"Only if you were in my shoes, you'd see it the way I do!"

Reflecting on Professional Identity and Improving Design Practice:

An Autoethnographic Phenomenological Study of Disabled Residents in Second Life

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ABSTRACT

Reflecting on professional identity and improving design practice: An autoethnographic phenomenological study of disabled residents in Second Life

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Concordia University, 2015

A limited number of studies have examined e-learning environments for people with disabilities. Essentially, these studies place emphasis on descriptions pertaining to the World Wide Web Consortium (W3C) standards and highlight interface design theory. Much has been said regarding interface design but little has been said regarding the interrelationship between the virtual environment, user emotions and the disabled learner. As spaces of learning are changing, going from the once traditional classroom environment to that of the virtual space, there is a growing need to understand how people with disabilities feel within the "pixelated" environment, thus allowing instructional designers to obtain a better understanding of what is a "good design" for people with disabilities.

Virtual environments allow people with disabilities to participate in activities which would not be possible in real life, exploring regions that are bound by diverse aesthetical experiences, various stimuli and sociality. However, a number of questions still remain unanswered and can equally contribute to the improvement of the instructional design practice while fostering the idea of "doing good" for the disabled user. In this study, which extended over a period of one year, research was conducted on adults with various real life disabilities (visible or non-visible) who are active residents within Second Life, a 3D online environment. The researcher, also a resident of Second Life, had an opportunity to interact with members of Virtual Ability Island, an online environment that enables users with a wide variety of disabilities to obtain support, access to health information and develop mastery of navigation of the online world using different tutorials. Resulting from her multiple visits, friendships emerged prior to commencing the research journey. Reflecting as a researcher, she sheds light on some of the challenges she encountered during the research process and how interacting with people from Virtual Ability Island altered her perception of the meaning "designing for people with disabilities".

The methodology used is unique: a fusion of autoethnography, phenomenology, and narrative research combined with Tillmann-Healy's Friendship as a Method. Using reflective journaling,

casual conversations, field notes and virtual snapshots, the researcher's thoughts parallel those of the disabled residents of the Second Life community. The Virtual Ability Island residents took the researcher on a visual, emotional and textual journey, sharing their experiences of Second Life. Although, the purpose of this study was intended to create dialogue, as well as evoke emotions, the underlying purpose was to demonstrate that alternative research methods can be considered as professional tools. These tools highlight active listening, emphasize ethical reasoning, and encourage critical self-reflection, while focusing on empathy, compassion and relationship building with the participant(s). They also aid in the interaction and gathering of data from people with disabilities in virtual environments such as Second Life.

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To mom, thank you for not letting me starve! Your home cooked meals provided the necessary brain fuel to accomplish this dissertation.

Finally, to my husband Richard, where should I start? I guess with an apology for walking around the house in the middle of the night and pulling those "all-nighters", disrupting your sleep cycle, setting the alarm before the sunrise and leaving journal articles and books throughout the entire house, resulting in the so called "trip and fall hazard". Thank you for putting up with my sleepless nights, and listening to the constant babbling about avatar Nia Cyannis who became a staple during breakfast, lunch and supper. Most importantly, thank you for encouraging me to push forward, even when I thought it was time to give up, you always reminded me of my second love, learning.

Dedicated to my late father, Theodore Tzemopoulos.

"Your guiding hand will remain on my shoulder forever."

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CHAPTER 1 FIRST STEPS

Our greatest instrument for understanding the world –introspection…

-Walter Lippman (1889-1974)

Introduction

Over the years, a number of researchers have examined different areas pertaining to instructional design. In the majority of instances comparative studies, surveys and discussions on different models and theories applied in instructional design practice (Visscher-Voerman & Gustafson, 2004; Gustafson & Branch, 1997; Edmonds, Branch & Mukherjee, 1994; Andrews & Goodson, 1980) as well as instructional design strategies and tools for distance education (Zheng & Smaldino, 2003; Johnson & Aragon, 2003) have significantly been popular topics of research. Alternatively, studies have also raised

the question of how instructional design should be defined along with reports on multiple

job tasks performed by instructional designers (Kenny, Zhang, Schwier & Campbell,

2005; Cox, 2003; Liu, Gibby, Quiros & Demps, 2002; Allen, 1996; Rowland, 1992).

Findings from these studies repeatedly highlighted that academics, practitioners and

students are often challenged to describe their roles, find common definitions or establish

a link between research and practice (Bichelmeyer, 2004).

Finally, some researchers (Driscoll, 1985; 1991; Hlynka & Belland, 1991;

Streibel, 1991) have also suggested, "alternative paradigms in the field of instructional

design and technology that goes beyond the traditional positivistic paradigm" (You,

1993, p. 17, Willis & Wright, 2000). Results from this have demonstrated "worry and

concern from some authors" (Willis, 1998, p. 15). For instance, Merill (1996) in

referring to Reigeluth's recommendations indicated that it was a recipe for disaster while

Braden (1996) consider the idea as simply dangerous.

> In accepting the idea that instructional design is an
> art has opened a crack. Others have squeezed into
> the expanded crack. The path is an easy one. Begin
> with art. Next comes artistic license. Soon there is
> just license –total license…Art in the design of
> instruction, when applied at the expense of craft
> and/or science would be disastrous. (p. 16)

Within various academic institutions which offer graduate programs in Instructional Design, Educational Technology or Instructional Systems Programs, numerous questions have been raised by faculty members attempting to understand how to develop an "appropriate fit" which will align students learning and the curriculum to practical skills requested by future employers (e.g., Larson & Lockee, 2009; Larson, 2004; Cox, 2003; Julian, 2001; Rowland, Parra & Basnet, 1995). Competency standards such as those developed by the International Board of Standards for Training, Performance and Instruction (IBSTPI), first developed in 1986, later revised in 1993 and most recently in 2000, have significantly played a major role in determining the core competencies deemed as essential and advanced for students. Tennyson (2001) indicated that instructional designers need to achieve competencies in three core areas, including educational foundations, instructional design development methodology and instructional development process. Furthermore, future employers and faculty members agree that "drawing upon a variety of disciplines (e.g. learning, communications and systems theories) instructional designers must use a set of highly interrelated behaviors involving extracting, analyzing, organizing, and synthesizing information" (Seels & Glasgow, 1998, p. 1) as well as skills in training, design and multimedia production to create instructional content which is efficient and effective. However, according to Rasmussen (2002) the major competencies required for instructional design technology (IDT) professionals are constantly changing because IDT continuously matures and develops as a profession, yet "many educational technology students, are taught only one instructional design model while in graduate school, the vast majority of them are taught the traditional model" (Willis, 1998, p. 5). Yet, Agnostopoulou (2002) points out that some instructional designers attempt to work in less

3

conventional manners when designing. She states that some professional instructional designer tends to work with greater creative flare, adding that "no two instructional designers will end up with exactly the same instructional strategies, as solutions, to the same problem" (p.2). Furthermore, adding that there is a significant importance in carrying out the design as a shared activity which involves both the consultation and consensus of "those who design, those who implement the design, and those who use the final product" (p.2). In Kenny et al. (2005) a literature review was conducted to clarify whether instructional designers use traditional, process based instructional design models. Results from the review revealed that the design models were used in a flexible manner, and that instructional designers "engaged in a variety of other tasks that are not reflected in instructional design models such as communication skills, research and team building/collaboration" (Sumuer, Kursun & Cagiltay, 2006).

There is no denying that instructional design programs adequately prepare students for the many functional and technical tasks they will undertake. Specifically, they are preparing students to undertake the "problem-solver archetype described in a number of readings (Sugar & Betrus, 2002; Dick, Carey, Carey, 2000; Seels & Glasgow, 1998; Smith & Ragan, 1999). Here, "the designer must utilize his or her detective or front end analysis skills to come up with an appropriate solution. Similar to a car mechanic diagnosing a client's rattle in a car, both the mechanic and designer must employ problem solving skills and develop a strategy to come up with an effective, prescriptive solution" (Sugar & Betrus, 2002). They "will apply the design models they learned in their graduate programs. Others might have to apply models used by the organization where they work or they will have to design models to fit the situation" (Wager, 2004). They are given an instructional design

toolbox, filled with tools that will allow them to conduct "learning task analysis, learner analysis, learning activities (strategies) design, and learning assessment" as described by Wager (2004). Yet, as Professor Elizabeth Boling from Indiana University, Department of Instructional Systems Technology stated at the 2004 Association for Communications and Technology Conference (AECT) in Chicago, many students have the ability to master new skills and concepts, in other words use what is given to them in the toolbox, yet

> seem to be timid about venturing outside the design process. Some clearly expect the process to yield acceptable results simply because it has been followed…They often ignore their own intuition about what might be important in a design situation, and sometimes set aside very thoughtful observations because they cannot cite an author who has validated those observations previously. They have well-functioning imaginations but frequently do not apply them to problem solving, and when asked why not, they reply that they weren't sure a particular innovative approach to the problem would be valid instructional design practice…They invest sparingly in the generation of design alternatives.

Thus, in light of this comment, the present study, written in the first person point of view, is intended to generate thought and/or heighten awareness. By no means, does it disregard or disrespect current practices of instructional design; instead, it attempts to shed light on issues which are less examined, such as human factors, ethical practice, self-awareness and personal experiences. Hence, by reflecting on these issues, it helps raise a number of questions, including whether it is necessary for Instructional Design, Educational Technology or Instructional Systems Programs to reconsider their pedagogical curriculum by exploring alternative design fields as a starting point. Additionally, it examines whether there is a significant importance in enhancing the graduate toolbox by providing students with access to courses, which focus on critical instructional design issues, and promote introspection.

The best journeys are not always in straight lines

-Anonymous

Statement of Problem and Purpose

Most of the literature on instructional design and educational technology places its main emphasis on competencies, discrete skills and various activities performed by instructional designers. Furthermore, when the literature does present critical topics in instructional design, the central focus still highlights the career preparation aspect while placing the critical elements in the background. A review conducted by Voithofer and Foley (2002) indicated that a number of graduate courses and programs in instructional design do not explicitly address socio-cultural issues in many of their courses and those that do, offer these courses as electives, by other departments in arts and science. Additionally they state that "instructional design textbooks […] tentatively indicate

small sections to issues of race, class, and gender in relation to instructional design however do no provide adequate strategies for taking these difficult to define factors into consideration in the design process" (p.2). Thus, one of the main concerns is whether instructional design courses and programs are adequately preparing students to face some of the socio-cultural challenges they might encounter at their future internship or employment sites. Henderson (2007) and Young (2008) have pointed out that the growing demands for distance education and e-learning courses has increasingly changed the target audience, making the learners, users and employees who are implementing the courses more culturally diverse. Therefore, even though the career-centric topics are important, with regards to preparing students for their professional roles and informing teaching staff on the required needs in designing an appropriate curriculum for future instructional designers, they often neglect to answer the diverse questions associated to the socio-cultural issues in instructional design. In 2008, Schwier, Campbell and Kenny indicated that the transformative and critical power that instructional designers can demonstrate at the institutional, corporate, societal and interpersonal level are often undervalued and neglected. Furthermore, there are concerns that many instructional designers attempt to separate their individual values, philosophies, principles and prejudices, from their professional work, hence fearing to explore alternative design models from other disciples or even avoiding to go along with their own intuition when designing.

Over the course of my graduate studies in Educational Technology, I often found myself grappling with the central meaning of being an instructional designer. Caught up in models and theories which addressed self-efficacy, prior knowledge, transfer, motivation,

and a strong focus on a system approaches to design, I had a difficult time accepting my future professional role as an instructional designer. I often asked myself whether efficiency and effectiveness was all that we cared about. Without denying that the models and theories, which I learned about in my courses, are equally important in my professional toolbox, I felt that I was unable to complete the instructional designer tripartite responsibility as described by Thomas (2003). This tripartite is a combination of good theory, good design and doing good. What does doing good mean? It cannot be described as one single word or sentence but it is a composition of words and thoughts that places the end-user at the forefront of the design process, in particular being sensitive to their needs, while reflecting on personal bias and considering the cultural lens of the world. Thus, in re-examining the course of my academic work, the internship site I selected, as well topics (e.g. disability studies, digital divide, assistive technology, ethical practice, user centered design) I tackled throughout my courses, the personal meaning of instructional design is about helping people achieve their potential. Thus, I align myself to Gibbons et al. (2008) description of an instructional design:

> Like doctors, lawyers, and psychotherapists, we should see ourselves as belonging to a helping profession with an ultimately ethical central concern…The designer is making more than just materials and instruction…The designer is creating an ethically founded and socially responsible experience. (p.128)

In this struggle to find a meaningful identity as an instructional designer, I turned to an alternative design model, a person/user-centered approach found in human factors engineering, (a subfield of environmental psychology and instructional design in tandem) to reflect on diverse elements which I strongly believe should be a part of every instructional designer's toolbox, especially for those who have an interest in designing for people with disabilities.

Hence, through a personal journey of deep reflection, analysis of past works, journal writings (derived from my experiences in the Educational Technology program), as well as this study (of the residents of a virtual environment), I synthesized different socio-cultural elements (centering on people with disabilities) within a virtual space and communicate directly to my reader of my experiences and thoughts of placing the person/user in the forefront of my instructional design process. My credo is designing for user "comfort", design for user "care" which could possibly maximize the learning experience for people with disabilities in 3D virtual environments.

Past studies have examined the use of distance and e-learning with people who have disabilities, describing many of the World Wide Web Consortium (W3C) standards as essential elements of interface design (i.e. alternative text for image, keyboard input accessibility, transcripts for podcasts, input assistance and navigability). In doing so, the fundamental rights of access to information as well as education are often assumed to be met. Much has been said in the past regarding interface design but little has been said regarding the interrelationship between the physical (virtual) environment, user emotions and the disabled learner. As spaces of learning are changing, going from the once traditional classroom environment to that of the virtual space, there is a growing need to

understand how people with disabilities feel (level of comfort/emotional flow) within the "pixelated" environment. Many questions have set the thought process. These include: What does the physical (virtual) space mean to the disabled user? How important are aesthetical responses in virtual spaces for users with disabilities? How does the physical (virtual) design of space affect behavior? What elements within the physical (virtual) space draw the disabled user to remain longer or consistently return? What can we learn as instructional designers by understanding emotions of people with disabilities who frequent virtual spaces? How can understanding user emotions (i.e. anxiety, discomfort, hopefulness, comfort) transcend into our design practice, which may assist in the maximization of learning for users with disabilities?

Acting as a surrogate for real life environments, virtual environments allow people with disabilities to participate in activities that would not be possible in real life, exploring regions that are bound by diverse aesthetical experiences, various stimuli and sociality. However, there are a number of questions that have remained unanswered and can equally contribute to the improvement of the instructional design practice while fostering the idea of "doing good" for the disabled user. Given the complexity of the environment being studied, a multidisciplinary approach is ideal. In this study, I concentrated on adult users who have various real life physical and/or psychological disabilities and who are active residents in Second Life. As a resident myself, for a number of years, I had the opportunity to meet some of the 700 members of Virtual Ability Island in Second Life. This island enables users with a wide variety of disabilities to obtain support, access health information and develop mastery in navigating the online world, using different tutorials. Through the course of my visits, participation in workshops, discussion groups, and conferences, I have

developed virtual friendships with these people. They showed me places they like to visit and activities they like to partake in. Reflecting as a researcher, I would like to shed light on how working and interacting in real life and virtual environments (via Second Life) with people who have different disabilities has allowed me to consider my role and actions as an instructional designer. Secondly, by critically examining the merger between user-place-emotions-learning, I hope that this will initiate a foundation for further research in instructional design practice and enhance the development of online learning environments for disabled users in turn, potentially maximizing learning opportunities.

