

# Across the Universe: Cyborgs and Students in the Garden

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## INTRODUCTION

Second Life as a virtual learning and networking tool can impact collaboration, identity and education for college students. The focus of this three-semester study is on student responses to learning in a virtual environment. Students in the 21<sup>st</sup> Century, particularly engineering and technical students will be working and creating in the virtual world. They need to think about the ways in which they are perceived in order to make informed conscious decisions about the future. Additionally, they need to find new ways of expressing their ideas and communicating with people in a virtual environment.

**“Second Life offers an open, socially contracted terrain to be something else from scratch” Adrian Batson, student**

### *I. Second Life as virtual Classroom to Explore Identity*

Engineering students were asked to become part of the Second Life virtual world. When a new user first enters Second Life, they create a representation of themselves (an Avatar). As the students created their Avatars, they examined the choices they made about their own creation. First, we used selected readings in order to help students think about physical and virtual representation, as well as imagination versus reality. One example is *Frankenstein*, an apt metaphor when dealing with the themes of identity collaboration and design in the 21<sup>st</sup> Century where we are capable of genetically modifying our bodies and the bodies of our children to create better models with more efficient capabilities

In Second Life users can choose a male representation, a female representation, or even a non-human representation. The fact that the majority of students remained the same underscores the determined nature of their own constructed identities in their actual lives. The social constructions represent behaviors that (in each environment) impact learning. Our objective is to understand and optimize behaviors in the virtual world in order to, eventually, increase innovation in engineering education.

## METHODOLOGY

First it is important to recognize that this is a recent qualitative study based on three semesters of students (4 classes in all, approximately 90 students). It is equally important to understand that this was the first time these students had interfaced with Second Life at all, particularly within a classroom setting, which explains some of the frustration with the learning curve in a virtual environment.

The first table (Table I) represents a cohort of about 20 students who participated in Second Life and chose to write an essay about how it impacted their learning. This was not a directed survey. Students wrote about how they viewed Second Life. The table indicates that many students saw how in the virtual world education, economy and art are perceived differently (some see these as a negative, some positive) but that eight students viewed Second Life as potentially dangerous.

The second cohort (Table II) is based on two classes and their essays about Second Life. The last cohort for the college students is a Web ex class designed to discuss virtual learning in a non-traditional classroom.

TABLE I  
20 STUDENT COHORT

Subjects	yes	no
Changed identity to another gender		3
Changed identity to another species		
Saw as a game	10	2
Saw as having consequences in real life	8	

TABLE II  
TWO CLASSES COHORT

	positive	negative	Neither but see an impact
Changes identity for participant	15	12	2
Change in interpersonal relationships	15	13	2
Implication for change in economy	14	11	2
Implication for change in education	16	7	2
Change in global interactions	13	9	2
Change in the way we perceive art	12	6	3
Opposition between nature and virtual world	6	9	
Dangerous	8		

In an upper level course entitled, “Art and Technology,” students were asked to become part of Second Life- a virtual learning tool to make students more aware of the differences or lack of differences between the actual class and a virtual world where they are free to interact with others in a virtual world where the user recreates him or herself and they are forced to examine why they make the choices they do about their own creation. In examining the novel, *Frankenstein*, students see the similarity between the creature and the creator and our current scientific drive to clone (recreate) animals, food and people. They also recognize that cyberspace is an alternative to the limitations of our bodies in the natural world. In *Frankenstein*, a creature is fashioned from the body parts of the dead. In today’s world, we are modifying our own bodies and mapping our own DNA in order to create a new and improved genetically modified body type. Perhaps it will be the engineering students who design, practice and develop policies around some of these technologies, which is why it is vital to think about these ideas now in the traditional, as well as the virtual classroom. We use Second Life to look at how students create their identity, collaborate and also what they learn in the virtual world.

