they do at this moment and the requirements to run them will be standard equipment on every computer. Not only will millions of US dollars change hands within virtual worlds (as they do now in Second Life), people will actually earn their livelihood entirely within virtual worlds (Castronova, 2005).

Implications

Working in virtual worlds requires one to be agile; change happens at every moment and it is up to those of us who live in these worlds to help smooth the path for those who will come after us. As both the number of experienced users of virtual worlds grows and the environments

themselves mature, the ability to perform empirical research that is repeatable and measurable will make these worlds more respected in the research community (Feuer, Towne, & Shavelson, 2004). Because of this, I have focused the last year in Second Life on my business pursuits as opposed to education, as the constraints of the platforms themselves may have prevented legitimate research. As I move forward in the EDLI program, my hope is to join the education community in Second Life and become a contributing member to the research that is performed there.

Research Strategy

My research is to be done within a virtual world such as Second Life. In fact, the groundwork for my research has already begun. Between the business model of the House of Flames, which has been in operation since January of 2007 and the Second Life campus of Colorado Technical University, I am in the unique position to design whatever research experiment will best observe interaction and communication in virtual group learning, human behavior in virtual worlds and also the marketing and expansion potential of these entities. My hope is to be able to conduct classes on the campus of Colorado Tech to be able to observe whether virtual worlds enhance or inhibit the learning experience and also be able to survey the people who attend events at the House of Flames as to what motivates them to participate in a MMORPG. By the time I actually conduct my research, both the Colorado Tech campus and the House of Flames should be mature enough as virtual entities to allow the traffic to have reasonable numbers to sample. Finally, using both these entities will enable me to compare growth over time, in terms of traffic and enrollments for Colorado Tech, and sustainability for the House of Flames.

Annual Review

My annual review should be held in the late fall of 2007. Having only taken a few classes, my expectations are that my artifacts will be minimal but my reflections, particularly with respect to how virtual worlds can assist in learning, should be substantial. My hope is to use a personal website as a repository for all my materials and to also use Second Life during my presentation. By the time of my review, I will have completed the Leadership class with Connie Fullmer, the Research Methods Class with Alan Davis, and be in Scott Grabinger's Theoretical Bases of Instructional Technology class, which is directly related to my research area. While I could have taken more classes during my first year in EDLI, I chose to actually become immersed and build a reputation in Second Life as a business owner, networking as the Second Life community has grown from mere thousands to over 7 million members.

Supports

As a participant in a society that changes each time I log in, the supports necessary to grow and flourish will also need to be dynamic and at the leading edge. In virtual worlds, there are minimal barriers to entry (there is a free account option in Second Life), low costs of maintenance (compared to other methods of marketing and presence), and best of all they never close (the community is global). The resources that will be most helpful in my research will be the people who are also working and researching in virtual worlds. Collaborating with the schools that have a substantial presence in Second Life and sharing research will be particularly helpful as I progress through the EDLI program. While I have not been as active in the education community in Second Life as I have been in the business community, my goal is to migrate over to the education side as my business matures and the model is sustainable.

Thankfully, I have a position within my university where virtual worlds and mobile learning are part of my job responsibilities. My attendance at mobile learning conferences and my continued research into the published works of the authors used for this paper should continue to keep me at the forefront of this field as I complete my program. In the time I have involved with virtual worlds, I have witnessed communications progress from text-based chat to voice and now video streaming. The knowledge of not only the process of how this works, but the ability to produce materials that can effectively be used to deliver interactive multimedia in cyberspace will help use attract and retain the next generation of learners.

Conclusion

In looking back over my artifacts from my first year in the EDLI program, I paused at the conclusion I wrote for my leadership paper. This paper was written at a time when my personal life was feeling the stress of my own self-discovery, and I wasn't sure of what the future would hold. Seven months later, my personal life is in the process of being redefined but what I wrote at that time still resonates with me:

Where I am heading

For the first time in my life, I feel that I am in the right place, at the right time, and living up to my potential, as I know it. At the moment, I am going through a period of self-discovery; determining what my hopes and dreams are for the remainder of my days. My hope is to remain healthy and contribute to the communities I am involved in until my last breath.

Long ago, I happened to see a poster at the Apple store that summarized my life philosophy so well, that I have kept the text close to my heart. It summarizes who I am, what motivates me and my hopes for the future:

To The Crazy Ones

Here's to the crazy ones. The misfits. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo. You can praise them, disagree with them, quote them, disbelieve them, glorify them or vilify them. About the only thing you can't do is ignore them.

Because they change things. They invent. They imagine. They heal. They explore. They create. They inspire. They push the human race forward. Maybe they have to be crazy. How else

can you stare at an empty canvas and see a work of art? Or sit in silence and hear a song that's never been written? Or gaze at a red planet and see a laboratory on wheels?

We make tools for these kinds of people. While some see them as the crazy ones, we see genius.

Because the people who are crazy enough to think they can change the world, are the ones who do.

Think Different

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