Emerging Goals

The purpose of this study was as follows:

1. Past literature in instructional design has yet to examine human factors. Human factor design is a subfield of environmental psychology and instructional design in tandem. This study brings the two design models together; demonstrating how human factor engineering can inform current instructional design practices and create a shift in the current approach moving towards one which is person/user centered. Using an autoethnographic voice, I reflected on how relationship building and studying communities of people with disabilities has manifested into the development of my instructional design identity and what it means to be a user sensitive instructional designer.

2. It addresses the question of whether it is necessary to re-examine the current instructional design model, and consider the importance of alternative design models to shift the practice towards accessible and ethical terms.

3. Demonstrate how autoethnography (as critical reflection) can add value to the academic and professional development of an instructional designer by following concepts such as "knowing thyself, to understand others" and the importance refection as a tool to inform practice, deal with sensitive issues, cope with challenges, and develop personal beliefs.

4. Past literature has yet to examine the interrelationship between the disabled user, virtual space, level of comfort/emotional flow and the aesthetical experience in tandem. Given the lack of literature, a phenomenological approach is used in pursuit of understand complex human emotions, within a complex environment.

In the exploratory stages of this research project, this helps to develop new models and theories for instructional design research particularly in designing for people with disabilities as well as designing for human experiences.

5. By merging two qualitative research methods, autoethnography and phenomenology, they are used as professional tools that highlight best practice methods in instructional design, particularly for those professionals who have a keen interest in designing for the disabled community. Additionally, as a tool this highlights active listening, emphasizes on ethical reasoning, encourage critical self-reflection, while focusing on empathy, compassion and relationship building with learners.

6. Finally, given the limited number of courses in instructional design that focus on socio-cultural issues (designing for social change), the emerging topics from this study serve both as a resource and foundation for the possible development of a Special Issues in Educational Technology course.

Research Questions

Taking a multidisciplinary approach, the answers to the following questions were interwoven throughout this dissertation:

- How do my past and present experiences with people who have disabilities influence my need to seek out an alternative design model, would enhance their needs, as well as emphasize the development of my identity as a "helpful instructional designer"?

- How can my personal experiences advocate socio-cultural issues in instructional design and assist current students to think outside the current instructional design paradigm?

The following questions contribute to the theoretical basis of instructional design:

- What is the interrelationship between the user-virtual space-aesthetics-emotions?

- Do particular aesthetical design qualities of the virtual space affect emotional well-being/emotional flow of online disabled users?

- In designing instructional online content for disabled learners, which aesthetical elements will possibly foster emotional comfort and flow, and which in turn maximize the learning experience?

- If aesthetical elements in the design aspect of virtual worlds for learning evoke emotions of the disabled user, then what ethical implications does this have on the over instructional design practice?

- What is the meaning of the aesthetical space to the disabled resident of Second Life?

Terminology

The following terminologies appear throughout the study. Delineation of the terminology is an essential part of this research, as many of these words may hold multiple meanings.

Autoethnography: An ethnographic inquiry which uses autobiographic materials of the researcher as primary data, it emphasizes cultural analysis and interpretation of the researcher's behaviors, thoughts and experiences in relation to others in society (Chang, 2007).

Disability: Disability is a complex, multi-faceted term with subjective and objective characteristics. Defined differently by person with disabilities, medical practitioners, the general public and advocacy groups, three major classification perspectives have emerged: impairment perspective, functional limitations perspective and ecological perspective. The impairment perspective follows a medical model in which disability is defined as a disease, abnormality, personal tragedy or disease. The functional limitations perspective is an extension of the impairment perspective but also includes the non-medical criteria of disability such as the physical and social environment. The ecological perspective is the most recent development, which defines disability in terms of the interaction between three factors: environmental factors (e.g. social context in which the person lives), life habits (e.g. the person's daily activities) and personal factors (e.g. age, sex and cultural identity) (Government of Canada, 2003, p. 6).

Environmental Psychology: Is a branch of psychology, which examines the interrelationship between environments (which is broadly defined to include both real and virtual settings), and human behavior (De Young, 1999).

Friendship as a Method: Calling for inquiry that is open, multi-voiced, and emotionally rich, friendship as method involves the practices, the pace, the contexts, and the ethics of friendship. Researching with the practices of friendship, first, means that although we employ traditional forms of data gathering (e.g., participant observation, systematic note-taking, and informal and formal interviewing), our primary procedures are those we use to build and sustain friendship: conversation, everyday involvement, compassion, giving, and vulnerability (Tillman, 2003, p. 8).

Invisible disability: An umbrella term, which includes hidden disabilities (non-visible) or challenges that are mainly neurological in nature. May also include emotional and behavioral difficulties such as agoraphobia (Matthews & Harrington, 2000).

Mindfulness: The awareness that merges through paying attention on purpose, in the present moment (reflection in action), and non-judgmentally to the unfolding of experience moment by moment (Lovas et al. 2008).

Narrative Research: An approach in research that is concerned with the study of the human experience. It seeks to gather stories; it is based on the paradigm of personal knowledge and subjectivity, and places emphasis on the importance of personal

perspectives and interpretations. It allows the researcher to acquire insight into people's motivations and actions, and creates a bond between the researcher and participant.

Phenomenology: The phenomenological approach in research is concerned with the study of the human experience. It seeks to describe rather than explain; it is based on the paradigm of personal knowledge and subjectivity, and places emphasis on the importance of personal perspectives and interpretations. It allows the researcher acquire insight into people's motivations and actions (Groenewal, 2004).

Second Life Residents or Residents: An alternative name given to community members of Second Life.

User Sensitive Inclusive Design: An approach to design which does not necessarily rely on design guidelines and standards, instead encourages the designer to develop an empathic relationship with the end user, ensuring that the end user is central to the design process and accompanies the designer throughout the process from start to finish (Newell, Gregor, Mogan, et al., 2010).

CHAPTER 2 LITERATURE REVIEW

If nothing ever changed, there'd be no butterflies.

-Author Unknown

As mentioned in the introductory section, my philosophy for instructional design is based on the concept of designing with care and comfort, which could maximize the learning experience for people with disabilities. Spaces for learning are changing and educational delivery methods are no longer situated within the confines of brick walls. Access to technology is the foundation for classrooms built on pixels and no longer simply on paint. The learning space has multiple meanings: informal, open, and digital. In 2011, the US National Council on Disability: Living, Learning and Earning published a research document exploring "the utility and accessibility of six key digital technologies that provide opportunities for people with disabilities" (p. 15). Within these six vectors or pathways, immersive digital environments were included. Defined as "electronic systems that involve interactions with a user interface to generate feedback on a display device" (p. 50), these spaces afford a window of opportunity for users with diverse disabilities. A space such as Second Life acts as a surrogate to real life environments. Immersive environments allow people with disabilities to participate in activities that would not be possible in real life, exploring regions that are bound by diverse aesthetical experiences, various stimuli and sociality. Knowing this, instructional designers are designing content for these spaces, yet with limited resources. Given the complexity of the environment, as well as the complexity of the users' needs (some physical, some psychological), extracting literature

that goes beyond the educational technology umbrella seems to be the most fitting. Thus, approaching the literature from multidisciplinary perspectives helps build a solid foundation that supports the critical examination of user-place-emotions-learning. Additionally the specific content selected for the literature review aims to satisfy the following needs (adapted from Ridley, 2008):

- Demonstrate which theories and concepts provide the foundations for the research.

- Introduce relevant terminology that is associated to the research.

- Demonstrate the current gap within the field of educational technology and disability research.

Human Factors

Introduction

A considerable number of well-known authors, (Discroll, Gagné, Jonassen, and Reigeluth) in the field of instructional design, have written important works illustrating both the theoretical and conceptual models for improving learning and performance in academic and job related environments. In 1983, Braden and Sachs conducted a nationwide survey of 300 instructional designers. From a list of 139 instructional design books, they requested participants to select those, which they felt were the most salient for a diverse number of uses such as, "personal use, textbook, reference for practicing developers, and readings for a client not knowledgeable about instructional design" (p.7). Additionally, the participants "were asked to indicate topics which they would like to see new books published" which included practical instructional design tips and instructional design for businesses and industries (p. 10). Most recently, Ouimette, Surry, Grubb and Hall (2009) undertook a similar study. Consisting of 77 instructional designers and

technologists from the United States, the participants were surveyed to determine which books were the most highly consulted during their practice or considered relatively important in their field. Although the researchers indicated that this was a fairly small, non-representational sample size, and further research needed to be undertaken, the study did list the top 10 books which included: Carey, Carey & Dicks, 2005; Gagné, 1985; Gagné, 1992; Gagné & Driscoll, 1988; Gagné, Wager, Golas, & Keller, 2004; Jonassen & Harris, 2003; Kirkpatrick & Kirkpatrick, 2006; Reigeluth, 1983; Reigeluth, 1999; Smith & Ragan, 1999. Incidentally, some of the authors who were included in the most recent list, were deemed as fundamentally important and "necessity in every instructional designer's or technologist personal library" (Ouimet et al., 2009, p. 731) were also present 25 years earlier in Braden and Sachs (1983). Given that a number of these important books are based on theoretical and conceptual models in instructional design and 25 years ago instructional designers were expressing their interest in the examination of new topics in the field, should instructional designers reexamine their personal libraries and consider adding new books related to human factors engineering (HFE)? Should they take better care in critically reflecting on their design principles and practices, as well as examining human characteristics which might improve their instructional design practice and create a shift towards the "ethics of care, based upon the interrelatedness of individuals and the assumption that, at least to some extent, persons are obliged to attend to particular others" (Damarin, 1994, p. 36)?

To date, few studies have been carried out to illustrate "the clear similarities between instructional design and other fields of design" (Rowlan, 1993, p. 80). Furthermore, there has been little research clearly supporting the proposed idea that

Human Factors Engineering can contribute to the field of instructional design. Thus, through the examination of definitions, historical foundations, theories and methodologies, a unifying approach is taken, in an attempt to address how instructional design and human factors engineering are quite similar. Additionally, to consider how it might improve the current practice of instructional design, some shortcomings are addressed using various examples. The first part is preceded by a comprehensive definition of Human Factors Engineering.

Common Origins

What is Human Factors Engineering? What is Instructional Design?

Human Factors Engineering is a complex, multidisciplinary term drawing from such disciplines as psychology, medicine, industrial design and engineering. Due to the complexity, the associated definition has been subject to various debates, as illustrated by Licht, Polzella and Boff (1989) in *Human Factors, Ergonomics, and Human Factors Engineering: An Analysis of Definitions*. Their findings indicated that "a formally endorsed unified definition of the field does not exist" (p. 2) and terms such as human factors, ergonomics, antropotechnics, applied experimental psychology, psycho-technology, engineering psychology, and industrial ergonomics are being used interchangeable. Additionally, the researchers pointed out that in the technical literature, authors are developing new words or an amalgamation of words which is creating some confusion amongst those interested in the field, having the readers ponder "if the 'new' expression means the same as the term they have seen before, almost the same, or something completely different" (p. 3). Findings from the study illustrated that even

though authors and researchers are using the terms interchangeable, there is a suggested

difference. For instance, the term human factors engineering maintains "an overwhelming

emphasis on design as the medium to effect change on an end-system", examining

potential issues that could hinder human performance and heighten human error (p. 13)

while ergonomics study human work activity in relation to human capabilities and human

function. However, maintaining that the overall goal of this paper is to clearly illustrate

how human factors engineering may contribute novel ideas to the current practice of

instructional design, the definition for human factors engineering and ergonomics will be

combined from a number of sources (Chapanis, 1999; Considine, 1983; Dhillon, 1986;

Grandjean, 1986; Human Factors and Ergonomics Society, 1989; International

Ergonomics Association, 2003; Kroemer, 2006; Stramler, 1993; Vincente, 2004), and

include research on empowerment in online support groups (Barak, Boneil-Nissim &

Suler, 2008). The following definition (based on a personal perspective) is used to

illustrate the term human factors engineering. The underlined text reflects that which is

central to my instructional design philosophy:

> Dedicated to the *betterment of humankind, promoting a*
>
> *holistic approach,* making the *"user"* its focal point, a
>
> human factors engineer conducts research regarding *human*
>
> *psychology, social/environmental, physical and biological*
>
> *characteristics.* As a scientific disciple, it is *concerned with*
>
> *the understanding of interactions among humans and other*
>
> *elements of a system.* Through a process of maintaining

data/information obtained from the research and working to

apply that information with respect to the design, operation,

or use of products or systems. The goal is to optimize

human performance, efficiency and effectiveness, health,

safety, and or habitability acceptance of the resultant

design. Other areas of interest include: personnel selection,

training principles, aid for job performance, lifelong

learning, workload, fatigue, capabilities, motivations,

desires, situational awareness, usability, user interface,

learnability, attention, human performance, man/machine

relations, individual differences aging, accessibility and

human error.

As Dix, Finlay, Abowd and Beale (1993) have indicated, the skills of a human factors engineering are interdisciplinary:

The ideal designer would have the expertise in a

wide range of topics: psychology and cognitive

science to give her the knowledge of the user's

perceptual, cognitive and problem-solving skills;

ergonomics for the user's capabilities; sociology to

help her understand the wider context of the

interaction; computer science and engineering to be

able to build the necessary technology; business to

be able to market it; graphic design to produce an

effective interface presentation; technical writing to

produce the manuals; and so it goes on. (p. 3)

Despite, the lack of research illustrating the many similarities in the field, a

review of literature by Kenny, Zhang, Schwier and Campbell (2005) has clearly indicated

that instructional designers need to similarly demonstrate various skills deemed

traditional. This includes, "determining instructional strategies and designing goals and

objectives" and non-traditional, such as communication in visual, oral and written

formats (Allen, 1996; Cox, 2003; Liu, Gibby, Quiros, & Demps, 2002; Rowley, Bunker

& Cole, 2002), marketing (Cox, 2003), media development and graphic design (Cox,

2003; Rowley et al., 2002), project management (Allen, 1996; Bichelmeyer, Misanchuk,

& Malopinsky, 2001; Cox, 2003; Cox & Osguthorpe, 2003; Rowley et al., 2002),

supervision of personnel (Cox, 2003), teambuilding/collaboration (Bichelmeyer et al.,

2001; Liu et al., 2002; Rowley et al. 2002; Glacken & Baylen, 2001), and technology

programming (Bichelmeyer et al., 2001; Liu et al, 2002). Furthermore, as Smith and

Ragan (1999) pointed out in their opening paragraph answering the question "*What does

instructional mean*" they make a clear comparison between an instructional designer and

an engineer. "Planning work based on principles that have been successful in the past, the

engineer on the laws of physics and the designer on the basic principles of instruction and

learning" (p.8). Thus, the question remains, why are instructional designers overlooking

other design fields, from which they can learn from or improve on what they are currently

doing?

Historical Development

The multiplicity of human factors engineering has generated much controversy regarding its evolution through the years. O'Brien and Meister (2001) stated, "to assign a chronological beginning would be difficult, if not impossible. Indeed the origin of human factors has been a matter of recent debate" (p. 5) and the examination dates back to pre-World War I, and as far back as the Middle Ages where "recording the pattern of arrows striking a target set a measured distances from archers helped the 13th century developers determine the optimal length and curvature for the weapon, considering an average man's height, reach and draw strength" (O'Brien & Meister, 2001, p. 7). However, given that one of the main objectives is to illustrate the interrelatedness of human factors engineering and instructional design, the historical examination will begin from World War II, in which both supported military development.