The initial focus of the theme of identity is important in the virtual world for several reasons, one being that the user must immediately create his or her identity. It is a choice, and it is not established (or inherent) from the beginning. The user consciously constructs his or her identity. When working with engineering students, it is important to focus on the idea of identity because in the future it the possibility of creating your physical identity seems inevitable. The first step of the study is to negotiate identity in the virtual world. How does identity impact our learning? Since the first sequencing of the human genome we now are able to think differently about the impending changes of our bodies and machines and even virtual and (outer) space. “The cyborg would not recognize the Garden of Eden; it is not made of mud and cannot dream of returning to dust.” [Haraway] In Second Life users can chose between a male or female representation, or a box for example. The fact that the majority of students remained the same in the virtual world as in their real world underscores the determined nature of their own constructed identities in their actual lives.

In reviewing student responses around the choices given to students about creating their own identity, many students claimed that they felt overwhelmed by choice. There was a ‘world of possibilities’ and they spent a long time constructing and thinking about their identity in Second Life. They noted, “you can do whatever you want,” and that ‘it wasn’t natural.’ They were uncomfortable with ‘made up languages and identity.’ Several were frustrated by the fact that in the virtual world you do not know if you are talking with a man or a woman. One Asian student said it was easier in 2ndlfe to interact with virtual strangers than in real life. Many said they felt left out and not accepted in the virtual world.

Many of the female students spent more time designing their Avatars and focusing on their names but chose to include some real aspect of their given name and some even dressed exactly as they do in real life. Female students complained that the female avatars reflected media stereotypes of women in general. "I became as close to myself as I could become," reflects the large population of students who strived to recreate themselves accurately as possible in the virtual world. This is surprising since students reflected that everything in the virtual world was a lie or pretend. Their healthy skepticism of the virtual world was refreshing but ironic in that they did not choose to recreate themselves differently. Several admitted that changing their identity would be 'lying'. Overall students, did not change gender or species when given the opportunity, but chose to stick with their own identity in the real world with small modifications. Students felt that the options to change identity compromised authenticity, but also noted the various freedoms in the virtual world.

***"We lose the outer shell to unleash the  
inner beauty to the virtual world around us"***  
**Student Response**

The second concept we focused on was collaboration or communication in Second Life. Most students did not collaborate but did choose to interact with various avatars. Some chose to visit educational sites, but most saw Second Life as a game or social tool. One student wrote, 'interesting but real life is better'- This statement proves that for these students a virtual life will not replace our natural body and physical world. Many students expressed the idea in their papers that as "technology progresses, human interaction diminishes" while this may be true, it is nonetheless inevitable that we will be conducting more research online, more learning on line and more interaction for business of all nature, online and through the World Wide Web. Students wrote that 2<sup>nd</sup> Life improves communication because language is different. They also expressed frustration about communicating in the virtual world:

- "I felt like a series of pixels."
- "Lose one's family, lose one's friends, lose one's self"
- "In 2<sup>nd</sup> life the men are women and the women are men and the children are the FBI"
- "Distorts human interaction"

Still many students understood the positive aspects of learning and communication in the virtual world and saw it as an 'opportunity to bypass nature and her boundaries.' One student noted that the physical world connects action and how we are perceived (our physical bodies) and that it is limiting; 'the body is useless.' Another wrote: "The Internet may become the prehistoric version of 2<sup>nd</sup> Life." Undoubtedly most of the students saw it as a game and seemed shocked when others took 'it seriously'. Most of the students used it to interact socially and were not very good at it. They admitted to spending a lot of time trying to connect with other avatars. Many students were accused of lurking for not interacting with avatars or failing to communicate properly. However, several used it for academic content or finding out about projects. Students saw Second Life as an attempt to imitate real life. One wrote, "If you can't live in the real world, you shouldn't have to escape to a virtual one." Another noted, "It doesn't have checkpoints or goals, it is essentially a sandbox." Perhaps there is a thin line between a game and an active learning tool Second Life. Most students tended to think of it as a game with real life consequences:

**"When people think no one is watching them they are mean and nasty. They do things they would normally not do."**

This was a common response that in the virtual world – there is no accountability, and in many ways this sentiment rings true. On the Internet, and the World Wide Web it is increasingly difficult to sift through real information as opposed to misinformation. Certainly there is solid scholarly work, but there are little if no consequences for printing false information and derogatory inflammatory remarks about anything.