Stemming out of the growing demands to improve both efficiency and effectiveness in the military, human factors engineering, like instructional design originated during World War II (Gagné, 1987; Reiser, 2001b; Wickens & Hollands, 2000). For instructional design, this was a period where psychologists and educators such as Briggs, Flanagan and Gagné, were called upon to apply different research methods and instructional principles to design and develop materials for the military services (Reiser, 2001b). Given the increasing lack of success in a number of flight training programs, measurements of "general intellectual, psychomotor and perceptual skills" (Reiser, 2001b, p. 58) were assessed using paper and pencil tests to determine appropriate candidates for the programs and redefined how training materials were developed. The

use of audiovisual media, such as film was being employed to train civilians prior to their entrance into the field. Saettler indicated that "most training directors reported that the films reduced training time without having a negative impact on training effectiveness, and that the films were more interesting and resulted in less absenteeism than additional training programs" (as cited in Reiser, 2001a, p. 57). In the United States, two growing demands called upon the need for human factors engineering. First, prior to World War II little emphasis was placed on the worker. The growing demands for efficient productivity enforced Taylorism. Taylorism, a term derived from Frederick Winslow Taylor (1856-1915), a mechanical engineer who studied workflow, stipulated that enforced standardization methods and enforced adoption to work conditions would increase overall productivity. His beliefs led to a number of studies on time and motion, observing correct movement and steps made by workers unloading iron from rail cars and a closer examination of tools, such as the shovel which was redesigned to increase shoveling capacity by coal workers. As output rendered an increase in the owner capital, worker safety along with a lack of monetary compensation increased frustration and resistance in the workforce leading to the growing failed response to Taylorism (Montgomery, 1987 Weisbord, 1987). Thus, this created a shift, where human capabilities and limitations, in addition to environmental conditions in the workspace were examined more closely. Secondly, as technology was evolving at a fairly rapid rate; there was an increased challenge for pilots to adapt to aircraft equipment, interfaces and controls. These poorly designed elements, amongst other factors increased the number of aircraft incidents (Broadbent, 1958) and accidents with artillery system (Fitts & Jones, 1947). A change from the "informal process of trial and error" (O'Brien & Meister, 2001, p. 6) led to the

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closer examination of physiological and psychological characteristics in relation to human/technology interaction (Meister, 1999). As technology was advancing in the military, the corporate sector was seeking out possible methods to advance its use as well. One definite contribution to human factors engineering, which could shed light on a closer examination of the design of learning spaces, was the study of the effects of lighting and level of humidity within the environment in relation to work productivity at the Hawthorne Electric Company. "Inexplicably worker output and job satisfaction generally increased regardless of the increase or decrease in illumination" (Franke & Kaul, 1978, p. 624). Thus, the term the Hawthorne effect was derived, illustrating that behavior was altered due to the presence of the observers (Franke & Kaul, 1978).

Post-World War II and thereafter, a number of research labs including the MRC Applied Psychology Unit (Cambridge), the Air Force Personnel and Training Research Center (USA), and the Army Research Institute for Behavioral Science (USA) continued their efforts to examine the application of human factors engineering, particularly its application in the field of medicine (O'Brien & Meister, 2001). They sought methods in training improvement and the design of safer medical equipment to reduce medical human error following the radiological mishaps at the East Texas Medical Centre in 1986 and the iridium source accident at the Indiana Regional Cancer Centre in 1992. (Reason, 1995). Additionally, numerous private companies sought out human factors design and development procedures for computer software applications and hardware, adaptive technology, the Internet and nuclear power plants. While in instructional design, the use of media tools for military training led to supplementary research programs with "concentrated efforts to identify principles of learning that could be used in the design of

audiovisual materials" followed by additional "media comparison studies"(Reiser, 2001a, p. 57). However, a variety of researchers (Levie & Dickie, 1973; Clark, 1983; Kozma, 1994) criticized Schramm's (1977) findings that reported, "regardless of the means of presentations, students learned equally well" (as cited in Reiser, 2001a, p.57). Levie and Dickie (1973) were arguing for a "near to" human factors engineering approach, even though they did not identify it as such. They felt that it was necessary to examine the "media attributes" (Sampath, Panneerselvam, & Santhanan, 1984, p. 84) described as:

- pictorial representation - photographic or graphic

- factor of size - projected or non-projected

- factor of color - black and white or full color

- factor of movement - still or motion

- factor of language - printed works or oral sounds

- factor of arrangement - visuals in linear order or in variable order by user choice

- sound picture relationship - silent picture or picture with sound

Clark (1983) believed that it was important to place all efforts in the examination of instructional methods. As he considered media to be a "mere vehicle that delivers instruction but does not influence student achievement any more than the truck that delivers the groceries and causes change in our nutrition" (as cited in Clark, 1994, p. 22). In 1994, Kozma reexamined Clark's question. In doing so, it appeared as though he was aligning his question to issues found in human factors engineering. His question, "does media influence learning" was transformed to "in what ways can we use the capabilities

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of media to influence learning for particular students, tasks and situations" (Kozma, 1994, p. 18). This question seemed to embrace human-machine interaction approach.

As a number of researchers (Rasmussen, 2000; Brewer & Hsiang, 2002; Cacciabue, 2008; and Vincente; 2008) have proposed that human factors engineering has indiscreetly been called upon to resolve different issues, and has moved quietly into diverse aspects of human life, they are also questioning its future direction. Thus, there is a necessity to examine its theoretical background more closely in order to gain a deeper understanding of its interrelationship, while at the same time questioning the new direction.

Theoretical Approach to Development

Human factors engineering does not have an identifiable theory, but rather it is seen as an approach to application. Central to this approach, is the person characteristics: diverse age, gender, and physical conditions, which when closely examined by a designer (who has a social responsibility) gains an improved understanding of how the person interacts within the perceived system. The main objectives of this approach is to achieve efficiency (speed and effort), effectiveness (completeness and accuracy), adaptability (diverse needs and preferences), increase the level of engagement (pleasantness and satisfaction), examine error tolerance (error prevention and error recovery) and learnability (predictability and consistency), while creating a connection to human values and ethical practice. And therefore, focusing on quality of life, increased comfort, improved safety , reduced fatigue and stress, and an increase in learning/work satisfaction (Human Factors Ergonomics Society, 1989).

Briefly illustrated in the previous section, human factors engineering grew out of the discipline of psychology, specifically, the classical school of thought, and behaviorism. In the beginning, a portion of the research conducted by Watson in North America and Anokhin, Berstein and Leotov in the former Union of the Soviet Socialist Republic (USSR), simply reported on stimulus-response measurements derived in laboratory experiments, very similar to the previously mentioned study conducted at the General Electric Company in 1932. Many researchers who followed the behaviorist route did not deny any mental activity of the person being studied; however, they did not attend to other factors related to internal cognitive behavior such as the thinking process, in addition to mental states or other unobservable behavior. Hence, this provides only a small portion of understanding human factors engineering, and the environment (Hendrick, 2000; O'Brien & Meister, 2001). Furthermore, the advancement of human factors engineering was in an unstable state in the USSR and restored itself with the development of the space program. As technology was evolving, there was a careful consideration in the reexamination of approaches, that would be appropriate to understand human-machine/technology interaction, and gain a clearer understanding of erroneous behavior between the novice and expert user (Marsden & Hollnagel, 1996). Here, an information processing, input-out model was used to understand how the sensory process transferred information to the brain to create or illicit an appropriate of inappropriate response (Marsden & Hollnagel, 1996). However, human factor engineers did not feel satisfied and they commented that even though "it has a high analytic capability, it was not very good at converting field data to useful and practical tool for prediction of possible erroneous action" (Marsden & Hollnagel, 1996, p. 12). Hence, a

shift in their approach led to cognitive psychology (namely cognitive ergonomics, as there was a merger between cognitive psychology and ergonomics), how people thought and processed information, "to achieve optimization between people and their work with respect to well-being and productivity" (Long, 2000, p. 557). Instead of limiting the focus on physical endurance, strength and physical dexterity, the focus shifted to vigilance, sustained attention, problem solving, planning and reasoning (Hollnagel, 2010). Furthermore, there was an acknowledgement that people interpreted situations differently from how the designers would have expected or assumed, hence exploring the challenges of human diversity, social inclusion and equality early on (Hollnagel, 2010).

Most recently, the greater focus of human factors engineering is usability and the application of user-centeredness design, with a number of umbrella terms such as accessible design, user-friendly design, universal design, user-sensitive inclusive design, affective design and adaptable design to name a few. As the principal term clearly indicates, the crucial focus of the design practice is on the person/user within a given environment/system. Khalid (2006) and Zimmerman (2009) illustrated the importance of usability and user-centered design with emphasis on examining pleasure and emotions. Khalid (2006) pointed to the importance of maximizing positive emotions and reducing user anxieties and fears. He indicated that "any design will elicit emotions from the user and the designer" (p.416). "Poor usability will induce responses such as frustration, annoyance, anger, and confusion…A moderate increase in positive emotions will improve cognitive processing" (p.410). Zimmerman (2009) examined different types of pleasure (physiological pleasure, social pleasure, psychological pleasure and ideological

pleasure). In association to produce attachment theory, drawing from the works of

Czikszentmihalyi and Rochberg-Halton (1981), he, like them believed that

> things with which people interact are not simply
>
> tools for survival, or making survival
>
> easier…Things embody goals, make skills, manifest
>
> and shape identity…His self to a large extent, a
>
> reflection of things with which he interacts. (p. 1)

However, according to Zimmerman (2009), there are currently no guidelines that

describe how to apply this theory in the design practice. His goal was to add value and

continue the growing discussion in the field of design. A deeper examination of the user-

centered, affective design approach and its applicability in instructional design and

learning will be examined more closely in the next section.

To apply a user-centered approach, the role of power between the person/user and

the designer become nearly parallel. The person/user displays an active involvement in

the entire six step planning to implementation process which resembles that of the

ADDIE (analyze, design, develop, implement, evaluate) model proposed by Dick and

Carey (1985) and most often used in instructional design. Using an approach which is

less objective this provides the designer an opportunity, to "elicit information rather than

measure effectiveness" (O'Brien & Meister, 2001). By gathering rich details, there is an

increase in the centrality of the user/person which the designer is aiming for. An iterative

approach is taken, as the steps (see Figure 1) are examined and applied many times, with

the need for continuous improvement, the user/person provides his/her greatest

contribution during the final two steps. Unfortunately this approach has been snubbed by

others in the field of design which could potentially be one of the many reasons

instructional design has remained in its traditional realm and possibly cannot see its

potential for use in designing instruction. Hendrick, in 1996, in his presidential address at

the 40th Annual Human Factors and Ergonomics Society Meeting clearly pointed out to

the audience, that a major concern is the additional amount of time, lack of educational

training, money, resources and lack of public education (including of other types of

designers) on how to move towards a user centric approach.

> I believe we sometimes expect organizational
>
> decision makers to proactively support human
>
> factors simply because it is the right thing to do.
>
> Like mother, and apple pie, it is hard to argue
>
> against doing anything that may better the human
>
> condition, and so that alone should be a compelling
>
> argument for actively supporting the use of the
>
> discipline. In reality, managers have to be able to
>
> justify any investment in terms of its concrete
>
> benefits to the organization - to the organization's
>
> ability to be competitive and survive. That
>
> something "is the right thing to do: is, by itself, an

excellent but decidedly insufficient reason for

managers actually doing it." (p.1)

Thus, Hendrick's speech, potentially opens the doors to a number of questions

interrelated to the practice of instructional design, but also in support of a closer

examination of the role and responsibilities of the instructional designer.
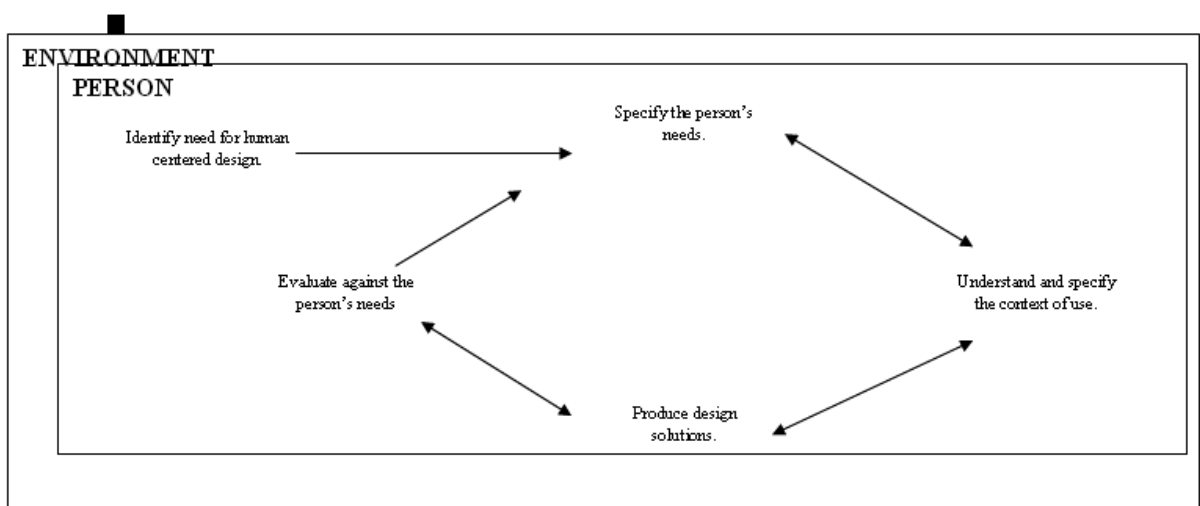
Figure 1. Design approach in human factors engineering (Adapted from HFES, 1989).

Informing Identity, and the Understanding of Diversity

Resulting from a growing evolution of technology, new media and teaching

methods have brought a dramatic change to the traditional landscape of learning

environments (Andrews & Goodsen, 1980; Braden, 1996; Reiguluth & Stein, 1983),

altering the roles of the teachers, students and instructional designers (Kenny, Zhang,

Schwier & Campbell, 2005; Schwier, Campell & Kenny, 2004). A theoretical and

practical lens of human factors engineering could improve instructional design practice and reassess how students are prepared for their future professional roles as instructional designers.

Schwier, Campbell, and Kenny (2004) have pointed out that many instructional designers are struggling with their professional identity. More specifically, they are having trouble building a positive image about their profession with respect to societal needs. It seems that their struggle is very much based on an imprecise understanding of what instructional design truly is; the ongoing debate of whether it is an art or a science. Inouye, Merrill, and Swan (2005) have indicated that there are three traditional centers to instructional design: the scientific paradigm similar to physics and geometry, involving hypotheses and measurements; the design paradigm based on artistry and creative practice; and the technological paradigm. Reflecting on the presidential address given by Hendrick in 1996 at the 40th Human Factors and Ergonomics Society, in addition to pointing out that human factors is both an art and science, he stressed that the essential role is the move towards the "betterment of society". Hendricks states, in this address that "we have the potential to truly make a difference in the quality of life for virtually all people on this globe. In fact, I know of no profession where such a small group of professionals have had such a tremendous potential for truly making a difference". Thus, the missing link in instructional design, is that other than being described as engineers, scientists and artists, designers should also take on the position of caregivers. The first step would be to take on an extensive analysis of the definition of instructional design from a set of key resources commonly used in instructing future instructional designers. The purpose of a definition is to "express the fundamental nature, meaning and

significance of a thing or a class of things…It should describe, expand, interpret, and use simile where indicated to clarify meaning". (Licht, Polzella & Boff, 1989, p. 2). What is being suggested is an extended definition, to define that which is very complex, therefore providing insight on the nature of the purpose, understanding and professional responsibility of the instructional designer in a time where so many are supporting constructivist approaches to learning and emphasis is placed on media for teaching and learning. Thus, drawing from a list of one of the most consulted books in instructional design as indicated earlier in the study by Ouimette, Surry and Grubb (2009) – namely, Smith and Ragan (1999)'s "Instructional Design" - instructional design is defined as " a systematic and reflective process translating principles of learning and instruction into plans for instructional materials, activities, information sources, and evaluation" (p.4). In considering this definition and comparing it to that of human factors engineering, the missing element is the acknowledgment of the end user, in this case the learner/student. With respect to human factors engineering the centrality of the end user is made clear in a number of definitions (see Licht, Polzella & Boff, 1989), possibly as a reminder of one's professional role and commitment.

The second impediment of Smith and Ragan's (1999) definition is that it does not advocate for empowerment or ownership of the end user, in this case the learner. Considering that there is a growing demand to shift from the teacher-centric to the learner-centric environment, instructional designers need to reexamine how they undertake the design process and their underlying professional role. As Kenny et al. (2005) and Gibbons et al. (2008) have pointed out, most instructional designers tend to follow the traditional, process based models and "do not emphasize the exercise of

learner's agency as the central concern" (p. 128). Thus, by reexamining the definition, the instructional designer, aligned with the "new" instructional design model, based on a constructivist learning principle can consider what it means to empower and create ownership for an end user/learner. In human factors engineering, there is a clear distinction that the role of the human factors engineer/designer is to maintain one's responsibility towards the "betterment of humankind" (Licht, Polzella & Boff, 1989). Whereas the process emphasizes the centrality of the user/person, the nature of change can be seen as something that adds value, empowers and creates ownerships. When considering the user-centered design system, the imposing role of the engineer/designer shifts, from what was once considered designing for, to designing with. Although, the user centered design approach has been observed in the past by Baek, Cagiltay and Frick (in Spector, 2008), there is a supporting argument which can possibly explain why instructional designers are not enthusiastic to hear about this approach. Nielson (1999) indicated that user centered design is often seen as intimidating, complex, time consuming and too expensive to implement. To add to these challenges, Baek, Cagiltay and Frick (2008) question the effectiveness of incorporating the user in the design process by considering which users will have the dominating voice, which will later be interpreted into the design. Secondly, Raskin (2000) made apparent that sometimes preferences of the user do not interpret very well into the needs and goals of creating an efficient model. Yet, in light of the diverse challenges of using a user-centered approach, it is equally important to examine how it can benefit the instructional designer as well as the end user/learner. In 2000, the Ministère de L'Éducation, du Loisir et du Sport (MELS), formerly known as the Ministère de L'Éducation du Québec devised an

education plan, known as *Success for All* to answer the growing needs and interests of a diverse population. In devising this plan, one of the major objectives was individualized educational success, which stipulated, "to give all young people a context with broad horizons, in which they are, encouraged to fulfill their aspirations and their potential…To think and develop their autonomy" (p. 11). In designing for a diverse learning population, instructional designers need to recognize that the development of a building relationship with various learners (i.e. disabled, and culturally diverse) can broaden their instructional design toolbox or knowledge base. What does it mean to be an "expert" instructional designer, designing for the "other"? How does the selection of instructional media, reflect dominance on the "other? Although literature has yet to illustrate how the user/learner may impact the instructional designer's knowledge base or design process; a user centered approach might assist the instructional designer in reexamining some of the personal beliefs and assumptions held on specific populations, which may be reflected in the output of the design or the selection of learning media. Additionally, Pananek, a major contributor to the human factors engineering community indicated "that the very choice of objects to be designed reflect our underlying political assumptions of what we value in the world, whether it be profit and market penetration, or advancing the needs of those who are marginalized" (Knouf, 2009, p.2257). Victor (2010) indicated that instructional designers have the power to become aware of issues, whatever these issues might be, and implement design practices to address these issues. For instance, in aligning a user centered approach to cultural sensitivity, "the designer must respect the culture of the learners and provide instruction that does not attempt to impose a dominant culture but rather allow the learners to learn in the context of their own cultural situation"

(Victor, 2010, p. 4074). In moving towards a user centered instructional design approach, what is being suggested is that instructional designers become critical instructional designers, ending student oppression through design or media selection. Empowering them, by moving towards a user centered instructional design approach and "encouraging them to reject any and all forms of oppression, injustice, and inequality. Teach them to use their voices to prevent silencing by authoritarian social structures" (Nicholls & Allen-Brown, n.d., p.8).

In suggesting a user-centered approach similar to the one proposed in human factors engineering, one of the main goals would be to acknowledge the diversity of the learner, and emphasize that learning is a social process. It is "no longer reasonable to restrict the learner's participation in the process of instruction to trivial interactions" (Gibbons et al., 2008, p. 127). In light of this shift, the author hopes to shed light on the need to take an ethical route towards instructional design, one that is altruistic in nature.

> As instructional designers, we must solely not be
> concerned with the effectiveness of what we design.
> We must also be been concerned with the
> consequences of our designs and with the possible
> ripple effects we leave in our wake…It is not
> enough to just make things and see if they work.
> Our broad responsibility is to inform the world with
> good solid theory while doing good to make the
> world a better place. (Thomas, 2003, p. 34)

40

In employing a user-centered approach, instructional designers may support the opportunity to reexamine the meaning of learning styles and multiple intelligences in relation to the creation of meaningful learning content for a diverse population. By no longer "grappling with the conflicting pressures of efficiency and effectiveness" the mechanical nature of how the design of instruction is often perceived will bring the human quality that some might be seeking (Gibbons et al, 2008). Thus, in proposing that instructional designers look more closely at the human factors engineering process of design, they will have an opportunity to reexamine their identity, and step away from the banking concept proposed by Freire (1997) in which "knowledge is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing" (p.72). Then and only then will instructional designers be seen in light of the description provided by Gibbons and his counterparts. "Like doctors, lawyers and psychotherapist, we should see ourselves as belonging to the helping profession with an ultimately ethical concern" (Gibbons, et al., p. 128).

Informing Practice

The field and practice of instructional design has ultimately transformed due to the growing demands for distance education and the encouragement of lifelong learning. Keeping this in mind, instructional designers are faced with the demands of reassessing their competencies and gaining not only theoretical knowledge but knowledge in developing electronic learning products and multimedia for diverse platforms. The new challenge is "to understand what makes powerful learning experiences, what technologies can be integrated to foster learning in these environments and how to do it effectively"

(Sims & Koszalka, 2008, p. 571). Thus, this encourages a closer investigation in the meaning of interactivity and aesthetics in the design of instructional content. Unfortunately, many instructional designers fail to recognize the importance of interaction and aesthetics in design. They feel that if they know how to design instructional content, they can design anything (Abbey, 2000). Yet, in taking this stance instructional designer are forgetting that when learners are interacting with "aesthetic content" this can also invoke emotion, which in turn can influence learning.

Currently, the instructional design models used to create the content of instructional media seldom include the overall aesthetic-interactive concept in the design phase. Hence, they neglect the communicative abilities and aesthetics, which can be used to create meaning and in turn promote learning. According to Streibel (1991) this void may be due to the fact that it does not fall into the scientific model of instructional design. He indicates that instructional designers cannot rely on a technical approach to design, which incidentally is quite valued in human factors engineering and its subfield of human-computer interaction.

Taking away from this subfield, we learn that there is an importance in reconsidering how aesthetics and interactivity can invoke emotion, which in turn can affect learning. There is a need to debunk the idea that emotions and cognitions should be separate. In 1902, John Dewey made a plea to educate the whole child. Centuries later, educators have yet to answer his plea. School activities and instructional content emphasize the importance of measureable outcomes, not considering the importance of well-being which ties into emotions. Yet, in part due to numerous studies in the field of

human factors engineering and its subfield of human-computer interaction product design, designers may actually be able to respond to Dewey's plea.

> New breakthroughs in neuroscience validate the
>
> assertions that cognition and emotions are unified
>
> and contribute to the control of thought and
>
> behavior conjointly and equally. Additionally,
>
> cognition contributes to the regulation of emotions.
>
> Contemporary views in artificial intelligence are
>
> also embracing an integrated view of emotion and
>
> cognition…What I am saying is that emotions
>
> aren't separate. (Khalid, 2006, p.411)

Through the lens of human factors engineering, instructional designers need to consider that they are not only creating instructional content, but an overall product which in the end, user will interact with. One clear example is that when designing instructional content for people who have disabilities, emotions can have a significant impact on the learner, in turn becoming an determine factor in adopting or abandoning instruction. In line with the guidelines proposed by human factors engineering, elements such as graphical images, color, and sound would be noted as elements that could support or hinder the zone of flow as indicated in Reily and Picard (2003). Thus, instructional designers should not overlook the guidelines proposed in human factors engineering, these are the ones that can drive attention, or stimulate anxiety, in turn hinder learning.

"Everyone who works with computers seems to develop a belief that there's some kind of actual space behind the screen, someplace you can't see but you know is there".

-McCaffery, 1988

Environmental Psychology

Reviving Environmental Psychology in a Virtual Space

Environmental psychology is an interdisciplinary branch of psychology where the main area of concern is the interrelationship between people and the physical environment. Given that it is applied in different professional disciples such as urban planning, interior design, architecture, and facility management, it is impossible to provide an accurate definition. Thus, Canter and Craik's (1981) general definition is most suitable. Defined as "an area of psychology which brings into conjunction and analyzes the transactions and interrelationships of human experiences and actions with pertinent aspects of the socio-physical surroundings" (p.2). Within this definition, six key concepts

are embedded: symbolism, territoriality, privacy, nonverbal communication, individual differences, and cultural differences (Heyman, 1978). *Symbolism* refers to the implied social meaning of the object and how it is arranged in a given space. For instance, in a traditional classroom desk settings and chairs which are arranged row by row , along with the teacher's large desk placed at the front of the classroom may have a significant meaning of authority. *Territoriality* refers to one's desire to occupy and control space. Referring to one's personal space, territoriality can be observed at a food counter in a restaurant. Often customers will place an object on the seat next to them or on top of the counter. The object is considered as a defense mechanism, creating a personal boundary beyond the physical space occupied. *Privacy* is defined as the "selective control of access to the self or to one's group" (Heyman, 1978, p.13). *Nonverbal communication* refers to one's body language and gestures, which includes facial expressions, eye gazing, hand signals and body posture. Finally, *individual* and *cultural differences* can also have a significant impact on how one reacts to the environment; furthermore, it can also have a significant influence on the first four key concepts mentioned above.

Theoretical perspectives most commonly discussed in the literature related to environmental psychology include, adaptation, stress, overload, under stimulation, adaptation level and behavioral constraint. *Adaptation* requires the person to alter one's behavior, environment or perception in order to continue living in the space. *Stress* refers to various stimuli (noise, lighting) within the environment, which may influence one's positive or negative physiological and psychological responses. *Overload* in environmental psychology is drawn from cognitive load theory, which assumes that there are limited capacities present in human information processing. This signifies that people

will focus on relevant cues and dismiss those, which are less important. *Under stimulation* denotes the behavioral results of perceptual isolation or the sensory deprivation of any of the sense modalities, which either has been created (blocking sound using headphones) or occurs naturally (a disability such as deafness) in the environment. This can be considered as positive or negative in the continuum. *Adaptation level* falls on a continuum in which a person has a set reference point which allows him/her to adapt in diverse environments. If one's adaptation level shifts to either sides of the set reference point, it may result in discomfort or pleasure. *Behavior constraints* are considered elements which could create a loss of control. Typically, the person will attempt to restore this control, however if the person is unable to do so, learned helplessness may occur.

Additional theoretical perspectives may include Lawton and Nahemov's (1973) competency-environmental model, as well as Kahana's (1975) congruence model. Lawton and Nahemov's (1973) model refers to the demands; whether physical, interpersonal or social and what the environment applies on the person. Competence refers to the person's ability to cope with the environmental demands. Kahana's (1975) model states that people seek and are found in environments which are harmonious to their needs. If the environment is incompatible with their needs, people enter into a level of stress and discomfort. On the opposite end of the continuum, a harmonious fit, results in an overall well-being.

Background

Historically, environmental psychology emerged in the early 1860's and was developed by a German physicist and philosopher Fechner who had an interest in psychophysics. As time progressed, in the late 1950' and early 1960's architects and social scientists began discussing their interests, in hopes that their shared knowledge would advance the research field. "The architects were interested in how the social sciences might help explain people's reactions to their designs. The social scientists were interested in the social consequences of the work of the design professions" (Heyman, 1978).

Research in environmental psychology is broad; much of its main concern is the design of built environments such as residences, work environments, institutional environments, recreational environments, neighborhoods, and communities. However, environmental psychology is not limited to the study of built environments; some studies also examine the interrelationship of environmental stressors on people and how people construct private spaces. Many of these studies are conducted in built environments, while some are exclusively conducted in laboratory settings. Assessment methods range from creative practice such as the use of photography to standard methods such as surveys and personality tests (Bell & Sundstrom, 1997, cited in Halpern & Voiskounsky, 1997).

In North America, and abroad, the main application of environmental psychology occurs in housing and office space (Rivlin & Weinstein, 1984). In therapeutic

environments such as psychiatric facilities, eldercare facilities, as well as prisons, the main interest is in design elements such as color, private space, and furniture arrangement (Canter & Craik, 1981). As Gifford (1997) explains, environmental psychology aims to make environments more humane, in an attempt to build a strong relationship with the natural environment.

Applying Environmental Psychology in the Learning Environment

Another environment which would benefit from the theoretical perspectives of environmental psychology is the learning environment. Traditionally, the contribution of psychology to education has focused on the individuals and the social group. However, as Heyman (1978) indicated, "environmental psychology can be of help to teachers and administrators who want to use the physical environment to support and enhance educational programs at any level" (p. 7). Unfortunately, from a historical standpoint, studies focusing on environmental psychology in educational settings have not received much attention (Rivlin & Weinstein, 1984), possibly due to the inconsistencies in data, and the multiple neglected areas in the research (Weinstein, 1979).

In Weinstein (1979), a review of various studies pertaining to the application of environmental variables in educational settings was undertaken. She examined three main areas which focused on environmental variables (seating position, classroom design, density, privacy, noise, and the absence or presence of windows), ecological perspectives (the study of natural behavior that occurs in particular environments without hypothesizing or manipulating variables), and the effects of open space school design. Findings indicated that a large portion of the studies focused on the minimum standards

for size, acoustics, lighting, and heating. These findings were possibly due to the fact there was a preconceived notion that learning depended exclusive on pedagogical, psychological and social variables, thus only a minimum amount of basic requirements would need to be respected (Weinstein, 1979, p. 577). Rivlin and Weinstein (1984) also indicated that educators and educational critics ignored two basic elements: first that "the schools and classrooms are physical entities as well as organizational units; and second, that the physical characteristics of the setting can influence both the behavior of its users and the educational program" (p. 348).