Class was conducted on Web ex (a virtual environment) and our theme focused on student experiences in Second Life. There were a number of changes between virtual classroom and student comments about Second Life, but there are three or four social responses that were dramatically different than exchanges performed in a traditional classroom setting.

The topics discussed centered on these four themes;

1. Relationships in Second Life
2. Gender role in Second Life

3. Education and reproduction in the 21 Century
4. The virtual world and learning in the virtual world.

The virtual class and traditional class differed in about four dominant ways; 1. The types of students who responded changed slightly but significantly in terms of demographic (specifically race). 2. The way the students responded to each other and professor was also significantly different in a substantial way in that they seemed a bit more confrontational in the virtual classroom. 3. The virtual classroom contained several threads of conversation at one time making it more difficult to communicate effectively (ideas were not developed) and it was hard to type read and think three different conversations at once. 4. The social etiquette of the virtual classroom seemed more formal in terms of greeting and saying goodbye. The social constructions of interactions in both environments are duly noted and important in that they represent behaviors in virtual learning environments and behaviors in traditional classrooms, which impact learning and affect teaching.

Students in the Web ex classroom were asked to discuss their experiences in 2<sup>nd</sup> Life. What was interesting from the beginning was that the students, who took the lead in discussions often challenging each other and myself, were students who remained quiet in the traditional classroom. I noted that the students who were leaders in the virtual classroom were the students of color. At one point a conflict broke out where the Haitian students challenged a white student. This had never happened, previously; in fact in the traditional classroom the two Haitian students were generally not too vocal. I had to interfere and redirect the discussion.

In the Web ex classroom students felt more comfortable challenging each other and even the professor. At one point, the professor remarked that it was a shame that the only female student was absent during the virtual class. Several students then suggested that the professor was not comfortable with the males in the class, which became a bit of a joke. However, this interchange would not have happened in the traditional classroom setting. When we remove the consequence of face-to-face interchange, it seems that students feel more comfortable and are quicker to respond in the virtual setting.

One major difference in teaching and learning in the virtual world vs. the traditional classroom is the issue of control and hierarchy. While the virtual classroom changes the hierarchal relationship between students and the student professor relationship, the traditional classroom defines authority clearly, perhaps too clearly. Students felt more empowered to change the topic, interfere with each other's arguments and challenge the professor in the virtual environment. By the same token, at times the learning was impeded as a result of these digressions. Therefore, a recommendation is to alter the settings of the Web ex classroom with more controls in order to follow one argument or discussion at a time in order to avoid confusion.

Lastly and perhaps most notably, students were astonishingly polite in terms of leaving the virtual classroom. In the traditional classroom students barely acknowledge each other's departures. They don't need to they can see each other. In the virtual class students took several minutes to say goodbye to everyone. Their farewells were by no means limited to "goodbye," but rather included a small indication of their experiences together. The interaction at this point seemed more meaningful than an interaction within the traditional class. Social interaction was at this point more relevant and more intricate than in the real world.

In conclusion, educators and students see the importance of identity and collaboration in the virtual world. We are in fact engaged and involved in negotiating our identities beyond the physical and in a platform with less restriction and more space, the virtual universe has completely different boundaries than the walls of the classroom. While future generations of educators and students look toward finding ways to collaborate that are not based in face to face traditional spaces, we also need to think about perception and identity. It is refreshing to note that students are just as concerned as we are regarding the evolution of identity.

#### References:

Haraway, Donna. *"A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century"*. <http://www.stanford.edu/dept/HPS/Haraway/CyborgManifesto.html>. Retrieved 2007-01-17.