Since then, more than a decade has gone by and there is a growing interest in the field of environmental psychology, and how the learning environment may have an impact on student behavior, as well as attitude. Initially, this interest grew out of the application of student centered learning approaches, active learning environments, and the design of classroom learning centers. For instance, in designing classroom learning centers, students are provided access to various materials such as books, science kits, and art materials, which can be explored alone or with others. The physical setting of the environment is often seen as an open space, accessible to wheelchair users, may include bean bag chairs, round tables, whimsical colors, and a mix of natural and artificial lighting to benefit diverse needs and encourage different activities. Thus, to fully understand the needs of the learner, there is also a need to go beyond the traditional concepts of learning. As Sagan (2008) suggests there is a need to provide students with a safe place, a place of ownership, which is also referred to as a place of domestication. By providing this place, learners will feel secure to take on the psychological risks often

necessary for learning and where emotions are not seen as baggage, but rather linked in learning.

Despite these growing studies in the physical learning environments, and the optimistic future of the research development, environmental psychology has yet to enter the virtual learning environment. Is the lack of presence of this theoretical framework due to the struggles of defining place and space in a virtual environment? Or the absence of face-to-face interactions? As mentioned earlier, learning environments are changing and instructional designers are designing for diverse learners within different spaces, the next section may provide some answers to the questions.

Space, Place, Emotions

Blurring the Boundaries between the Real and the Virtual

Pedro Meyers, a photographer, once said that we have trained ourselves to ignore the framed experience of the television set, or the automobile windshield (White, 2002). With regards to the computer, the presence of the web has provided many people with disabilities an opportunity to place their physical selves in a non-existent, intangible virtual world, allowing them to "go anywhere, do anything, be anyone…visit remote places, go on a virtual pilgrimage and interact with people from around the world" (Cowan, 2005, p. 257). Thus, transforming the notion of space, in which "the individual, in a cybernetic space, is able to find the ideal space where the synthesis of real and the virtual produce the most comfortable dwelling place" (Mitra, 2003, p. 8). To clarify this

notion, two related concepts, space and place, drawn from the interactionist theory, need to be examined more closely. According to this theory, space exists in the abstract, using sensory perceptions (mainly visual and aural) informational inputs allow for the development of meanings, which are attributed to the space, thus becoming a place.

In a large body of literature, place is often referred to as built environments, physical sites for interactions. As interactions occur with objects and people in the environment, meanings are attached which are often rich in association and excessive emotional sentiment (Milligan, 1998). However, some argue that anonymous interactions or interactions which occur in the virtual spaces are placeless (Kunstler, 1993). As a point of disagreement, if interactions which occur in virtual environments are considered placeless then, the message attached to this, is one of oppression towards people with disabilities. In the virtual environment, "a mediated space evolves from users' sensory perceptions, awareness, and meaningful interactions…Thus, a place is such that some users' experiences are tied to it" (Goel, Johnson, Junglas & Ives, 2011, p. 751) and physicality is not necessary.

Second Life, as well as other virtual environments, are designed to resemble a seemingly real environment bounded by metaphors such as "home" and "place" (Cowan, 2005). The visual aesthetics and aural experiences of the environment is one of the many factors which may create a sense of presence or being there (Kalawsky, 2000). Research in the field of mental health have already demonstrated the potential nature of the environment and benefits of using it to treat or elicit particular emotions (see Anderson, Rothbaum & Hodges, 2001). Therefore, there is a current understanding that in a controlled virtual environment various emotions may be evoked. However, to date and

with reference to instructional design, no study has been uncovered, which examines emotions "felt" within a virtual space by people with disabilities during free exploration. By gaining this insight, additional knowledge may be provided to instructional designers allowing them to create an online experience which takes into consideration the emotionality of place. By examining the emotionality of space more closely, this may foster a positive, sustainable online learning experience for learners with disabilities.

Why study emotions elicited from being in a virtual environment?

Emotions are interwoven in the phenomenological understanding of the real, physical world, and thus it is possible to assume that emotions also share a fundamental part in virtual experiences as well. In 2002, the first objective step in assessing virtual environments for its emotional equivalence to real world experiences was undertaken by the University of North Carolina (UNC) (Morie, Williams, Dozois, & Luigi. 2005). Brooks and his team designed a virtual world which displayed a deep, dark pit. When participants were exposed to this virtual environment, results indicated that there was an increase in heart rate and skin conductive responses. In real life, when participants were exposed to an identical deep, dark pit, similar physiological responses occurred. Hence, UNC's study demonstrated that physiological responses to virtual environment were aligned with real world responses as well (Meeham, Insko, Whitton & Brooks, 2002).

Since then studies in virtual environments examine the feeling of presence, "the perception of being in a place within a digital simulation that feels as real as the unmediated world" (Morie, 2005, p.2). Some studies (Chen, Wigand, & Nilan, 1999; Koufaris, 2002; Novak, Hoffman, & Yung, 1998; Trevino & Webster, 1992; Webster,

Trevino, & Ryan, 1993) have implemented Csikszentmihalyis' flow theory, a complex construct which combines motivation, personality and subjective experience to understand computer mediated technology and human-computer interaction. Unfortunately, most of these studies single out participants with disabilities, along with their emotions, thus the current study fills this gap.

Emotions, Learning, Spaces/Places and Disabilities

Emotions are regarded as complex states of mind and body. They often consist of the physiological, behavioral and cognitive reactions which at times may be managed and directed. Cognitive reactions may be triggered when people interpret a particular environment, for instance as dangerous, or sad. Physiologically, a dangerous or sad environment may elevate a person's heart or stimulate a tear. Behaviorally, a person may respond by seeking comfort or request help. Emotions, actions, and thoughts are inseparable (Darling-Hammond et al., n.d.). A number of empirical studies have pointed to the interconnectedness of cognition, emotions, learning and behavior (Morie, et al., 2005). However, emotions have rarely been comfortably fused into the curriculum and the classroom. According to Sagan (2008) emotions are often regard as the "split off from the rationalist, cognitive task of learning" (p. 175). Furthermore, when referring to emotions and space it is often associated with a clichéd notion of femininity, thus preference is placed on examining space as a neutral entity. However, space is not neutral. "Spaces come to be implicitly recognized as more powerful, less powerful subjects/activities/courses…A sense of space is a potent part of identity" (Sagan, 2008,

p.176). As for emotions, they exist; ignoring them would go against John Dewey's plea to educate the whole person.

Within the academic milieu the importance of a positive classroom environment (whether online or offline) for learners with disabilities has not been fully discussed (Sylwester, 1994). People with disabilities may demonstrate specific sensitivities to environments and these sensitivities may elicit emotions. As such, various studies (Boekaerts, 1993; Oatly & Nundy, 1996) have demonstrated that emotional states have the capacity to influence thinking and emotions have the capability of interfering with a student's learning. Thus, if this is truly the case, instructional designers may benefit from examining the virtual experiences of disabled people. Drawing from these emotional experiences, may raise new questions and uncover alternative solutions that regard the whole person in the design process.

Virtual Environments

Second Life

Virtual environments are reproductions of the physical world, generated with the use of advanced computer graphics; the main purpose is to create a sense of presence or "being there" (Ellis, 1995b; De Kort, Ijsselsteinj, Kooijman & Shuurmans, 2003). Alternatively, the term immersive is used to replace the term virtual. According to the Webster dictionary, immersive is defined as: 1) to plunge into something that surrounds or covers, 2) to engross or absorb in an activity. Thus, a virtual or immersive environment is designed to create a bodily submersion in an enveloping medium like water, and at the same time create a state of deep cognitive absorption (Davies, 2003, p. 257). Lombard

(1995) suggests that the accuracy of the real world representation, which creates a sense of presence, results in behaviors and responses similar to real world environments. This is known as the concept of behavioral realism.

According to Loomis, Blascovich and Beall (1999) achieving behavioral realism requires three design elements: 1) a sensorial rich environment, 2) a perceptually rich environment, 3) the facilitation of natural interaction between the user and the environment. Thus, in combining these design elements virtual environments afford "meaningful interactions and walkthrough experiences more than many other types of simulations" (de Kort et al., 2003). Additionally, achieving optimal design, allows for the most favorable flow of information between the user and the virtual environment.

As described in the previous section, Second Life is an immersive, virtual environment. Official launched in 2003 by Linden Labs, in the United States, Second Life is coined as a persistent, avatar based virtual environment. Unlike massively multiplayer online role-playing games (MMORPG) such as World of Warcraft which has levels of difficulties and various challenges which need to be accomplished, Second Life is a place which is used for numerous activities, including: academic, corporate and social. Residents of Second Life use virtual representations (known as avatars), in anthropomorphic or non-anthropomorphic art forms to interact with other residents, as well as objects. Avatars are completely customizable, often thought of as papier mâché sculptures. Skins, which are physiognomic features may be purchased to modify physical and facial features, as well as ethnic and racial backgrounds. Additionally, facial animations may be purchased to simulate expressions such fear, disgust and excitement (Figure 2). Essentially, research has demonstrated that avatars are often judged for their

level of interactivity and believability. Thus, this does not limit itself to appearance, it also includes behavior, personality expressions, actions and moods (Romano, 2005).

Figure 2. Sample of physiognomic features which may be purchased and worn by the avatar.

Given that Second Life is completely developed through peer creation, many residents enter the environment specifically for the purpose of building visual objects (clothing, landscapes, and vehicles). Known as prims (primitive objects), fifteen geometric shapes are the foundation for these objects, which can be modified to more advanced organic shapes with added textures, and embedded scripting language (to create, sculpties) which triggers an event or state upon interaction (Figure 3). Thus, when an avatar raises a hand, radiating patterns of light beam out of its hand, and after a few "zips and zaps" a three dimensional shape emerges. The builders of the prims and sculpties have intellectual proprietary rights; objects may be sold for Linden dollars, the Second Life currency which is exchangeable for real US currency. Objects may also be

exchanged, which is similar to a barter system or simply transferred to another resident, and thus, given as a gift.

Figure 3. Advanced sculptie design created in Second Life.

Disabled Residents in Second Life: Identity, Place and Accessibility

With over 30 million residents (according to real time statistics obtained at http://gridsurvey.com/economy.php) dispersed throughout the various islands on the Second Life grid, encounters with users from various countries, diverse backgrounds and needs is not unlikely. Some of these users include people with disabilities. However, providing a definitive count of the number of disabled residents in Second Life is not possible. Disclosure of one's disability in Second Life is optional. One such example is that J. Wheels Carver, a comedian at the Learning Center Experience in Second Life. In real life, Jamie Jordan is a comedian and uses a wheelchair due to his Cerebral Palsy; however, in Second Life he uses a wheelchair only when entertaining. He states: "Other than on stage I don't really tell people that I am in a wheelchair unless they ask. Second

Life is the one place where I don't have to be known as my disability" (Barry, 2010, p. 3). Professor Jason Nolan of Ryerson University, diagnosed with Asperger's syndrome uses a non-anthropomorphic avatar CT Niven which is a replica of J.G. Ballard's sonic sculpture. He states that his avatar "embodies his self-perception of otherness and social non-conformism in the real world" (in Danilovic, 2009, p. 128). He adds "my avatar is something people think is strange or novel, but it is just what I look like to myself without worrying about what I'm supposed (to) look like" (in Danilovic, 2009, p. 128). Thus, some residents choose to design avatars which appear able-bodied, or in non-anthropomorphic forms, while others who have been born with a disability feel that it is a significant part of their online identity as well. Simon Stevens, known as Simon Walsh in Second Life is a Disability Consultant and Trainer with cerebral palsy. A creator of Wheelies Nightclub, a space for gathering and socializing with disabled and non-disabled users, his avatar, Simon Walsh was created with the idea of representing his real self in the virtual world. Thus, his avatar is designed with a protective helmet and wheelchair similar to his real life. He made the choice to design his avatar with the disability as he felt that "this would save time from informing people of what he calls his cultural background as a disabled person" (Barry, 2010, p. 2). He comments on the design of the avatar stating that for some, it has a strong inner meaning of identity, while for some disabled users the creation of an able-bodied avatar in an environment similar to real life is significantly used for the purpose of escaping from the disability (Barry, 2010). One such story is that of Nanci Schenkein from New York. In real life she was an event planner who was diagnosed with Multiple Sclerosis and forced to abandon her job, to later enter the world of Second Life which empowered her to design an able-bodied

avatar and recreate her career in Second Life. Thus, each resident has a different motive

for being in the environment. Some are simply there to explore the wild frontiers,

bounded by green pastures; others are there to explore the frescoes once created by

Michelangelo, Botticelli and Perugino in the highly detailed Second Life Sistine Chapel.

Finally, for some this is an opportunity to apply their real life skills and provide goods

and services as architects, brokers, detectives and live performers. However, thorough

answers may be found using the use-and-gratification model which stipulates that people

use information and communication technologies to fulfill one of several needs:

cognitive, affective, personal integrating, social integrating or tension releasing (Lind,

2009).

  For many disabled users Second Life is considered an enabling or assistive

technology which is defined as "any item, piece of equipment, or system, whether

acquired commercially, modified, or customized, that is commonly used to increase,

maintain, or improve functional capabilities or individuals with disabilities" (Section 508

Standards, § 11994.4, ¶ 4). Numerous disabled users also agree that Second Life provides

an opportunity for freedom, control and equality, something often difficult to achieve in

real life as Boellstorff (2008) points out. Winder (2008) states that most disabled users

who enter Second Life for the first time are taken by how the technology removes some

of the patronizing effects faced in real life regarding abilities. Some disabled users claim

that removing the face-to-face interaction and replacing it with an avatar, provides a

sense of anonymity. Additionally, it reduces the stress, risks and level of threat in

communication, thus decreasing the level of social isolation and exclusion (Smith,

Swanson, Haolvestott, & Duncan, 2007). Multiple locations such as Virtual Ability

Island and the Gimp Girl Community provide support, information, and social environments for the disabled community members, as well as caregivers, advocates and so forth.

Unfortunately, it is equally important to note that one of the major challenges Second Life faces at the current moment is that it does not comply with Section 508[1], of the United States Electronic and Information Technology Rehabilitation Act. Therefore, Second Life is not necessarily accessible to all. Being a highly visual platform, graphical images are unable to be read by screen readers unless the objects have been tagged with names and descriptors. People who are blind or visually impaired are faced with barriers upon their first time entry into Second Life. Arrival at Orientation Island, the first entry point where new residents experience a guided tutorial to learn how to navigate around Second Life does not include any objects with metadata. However, researchers such as White, Fitzpatrick, and McAllister (2008) have examined audio games which are videogames specifically designed for the blind and seek to advance knowledge in accessibility standards in Second Life and encourage builders to "rethink … issues of representation and interaction with spatial data" (p.7). In an article by Crow (2008), which examined four major types of disabilities (visual impairments, hearing impairments, motor impairments and cognitive impairments) and their impact on online learning, he provides a number of suggestion on how to develop online learning materials with greater accessibility. Although he is not referring to virtual environments, his concluding remarks and key concepts are equally applicable in these environments as well. Therefore, it is important to remember that online learners may be using assistive

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[1] Canada does not have an equivalent to Section 508.

technology and secondly, to apply the theory and practice of universal design (i.e. the use of alt tags, text equivalences for non-text based items or real time text for audio and video).

However, while the challenges faced in Second Life may be frustrating for some disabled members, there are a number of stakeholders who are involved in supporting the improvement of development. For instance developers of third party viewers, a software used to connect to Second Life, are considering viewer-friendly interfaces. Additionally NASA e-Education, which has an island on the grid, has considered accessibility in the overall design of their island. While many of these solutions are being addressed based on theoretical applications, there is a need to consider who the real experts of the environment are -the individuals who have disabilities and are currently accessing Second Life. This will promote the use of applied knowledge.

Education and Disability in Second Life

Over 163 universities and colleges from around the world are listed in the Second Life Academic Organization Directory. Many of these institutions use the Second Life grid for the purpose of instructing courses, providing access to admissions and offering virtual campus tours. Even though the virtual environment has been in existence for quite some time, and a number of academic institutions have chosen to explore its potential, Second Life could very well be considered a learning tool in its nascent stage, particularly for people with disabilities. Most studies which examine the topic of Second Life and disability report on "various modes of communication, socialization, and

mobility" (Carr, 2010, p. 2). Other studies such as Ball and Pearce (2008) and Sheehy (2008) concentrate on the inclusive potential of Second Life and how it may support a range of learning modalities (Carr, 2010); additionally practical suggestions are often made in reference to the Universal Design approach. However, very few academic works focus on Second Life, disabled users and education concurrently. These topics are most often addressed on blogs and in forums which discuss potential projects, funding and compliance issues. Additionally, when references are made to disabled users of technology, the topic is often examined through the lens of "impairment as a problem (and) technology as a solution approach" (Carr, 2010, p. 3) without necessarily considering the whole person with abilities, in addition to motivations for being in a virtual environment or using a particular type of technology. Goggin and Newell (2007) indicated that research on disability and ICT is replicating charity, medical, and other oppressive discourses of disability. Thus, to fill in the gap and respond to an area which has a limited amount of research, the current study intends to push instructional design practice towards an ethical approach; with an interdisciplinary focus. The subjective views of the disabled residents of Second Life are an integral part in reexamining instructional design from a whole person perspective.

To know a rose by its Latin name and yet to miss its fragrance is to miss much of the rose's meaning. Artistic approaches to research are very much interested in helping people experience the fragrance.

-Elliot W. Eisner

CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY

Qualitative Research

A qualitative methodology can be a pathway to answer questions beginning with "why", "how" and "what". It is the kind of emergent journey which creates relationships, between personal interactions and settings, where the researcher is the instrument who steps around the "platform of scientifically derived knowledge as the only truth to explore knowledge as art, as intuition, as tentative, as problematic, and as complex social questions that can be answered through problem solving and negotiated resolution" (Klinker and Todd, 2007; Glesne, 2006; Cresswell, 1997; Patton, 1990). Eisner (1981) points out, that artistic approaches to qualitative research have no simple, single definition and the ultimate aim is to create meaningful images in which people can alter, reject and/or secure their views of the world. In Collins' (1992) article, the analogy of

Robbin's (1990) mockingbirds is used to describe the importance of creating a unified

connection between the researcher and the research.

>Mockingbirds…Although they're born with a song
>
>of their own, aren't content to merely play the hand
>
>that is dealt with them. Like all artists, they are out
>
>to rearrange reality. Innovative, willful, daring, not
>
>bound by the rules to which others may blindly
>
>adhere, the mockingbird collects snatches of
>
>birdsong from this tree and that field, appropriate
>
>them, place them in new and unexpected contexts,
>
>and recreates the world from the world. (p.6)

Hence, reflecting on the above analogy, in addition to pondering on Chandler's

(cited in Collins, 1992) questions (which suggest that quite often little is known about the

researcher e.g. background experience, personal beliefs and values, which in reality

parallels the framing of the question(s), the methodology and the language selected to

create a unified whole), I chose to pursue an autoethnographic study. The study is

embedded within a phenomenological approach which merges a number of elements

together: struggles with the traditional instructional design model, a need to redefine an

instructional design identity to one which is person centered and helpful, parallel current

work with the disability culture, and finally provide a voice to the disabled community in

Second Life and have them teach the "instructional designer" about their lived experience

in this complex environment. Overall, I believe that the two methodological approaches heighten critical elements in the instructional designer's toolbox. The first a closer attention to the meaning of images, feelings and sensations of residents in Second Life and secondly, how this knowledge is transferred into the design practice and heightens self-awareness and critical reflection as a researcher and novice instructional design professional.

Autoethnography: Unmasking Self Awareness, Improving Practice

Willis (2008) considers autoethnography as an alternative source of understanding. Rarely applied in educational technology it is considered as "one of the newer paradigms of scholarship" (p.103). Described as a method of writing that bonds the personal to the cultural (Ellis, 2004; Ellis & Bochner, 2000, p. 2), where the experience of others is used for understanding the self and associating it to the growing debate about reflexivity and voice in the application of social research (Wall, 2006). It constitutes one's need to "resist colonialist, sterile research impulses of authoritatively entering a culture, exploiting cultural members, and then recklessly leaving to write about the culture for monetary and/or professional gain, while disregarding relational ties to cultural members" (Ellis, Adams & Bochner, 2011, para. 4 – online only). It raises the question of how this methodology can contribute to the knowledge base or whether this satisfies "good" research (Hamilton, Smith & Worthington, 2008). It challenges researchers such as Delamont (2009), Buzard (2003), Atkinson (2007) and others who claim that research can be done in a vacuum, value free, with an impersonal objective stance. Instead, it embraces the emotional, "creating a palpable emotional experience as it

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connects to, and separates from, other ways of knowing, being, and acting in the world" (Holman-Jones; as cited in Denzin & Lincoln, 2005, p. 767). It taps into the evocative, "it seeks to invoke the corporeal, sensuous, and political nature of experience rather than collapse text into embodiment or politics into language play" (Holman-Jones; as cited in Denzin & Lincoln, 2005, p. 767). Furthermore, in using such a methodology it emphasizes that there are diverse ways of communicating information to make it accessible, evocative and meaningful to many outside the academic institution. As the researcher becomes vulnerable, exposing personal stories, the reader should become sensitive to "issues of identity politics, to experiences shrouded in silence, and to forms of representation that deepen" ones capacity to empathize with people who are different from them (Ellis & Bochner, 2000, as cited in Ellis, Adams & Bochner, 2011). Ellis (1999) writes, "you come to understand yourself in deeper ways. And with understanding yourself comes understanding others…It is an avenue for doing something meaningful for yourself and the world" (p.672).

Because there is no clear description of how one should undertake an autoethnography, researchers such as Giddings and Smythe (2010); Denzin (2006); Grant and Giddings (2002) ; Crotty (1998) have suggested that the researcher pinpoint his/her philosophical values and beliefs, and align these to his/her research framework. Ellis, Adams and Bochner (2011), suggest that the autoethnographic process should encompass methods from autobiographical writing and ethnography. In autobiographical writing, the "author retroactively and selectively writes about past experiences" (Ellis, 2010, para. 8 – online version).

Consulting journals, photographs, sound files, and conducting interviews helps jog one's memory, and awaken the "epiphanies – those remembered moments perceived to have significantly impacted the trajectory of a person's life" (Goodall, 2006; as cited in Ellis, Adams, & Bochner, 2011). Secondly in ethnographic writing, the researcher who is immersed for an extended period of time, positions himself/herself in different roles (the insider/outsider or both), observing, interviewing and note taking to improve his/her understanding of an unfamiliar culture. In doing so, the researcher acquires a profound understanding of people and the broader context within which they are rooted (Myers, 1999). The major purpose is to illustrate and systematically analyze (graphy) personal experience (auto) to understanding cultural experience (ethno) (Ellis, 2004). The goal is to "transform readers and transport them into a place where they are motivated to look back upon their own personally political identity construction…Emotionally engaging, as well as critically self-reflexive of one's socio-political interactivity" (Spry, 2001, p.713).

In Rose's (2008) article entitled *Why Reflection Matters for Instructional Designer*, she claims that the "instructional design practice has gone hand-in-hand with a mode of thought that is characteristically analytical, calculative, and efficient" (p.15). Thus, many instructional designers do not have the opportunity or the appropriate space to "engage in reflection about one's own ideas and practices" (p.15). She states that "efficiency has always been a chief virtue in both the products and practices of instructional design. This means, when instructional design practice is going as it should, there is no time for reflection" (p.15). Most instructional designers are expected to work in the realm of prescriptive models and templates while eliminating or virtually reducing the need for reflective thought, however as there is an ongoing need to develop flexible,

adaptive learning for diverse clientele, "it will be increasingly important that instructional designers are able to find opportunities for the moments of quiet, sustained contemplation that are necessary for thoughtful, original instructional decision making" (p.15). Additionally, linking self-reflective professional practice to research has the potential for greater personal, professional and organizational learning (Miller, 1990); as well as an original way of thinking about knowledge creation and dissemination (Carr & Kemmis, 1983). Therefore, to make space for reflection which will hopefully allow the fundamental professional questions "who am I, why am I practicing this way, what effect does this have on others?" (Campell et al., 2004, p. 23) to be answered. The author chose to use this methodology within the space of Second Life, as a place to escape, and critically reflect about designing for people with disabilities and to reexamine the possible assumptions and myths she created through years of working with and designing for people who have disabilities. Devault (1997) suggests that "personal revelation is useful if links are made to analyze its relevance in terms of the broader study" (in Nadin & Cassell, 2006, p. 215). Furthermore, through the use of the self as an object of study, I also examined how my role as a well-known Second Life resident, and member of Virtual Ability Island, influenced the relationship and the data gathering in the virtual world. By using an autoethnographic approach similar to –and yet distinct from - that explored by Dimitrica and Gaden (2009) [in the context of gender in online forums] as well as Holestine (2013) [in the context of bereavement in online forums], I reveal that which is often less spoken of in research, namely the emotions felt by the researcher partaking in the research process. In my case, the autoethnographic approach was used to provoke new questions that could encourage instructional designers to relook at the

traditional research methods most commonly used and consider the potential of new methods as a form of inquiry.

Thus, the journey began with an avatar in Second Life as an instructional designer, lulled into a lively aesthetic environment, initiating first encounters with disabled residents, participating in creative practices (building) and taking the time to understand the meaning of the aesthetic environment for these residents. The time spent in this space, amongst the community changed my instructional designer perspective. As I passed through different stages of encounters, different contexts of learning, understanding the significance of the aesthetic space and what it affords for these disabled residents, I believe that this shaped my instructional designer identity – using the space, as a reflective tool to shift my thinking from the personal/professional to that of the disabled community within Second Life. Chang (2007) would state that this is "gaining a cultural understanding of self that is intimately connected to others in the society" (p.9).

Thus, throughout this research process, data was obtained from three initial sources: a research diary "a melting pot of prior experiences, observations, readings and ideas and the resulting interplay of these elements" (Newbury, 2001), conversations (an informal exchange of information), and visual imagery.

In his book entitled *How We Think,* Dewey (1933) writes that reflective thought is "an active, persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further conclusion to which tends" (p. 9). The role of reflection is to bring about a new situation in which "there is experienced obscurity, doubt, conflict, disturbance of some sort into a situation that is clear, coherent,

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settled, (and) harmonious" (p.100). Dewey also believed that reflective thinkers required three qualifying attitudes: open-mindedness, whole-heartedness, and responsibility, which I believe are indispensable attitudes that a qualitative researcher should maintain. In the absence of these characteristics, actions would simply result in "impulsive and routine activity" (Dewey, 1933, p. 17). While Dewey never specifically wrote about the use of journals for reflection there is an extensive amount of literature that considers his work as the theoretical foundation for reflective journal writing (Stevens & Cooper, 2009).

In Kolb's cycle of experiential learning consisting of four cycles: concrete experience, reflective observation, abstract conceptualization and active experimentation, reflection is considered as the tugboat that pulls the learner from one phase to the next, "moving from feeling, to observing, to thinking, to doing" (Eyler and Giles, 1999, p.195). However like Dewey, Kolb did not address the use of journaling for reflection. Nevertheless, journaling can help the researcher deal with the concrete experiences in the virtual world of Second Life.

Schatzman and Strauss (1973) have supported the use of the research diary and have argued that contrary to many beliefs, it is more than a mechanical means of storing information for later retrieval, instead it is viewed as a tool which provides ongoing developmental dialogue (p.94). "In many cases the primary focus on such diaries is the development of one's own skills and knowledge as a practitioner" (Newbury, 2001).

For instance, Holt's (2001) examined data found in his reflective journal for discussing his teaching practice. Duncan (2004) used a reflexive journal to support an evaluation of her professional work (in Wall, 2008). Engin (2011) referred to her research diary as a scaffolding tool, a repository of thoughts, and her expert other. She writes: "the

act of articulating my thoughts through the written word helped me to make the connections between ideas and form my identity as a researcher" (p.304).

Suggestions on how to record and analyze data in a research diary are diverse and many. The application of Schatzman and Strauss's (1973) method for field research seemed to be the most fitting. I chose to record interactions with residents, observations and personal thoughts which are categorized (color coded) into three areas: observational notes (ON), theoretical notes (TN) and methodological notes (MN). This categorizing method helped maintain the ample observational notes and conversations gathered, additionally making them easily accessible (due to color coding and categorization) during the write up process. Observational notes are comprised of very little interpretation; they are "statements bearing upon events experienced principally by watching and listening" (p.100). Theoretical notes include self-reflective thoughts. They "represent self-conscious, controlled attempts to derive meaning from any one or several observation notes" (p. 101). Finally, methodological notes are "statements that reflect the operational act completed or planned: an instruction to oneself, a reminder, a critique of one's own tactics" (p. 101).

Visual images (screenshots) also accompany the diary inputs. These snapshots support the study of the space and accompany additional notations made in the research diary. "When we plan, analyze, imagine, think, or critique, our thoughts are associated with and largely constituted by images" (Bruner, 1983 in Weber, 2008, p. 41). Images are often used to increase the clarity of the written words, Weber (2008) explains. I chose to use images as an attempt to allow the reader to "see what I see" at the moment of my entry. Images are used as a method to capture the inexpressible elements which are

challenging to put into words. Images have the ability to reveal information; "images can talk; they can have what Ong (1982) calls orality, a narrative quality or the ability to provoke or reconstruct conversation" (Weber, 2008, p. 45). They give the viewer an opportunity to examine something more closely, to perceive something which was not apparent in the past (Weber, 2008).

Following the recording and analysis process, which responded to my initial research goals, I briefly present the various elements that were set up in frame stories (a literary technique which pieces a story within a story). Images as screen shots accompany the written text to demonstrate how the virtual space was used by the researcher as well as disabled residents. The aim: to fundamentally create an invitation to reflect upon possible connections between the disabled user-virtual space-aesthetic-emotions and learning. Secondly, given that I chose to intertwine a phenomenological study in this research project, one of the criteria necessary was to immerse oneself, and develop an intimacy with the phenomenon through prolonged first hand involvement (Seamon, 2000b) thus, the autoethnography helped foster this methodological possibility.

Research Issues

The criticism lodged at this methodology is abundant and I have chosen to present these issues in order to help others re-examine this methodology more closely, and consider its role in academic writing.

Ellis et al., 2011; Ellis, 2009; Hooks, 1994; Keller, 1995 have commented that this methodology has often been refused as it does not meet with the social science standards, "being insufficiently rigorous, theoretical, and analytical, and too aesthetic,

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emotional, and therapeutic" (Ellis et al, 2011, p. 9). Additionally, Madison (2006), Anderson, (1971), Gains (1999), and Atkinson, (2007), have commented that this work is subjective, bias, done by self – absorbed narcissists who are trying to escape scholarly obligations of hypothesizing, analyzing and theorizing. However, we need to rethink:

> Sharing one's story is not just about gratification. It's about writing about what we know…My question is, Why is it acceptable (even positively regarded) for people to share their life experiences with a researcher, when, concurrently, it is perceived to be problematic that a researcher – who is presumably best qualified to do the recording and interpretation – examines his or her own life?...My response: being prepared to ask another to risk exposing his or her life implies that we might at least be prepared to do the same. (Vickers, 2002, p. 617-619)

Holt (2003) shares his experiences of submitting an autoethnographic manuscript to a review committee; he provides details on the conversation between him and the reviewers, demonstrating the uncertainty of what constitutes an appropriate evaluation of autoethnographic research. Some members who referred to his manuscript as a story raised questions regarding evaluation identical to those of Josselson (1993): "What is a

good story? Is a good story enough? What must be added to a story to make it scholarship? How do we derive concepts from stories and then use these concepts to understand people"? (p. xi). One reviewer suggested examining the work based on Richardson's (1995, 2000) five evaluation criteria:

1. *Substantive Contribution:* Does this piece contribute to our understanding of social life?

2. *Aesthetic Merit:* Does the use of creative analytical practice open up the text and invite interpretive responses?

3. *Reflexivity:* How did the author come to write this text? How was information gathered? Are there ethical issues? Is there adequate self-awareness and self-exposure for the reader to make judgments about the point of view?

4. *Impactfulness:* Does it generate new questions, move me to write, move me to try new research practices, or move me to action?

5. *Express a reality:* Does this text embody a fleshed out sense of a lived experience? Does it seem true – a credible account of cultural, social, individual, or communal sense of the "real" world? (p. 20)

Thus, while there are many definitive questions that have yet to be answered, those who have examined autoethnography more closely, contend that traditional criteria used to evaluate qualitative research is not applicable (Garrett & Hodkinson, 1999; Sparkes, 2000). Can we resist the temptation to seek universal, foundational criteria, Sparkes asks (in Armstong, 2008). Maybe we should take on a relativist and heuristic position – make

it up as we go along, exclaims Smith (in Armstrong, 2008). Some researchers (Bullough & Pinnegar, 2001; Munby, 1995; Northfield & Loughran, 1997; Whitehead, 1989) have also overcome the question of validity by examining self-study as a literary form, personal reflection, or professional development method, an educative activity or a method to develop theory that can be tested in practice (Feldman, 2003). Nonetheless, until we come up with an answer (if this is even possible) from a personal perspective, I strongly believe that within the research community we need to overlook the 'once was', "where scholarly writers are expected to stay on the sidelines and keep their voices out of their articles" (Charmaz & Mitchell, 1997, p. 194) and move ahead towards the "what is", "there is no single way – much less right way of staging a text…Alternative ways of writing increase your repertoire, increase the number and kinds of audiences you might reach" (Richardson, 2000, p. 15). Additionally, what this methodology affords is ethical practice.

In defending this methodology, I agree that there is a possibility that an autoethnography can become self-indulgent, however, I disagree that autoethnography is simply about the self. Stanley (1993) points out that people do not accumulate their experiences in a social vacuum. Mykhalovskiy (1996) challenges that notion by explaining that in order to write about one's experience, one also writes about the social experience. I see autoethnography, as a tool to encourage reflective practice, to become a better instructional designer, one who designs with the head as well as the heart. Bochner and Ellis (2006) have associated autoethnography to an ethical practice.

Autoethnographies show people in the process of figuring

out what to do, how to live, and the meaning of their

struggles. That's why I consider autoethnography an ethical

practice. People want to do the right thing, the sensible and

helpful thing. (p.111)

Reflective thinking is important not only as a tool, "it enables us to know what we

are about when we act. It converts actions that are merely […] blind and impulsive into

intelligent action" (Dewey, 1964, p. 211). McIlveen (2008) adds: "reflexivity in research

and practice offers more than a checking process; it is a process which in itself proffers

new understandings and actions – transformation" (p. 6). In asking "what is the potential

benefit of autoethnography from a professional standpoint" McIlveen (2008) remarks

it enables the researcher and or practitioner to construct an

intimate and theoretically - grounded, critical

understanding of the self or identity relation to research and

professional activities, and thus improves awareness of the

researcher's or practitioner's influences and roles in their

work with research participants or clients. (p. 7)

Secondly, regarding concerns of validity, trustworthiness and quality, I believe

that it is equally important to mention that there are a few limitations present.

Particularly, autoethnography has no rightful purchase on generalizability; findings are

limited to the study. But, "it has the potential to act as a stimulus for profound understanding of a single case and, moreover, act as a stimulus to open new intellectual vistas for the reader through uniquely personal meaning and empathy" (McIlveen, 2008, p. 5). Thus, in following Morrow's (2005) guidelines, melding theory into the autoethnographic writing should for the most part construct a lesson which could be applied towards one's practice, in the current case, if the reader is an instructional designer.

Ethical Concerns

Autoethnography affords a unique ethical position, according to Chang (2007). Many autoethnographers believe that ethical issues involving human subjects do not necessarily apply to this research process; however this belief is not necessarily correct. Chang (2007) claims that protecting the privacy of others during research about the self is the most challenging. According to Tolich (2010) there is "little consistent ethical guidance for novice autoethnographers" (p.1600), thus uncertainty lingers throughout. Adding to the current challenge is the fact that this autoethnography takes place in a virtual environment; however I chose to approach these ethical issues no differently, since there is little available to reference regarding the application of autoethnographic methods within a virtual world.

The first step in approaching autoethnography is to consider Clandinin and Connelly's (2000) question: "do you really own the story because you tell it?" This question allows the research to step back and consider the various contacts/interactions made which also add weight to the personal story. Thus, in reviewing a number of ethical

concerns in autoethnography, questions of informed consent and privacy caught my attention. Hence, I approached the issue of consent as Ellis (2007) explains, using process consent. First, given that the Second Life technology allows one to create a name tag over one's avatars head, I created an identification label reading "you may be in my research" and another similar. Secondly, I took rigorous measures in assuring that my profile included a description of what I was study, how they may be part of my research, that any statement made may be noted, if there were any potential risks and contact information for additional questions/concerns. I explained that there was a strong possibility that the screen capture technology would be used to take snapshots of the environment.

Prior to taking snapshots in a populated avatar environment, I sent out a public text message with a statement similar to "HEY, everyone do you mind if I take a snapshot. It's for [insert reason here]" to obtain approval. Furthermore, I removed any visible name tags lingering above the avatars heads. Past experience, has demonstrated that this method caused no additional issues, unless entering in an environment which had a set of rules specifying that no research may be conducted in the space.

Overall, my encounters within the space were treated with respect for the Second Life community. All too often I encountered people who felt that researchers neglect to take into account that behind every pixelated image is an actual person. Hence, as Ellis (1995a) suggests a precautionary measure has been taken. Avatars are controlled by real people and names representing these avatars are also attached to real people; thus pseudonyms (such as "ambassador" which describe a role and more neutral ones like Persons A, B, C, D and E) and omission of last names from avatar handles have been

been adopted in the text assuming that it could be possibly read by anyone from the Second Life community or Virtual Ability Island.

Phenomenology

Phenomenology as Reflection

Even though phenomenology can be traced back to some well-known names as Kant, Hegel, Heidegger, Sartre, Ponty, and Giorgi, German philosopher Edmund Husserl (1859-1939) was considered as the "fountainhead of phenomenology in the twentieth century" (Vandenberg, 1997, p. 11) who "sought to develop a new philosophical method which would lend absolute certainty to a disintegrating civilization" during the end of World War I (Eagleton, 1983, p. 54). Husserl's motive was to investigate how individual consciousness was formed as he was quite skeptical that human beings "experienced external things and events in the same way" (Greenfield & Jensen, 2010, p.1190). Instead, Husserl believes in the concept of intentionality, referring to the human condition in which we are constantly conscious of our external world as well as an attempt to make sense of the experience (Greenfield & Jensen, 2010). Hence, like Dewey, Husserl believed that conscious and meaning occurred through experience. He felt that

subjectively knowing cannot exist without objective experiences. Husserl referred to our subjective-objective life as a part of our life-world…To understanding our subjective meaning of things, we have to explore our experiences…To do that, we must

temporarily disengage from our natural, everyday attitude about

things and move towards a phenomenological attitude of self-

reflection...Dewey would argue that we do not learn from

experience alone, but from thinking about our experience.

(Grenfield & Jensen, 2010, p.1190)

Patton (1990) defines phenomenology as the study of human experience. This method provides the researcher an opportunity to explore and clarify human events, situations, meanings, and experiences "as they spontaneously occur in the course of daily life" (Von Eckartsberg, 1998, p.3). The main goal is to obtain a "rigorous description of human life as it is lived and reflected upon in all of its first person concreteness, urgency and ambiguity" (Pollio et al., 1997, p. 5). According to Creswell (1997), the "researcher needs to understand the philosophical perspectives behind the approach, especially the concept of studying how people experience a phenomenon" (p.55). In social science research, this methodology is used to give both power and voice providing the people an opportunity to "communicate their experience without having it transformed by the researcher so as to alert its meaning in any significant manner" (Grover, 2004, p. 84). Thus, the responsibility of the researcher is to ascertain that no data be "prematurely structured into existing categories of thinking" (Grover, 2004). As described by Bentz and Shapiro (1998) some suggestions include the use of a recording device, performing little to no editing and censoring as possible, and "offering a clear psychological and linguistic critique of one's own perceptual and cognitive biases (p.99).

The application of phenomenological research has extensive possibilities in diverse areas including: disability research, human factors engineering, environmental behavior examination, and education. "Any object, event, situation, or experience that a person can see, hear, touch, smell, taste, feel, intuit, know, understand, or live through is a legitimate topic of phenomenological investigation" (Seamon, 2000a, p.3). However, as mentioned previously, phenomenological research provides both power and voice, two critical elements which add value to my research. As it has been criticized in the past, people with disabilities are often marginalized and treated as colonial populations in research. Davis (1997) states "people with disabilities have been isolated, incarcerated, observed, written about, operated on, instructed, implanted, regulated, treated, institutionalized and controlled to a degree probably unequal to that experienced by any other minority group" (p. 1). "Disabled people have come to view it [research] as part of their oppression rather than a solution" (Northway, 2000, p.28). Additionally, "very few studies, for example, beyond the observational, have succeeded in eliciting the perceptions or feelings of people with multiple or profound impairments" Thus, this methodology fosters Charlton's (1998) classic statement "Nothing about Us without Us".

Secondly, as previously indicated, I align my instructional design identity to that of Gibbons et al. (2008) description of the instructional designer within the realm of a caring profession. I believe that phenomenology as a method highlights this importance. By having explored the lived experience of the person with a disability in Second Life (what it means to be in this virtual world), the instructional designer (me) within Second Life aims to enter phenomenological empathy. Phenomenological empathy as described by Davis (2005) and Peloquin (2005) involves a unique moment where there is a shared

meaning between people, where a deep connection occurs and through intense listening, one has the opportunity to enter into someone else's experiences. Thus, from an instructional designer standpoint this phenomenological approach acts as a tool for the purpose of professional development. Given the deep interest I have demonstrated throughout my academic studies in designing for people with disabilities, a phenomenological approach improves my understanding of their experience in and steps beyond the boundaries of formal analytical reasoning which is often a required professional skill, to that of critical reflection (understanding their virtual space experience through deep listening, acknowledging and becoming empathic to how they see the their virtual space, and the emotional affordance their virtual space provides). Additionally, in acknowledging the meaning of their lived experience in Second Life, it assists in creating a link between good design, ethical practice and overall good instructional design judgments similar to the description provided by Benner et al. (1996) in referring to the use of phenomenology as a professional tool in nursing practice.

> Learning to make good clinical judgment and be a
> good practitioner requires ongoing experiential
> learning, reflection, and dialogue with patients and
> their families…Nursing, like teaching, medicine
> and social work, and other helping professions,
> depends on solidarity with one's fellow human
> beings and on professional standards of beneficence
> and non-maleficence for helping people during

periods of vulnerability and distress - this is what it

means to be "good at one work. (p.17)

Participants

When one undertakes a phenomenological study, the participants are viewed as the experts of the phenomenon of interest. Purposive or purposeful sampling (criterion/expert sampling) is appropriate with the current methodology, as it ties into my initial objective of the research. Single case or multiple participant research may be conducted. "Single case studies are able to identify issues which illuminate or draw attention to different situations...In multiple participant research, the strength of inference which can be made increases rapidly once factors start to recur with more than one participant" (Lester, 1999). According to Pokinghorne (1989) and Moustaka's (1994) essential criteria for selecting participants for a phenomenological study include:

- The person or people experienced the phenomenon under investigation.

- An intense interest in understanding the nature and meaning of the experience(s).

- A willingness to participate in an interview to describe their experience(s), possibly followed by additional probing.

- An agreement to have one's interview recorded.

- An agreement to have one's interview shared with others.

In the current study, two participants were selected from my Second Life "friends". Key criteria for selecting the participants are stated above, as well as their keen interest in education and improving online instruction for disabled users. Additional criteria I applied included:

- Must have been a resident of Virtual Ability Island for 2 or more years, as this time frame allows the resident an opportunity to gain familiarity with the diverse spaces and controls.

- Must have been self-reported as disabled in real life. This included visible (i.e. paraplegia, blindness) and non-visible (i.e. hemophilia, chronic fatigue) disabilities.

Interviews

Associated to the exploration of uncharted territory, a phenomenological study does not necessarily have a set of functional set of data gathering procedure; "unlike other methodologies, phenomenology cannot be reduced to a cookbook set of instructions. It is more of an approach, an attitude, an investigative posture with a certain set of goals" (Keen, 1975, p. 41). Therefore, the phenomenologist must adapt her methods to the nature and circumstances of the phenomenon. "In short, the phenomenologist has no clear sense of what she will find or how discoveries will proceed. The skills, perceptiveness and dedication of the researcher are the engine for phenomenological research and presuppose any specific methodological procedures" (Seamon, 2000b, p. 161). However, given that the goal was to derive the essence, structure, or form of human experience through the use of descriptive techniques, text-

chat interviews were conducted and passages from these chats were made explicit

throughout the study. Prior to interviewing, Roulston et al. (2003) suggests the following

elements to be considered: style of interviewing, the style of responses, and the

significance of discursive responses. The interviewing process is considered to be a

powerful technique for attaining rigorous thick descriptions of another person "being in

the world". According to Pollio, Henley and Thompson (1997) in phenomenological

research, the interviewing must be unstructured, unforced, arising from the inter-

subjective space of two people having a conversation. The

> researcher must be open to respondents and adapt her
>
> questions, tone, and interest to both respondents'
>
> commentaries and to her own shifting understanding as she
>
> learns more about the phenomenon… Uncertainty and
>
> spontaneity that must be accepted and transformed into
>
> possibility and pattern…A particular phenomenon must be
>
> developed creatively and allow for a fluidity of methods
>
> and research process. (Seamon, 2000b, p. 163)

In '*Conversation as research: Collecting life stories, creating places'* Hamilton

(2010) provides an account of her six month qualitative study in the city of Rome. She

describes her casual encounters with people at cafes, bus stops and in piazzas, attempting

friendships and having casual, dialogic conversations which informed her of

"immigration in an urban environment" (p. 43). She speaks of these casual, friendly,

conversations which were generated easily due to her ability to speak Italian, her Italian held citizenship and her story of her grandparents migrating to Italy from Australia. This allowed her to develop a trusting relationship with the participants, changing the role of the researcher. Hamilton (2010) explains that her research was conducted with Tillmann-Healy's (2003), idea of friendship as a method of qualitative inquiry which "has been laid by feminist researchers" (p.732). Collins' (1998) describes this as the shift "from colonization to an epistemology of empowerment" (p.229). "Researching with the practice of friendship means that although we employ traditional forms of data gathering (e.g. participant observation, systematic note taking, and informal and formal interviewing), our primary procedures are those we use to build and sustain friendships; conversations, everyday involvements, compassion, giving, and vulnerability" (Tillmann-Healy, 2003, p 734).

In virtual environments, the term friendship is ambiguous, as it has been argued that virtual friends are simply virtual contacts that belong to virtual communities with shared interests and goals, rather than emotional contacts with physical presence. Although, it is true that there is a lack of physical presence due to the geographical boundaries afforded by the technology, many people do actually blur the boundaries between the real and the virtual, which involves issues of emotional investment and trust. The statement "behind every avatar is a real person" can make it quite challenging to develop a concrete view. However, for the purpose of this research I saw these friendships as no different to offline friendships, one's that require trust, benevolence and respect. Thus, given that I have been a resident of Second Life for quite a few years and befriended many of the disabled residents from Virtual Ability Island, my role as a friend

was difficult to shed during the research, as I had already developed a specific type of relationship with these residents – that of an advocate and as a trusted community member. Ultimately, there was a possibility that this would impact the research journey and alter relationships before, during and after the research process –this was a risk to take.

Some of the residents viewed me as a friend, while others viewed me as a work colleague; however, the profile I disclosed for my avatar's identity clearly indicates that offline I am a university student/researcher. The boundaries between friendship and research have been discussed by a number of authors (Acker, Barry, & Essevald, 1991; Cotterill, 1992; Gair, 2002; Johnson & Clarke, 2003; Watson, Irwin, & Michalske, 1991). These authors discuss the importance of boundary management and the implication of the dual roles (professional role and friend role). The issue of boundary management, and "level of emotional involvement with participants' stems from the subjective nature of the qualitative researcher" (Dickson-Swift et al., 2006, p. 855). The need to build rapport, however "can require a merging of boundaries between researcher and participant…Some strategies used by researchers include sharing a meal, attending family gatherings, looking at family photos, and running errands…It allows the researcher to develop an interactive relationship with the participants based on trust and rapport" (Dickson-Swift et al., 2006, p. 856). In Second Life, I had already surpassed this development of rapport, through various online activities, (I played as a team member in role playing games, attended and assisted in online conferences, and volunteered my time in the virtual space) demonstrating to the community a sense of commitment through an ongoing presence, contribution and communication. Although, some might consider the

importance of maintain a professional boundary with participants as an essential

qualification for conducting research (conflict of interest), I saw my dual role as ethically

valuable, as it emerged into a mentorship-type of relationship where the residents of

Virtual Ability Island supported the role of trusted advisors throughout this research

journey. To access an entry point within the Second Life disabled community, as well as

some of the other communities in the Second Life space, strongly depends on one's

understanding of Second Life etiquette, Second Life culture, and behavioral guidelines

(the Big Six, http://secondlife.com/corporate/cs.php as they are referred to in Second

Life: the six behaviors that are not tolerated in Second Life). My argument against

designing another avatar specifically for this research would require many months

invested in building a strong rapport - trust with the participants to conduct an interview,

it would also be deceitful and furthermore, it could be quite challenging to hide my

original avatar identity.

Therefore, friendship as a method evolves into a "friendship of ethics, a stance of

hope, caring, justice, even love" (Tillmann-Healy, 2003, p. 735). It affords a greater

responsibility towards the participant - friend, wanting them to feel heard, known, and

understood. "Friendship as a method requires that ethics remain at the forefront of the

research and research relationship. Researchers and participants reflexively consider and

negotiate power dynamics at every turn" (Tillmann-Healy, 2003, p. 745). Nonetheless,

friendship as a method is risky, but then again research in general is risky. The beauty of

applying friendship as a method allowed me to think of my position – one that is trying to

resist exploiting the participants, attempting to become "as Ellis herself becomes, a more

emotional, dialogical and ethical researcher" (Tillmann-Healy, 2003, p. 744).

Maintaining a dual role, conversation occurred as "friendly conversations" exchanges between two people who have known each for a while, "role changes may occur" (Robertson & Hale, 2011, p. 4) between the interviewer and interviewee. Shank & Cunningham (1996) has identified three conversation types: monologue, dialogue, and discussion. According to them Internet communications usually follow the pattern of conversation: "messages tend to be informal, phrased in conversation form, and often engendered a great deal of direct interchange" (p. 29). They also specify that oral culture is very different than written culture, thus from a researchers perspective it is fairly important to acknowledge this different. To understand online conversation, a phenomenon known as "multilogue requires us to go beyond traditional theories of communication, that [focuses] on the transfer of information" (Holge-Hazelton, 2002). Emoticons and online text abbreviations which may appear in the online conversation may have a significant importance during the analysis phase.

Along with "friendly conversations" there was a possibility that the participant(s) would offer to 'teleport' my avatar from one location to the next, as the conversation unfolded. Secondly, although a semi-structured script was followed (the semi-structured script was used simply as a guide, to set up the conversation), the initial topic of conversation sometimes shifted, which may or may not have added value to the research. Relying on one's skills of interacting with people as well as continuously refocusing was be necessary (Robertson & Hale, 2011). No two interviews are alike. There is a need to adapt and be aware of how the person is feeling. There is a need to be aware of these ongoing changes. The researcher must be self-aware and demonstrating one's readiness to stay focused is important (Robertson & Hale, 2011).

Another ethical question which needs to be examined is: what implications might friendship as a method have on ending the research process, especially in a virtual world. According to Northway (2000) "what becomes apparent is that little tends to be written about this stage of the process" (p.27) and to date, I have yet to discover any information on ending the research process and the dissolution of the friendship as a research method in a in a virtual world environment. According to the suggestions made by Booth (1998) in '*Doing Research with Lonely People*' and Stalker (1998) in *'Some Ethical and Methodological Issues in Research with People with Learning Difficulties'* it is the researcher's responsibility to critically consider in advance the effects relationship may have on the participant, as well as the researcher. Booth (1998) suggested that people with limited social networks will tend to maintain a relationship with the researcher. Although Booth (1998) was referring to one's offline social network, does his suggestion apply in the online world? Again, it is difficult to determine whether Booth's suggestion can be applied in a virtual world as studies in the field of Cyberpsychology vary. "Some studies have found that Internet use is associated with reduced social networks and increased loneliness, whereas other research suggested virtually the opposite" (Coget, JF, Yammauchi, Y. & Suman, M., 2002, p. 180).

In the current research, the researcher put an end to the research process by removing the tag above the research avatar's head and thanking the participants for their time.

The next issue, which might have impacted the conversational dynamics, is the space in which the research was occurring. Online participants are known to be more relaxed because they are communicating with the researcher in the comfort of a familiar

environment. As a result, participants may be willing to discuss sensitive or personal matters, such as emotions or disorders that are hard to reveal in person (Salmons, 2010, p.9). Known as the online disinhibition effect, this "refers to how people behave online in ways that appear quite uninhibited as compared with their usual offline behavior" (Suler, 2005, p. 184). One factor which influences this effect is invisibility. "This invisibility gives people the courage to go places and do things that they otherwise wouldn't…To be physically invisible...people don't have to worry about how they look or sound when they type a message" (Suler, 2004, p. 322). The effect can raise some ethical questions, however ethical guidelines are still evolving and unclear, thus to maintain appropriate responsibility as a researcher, I examined the Ethical Standard for Internet Online Counseling which states that a waiver should be signed by the participants warning of the alterations of behavior that may occur in the virtual space.   Finally, along with these conversations, screen captures (representing the aesthetical elements) were used to demonstrate the "travels", done with the avatars, as well as depicting some of the visual elements they "spoke" of. Given that Second Life was designed with a screen capture tool embedded in the technology, the simplicity of the tool requires a few steps of toggling the camera view and clicking on the mouse button to capture the aesthetic environment. Additionally, the technology allows for the captured snapshots to be shared amongst residents, which is not uncommon behavior in Second Life. Participants were encouraged to capture their own snapshots, similar to Photovoice.

A process by which people can identify, represent, and

enhance their community through a specific photographic

technique. It entrusts cameras to the hands of people to

enable them to act as recorders, and potential catalysts for

change, in their own communities. It uses the immediacy of

the visual image to furnish evidence and to promote an

effective, participatory means of sharing expertise and

knowledge. (Wang & Burris, 1997, p. 369)

Using this powerful means of visual image provided an alternative method for

participants to express themselves if they are unable to find the appropriate written

words. Secondly, Photovoice creates a sense of ownership and pride ("it speaks for

itself") by contributing explanations, ideas or stories while acknowledging their

contributions as the vital source of expertise. This method can also be considered as a

needs assessment tool, "the more visual detail that is provided about the context and the

phenomenon being investigated, the better able the audience is to judge how it may or

may not apply to its own situation, models, or concerns" (Weber, 2008, p. 45).

Interview Procedures

I sent a notecard (a text document used in Second Life for sharing information or

providing instruction) to the participants who met the selection criteria described above

via an Instant Message (IM) in Second Life (see Appendix A). On the notecard, I

informed them of the objective of the study, and invited them to participate. Those that

demonstrated an interest in the study, were guided to contact me via Second Life to

obtain a consent form (See Appendix B). Shenton (2004) states that "each person who is

approached should be given opportunities to refuse to participate in the project so as to ensure that the data collection sessions involve only those who are genuinely willing to take part and prepared to offer data freely" (p. 66). Thus, the second notecard explained that their participation was completely voluntary and that they could withdraw from the study at any given time without the need of providing supporting explanations to the researcher. Furthermore, I emphasized that the value of providing one's emotional experience as a result of being in the virtual environment was absolutely personal, hence encouraged the idea that there was no "right" or "wrong" answer. Finally, my contact information was included if the participant(s) had any additional questions regarding the study. My Second Life name was Nia Cyannis.

The location of the interviews was in Virtual Ability Island (VAI), a unique island in Second Life, which provides accessible orientation services to newcomer residents, conferences, and educational resources on disability and disability related information. VAI was founded by members of Virtual Ability Inc., which is a non-profit organization which actually exists in Colorado. Their vision over the years has demonstrated a want to become top leaders in providing information and services for people with disabilities in online environments. Through their ongoing activities and outreach programs, the community has grown, offering not only support to people with disabilities, but significantly servicing the needs of their friends, families, and caregivers. In addition, I "traveled" with the participants to other environments during our discussions.

The interviews were semi – structured; however, the interview protocol consisted of four open-ended probing questions:

- **Describe this space to me. Show me what you see using the snapshot feature.**
- **Why do you come to this specific space?**
- **How long do you spend in this space?**
- **What makes you stay here for [time]?**
- **How does this designed space make you feel? Explain.**

All other questions emerged from the context of the conversation and additional probing questions, such as "can you tell me more about this?" was used to further investigate the phenomenon.

> In the unstructured interview, questions emerge from the context
> and events occurring in the circumstance of the interview. The
> unstructured may be a planned discussion in a formal interview
> setting. Or, it can be naturalistic, meaning it occurs on site where
> the participant lives or works, occurring in conjunction with other
> field or participant observations. (Salmons, 2010, p. 52)

Data Storage and Removal

To extract the data gathered from the conversations between the participants and the research, from the local chat area screen, data was copied and pasted into a Microsoft Word document. Snapshots were transferred from the online environment and saved on an external storage device. All files were saved on a USB encrypted (anti tampering/password protected) flash drive. Data was stored under lock and key and will remain as such for the next 5 years. After this period, the USB will be physically destroyed.

Data Analysis

Hycner, (1985), Moustakas (1994) and Cresswell (1998) have indicated that the analysis of phenomenological data can be problematic and messy as it may not necessarily fall under neat categories. Colaizzi (1978) provides suggested guidelines as to how one should undertake the data analysis process.

1. The researcher becomes familiar with the data collected and gains a feeling for the participant's inherent meaning.

2. The researcher extracts significant statements from the data that are most important to the phenomenon being studied. Here acknowledgement of emoticons and text abbreviations will be necessary, as this may have a significant importance in the information that was gathered.

3. From the significant statements which have been extracted, the researcher formulates meanings in the context of the participant's own term terms.

4. Clusters of themes are created from the meanings, to reveal common patterns in the data.

5. A validity check will be conducted between the participants. Chat logs will be exchanged for the purpose of cross-checking the chat log statements made.

6. The researcher undertakes the process of exhaustive descriptions in which thick descriptions are compiled of the participant's feelings and ideas.

7. Identification of the fundamental structure for each exhaustive description is conducted. According to Hycner (1985), this is the summary writing phase.

8. In the final stage, findings are taken back to the participant's (validity check) to determine whether any changes need to be made or more information needs to be added. Additionally a master's student in the department would review the findings descriptions. Colaizzi (1978) identifies this final stage as member check.

Research Issues

In most qualitative research methods, but especially in phenomenology, authors (Crotty, 1995, 1996; Paley, 1997, 1998) have criticized both the interpretation of the methodology as well as the methods used to undertake the research (in Caelli, 2001), particularly they have also questioned issues pertaining to subjective phenomenon, as well as a lack of rigor. Below is a list of issues, which have most frequently generated criticism as illustrated in Hycner (1985). By demonstrating my awareness of these issues, I addressed potential questions the research community might have regarding my current study.

1. *Not a random sample and not generalizable, but still valuable*: Given that the objective of the study was to understand the emotional experience of the disabled person within Second Life, I selected two participants for the study. They have been residents in Second Life for a number of years, as well as researchers and presenters at different disability conferences. These residents have participated in numerous studies over the course of their "habitation" in Second Life and have the ease of articulating their experience within the given environment. As Hycner (1985) has indicated, the phenomenon dictates the method, including the selection

and type of participants. The goal of phenomenological research is not to generalize the findings; instead, the purpose is to select participants who have both the experience and ability to illuminate the human phenomenon of interest. Arguments concerning issues of control and rigor can be addressed as well; given that the type of participants selected for this study (people with disabilities) have the strongest ability to describe their lived, emotional experience in the virtual environment. Secondly, although there were a limited number of participants who provided a description of their emotional experience, it is often argued that qualitative research provides an abundance of data that "although only applies to the participants interviewed… can be phenomenologically informative about human beings in general" (Hycner, 1985, p.295).

2. *Issues of validity:* Validity has been a key issue in debates over the legitimacy of qualitative research. In phenomenology, validity indicates whether the research data accurately illuminates the phenomenon being studied (Hycner, 1985). Thus, in the current study, to ascertain the validity of the research data, three validity checks were conducted as suggested by Cole (1975) and Hycner (1985). First, as suggested, returning to the participants of the study to verify the authenticity of the written work, furthermore this provided the participants an opportunity to add information or remove statements that were made during the interview. If the participants affirmed that the written work truly did reflect their statements, then it was possible to assume the credibility of the work. Additionally, one of the key elements was to obtain a thick description of the phenomenon being studied, hence any additional contributions made by the participant(s) were considered as

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an "important provision for promoting credibility as it helps to convey the actual situations that have been investigated and, to an extent, the context that surrounds them" (Shenton, 2004, p. 69). Cole (1975) also suggests that the research be evaluated by a committee or neutral party who will indicate whether the findings "ring true". Finally, the findings were also submitted to some members of the disabled community within Second Life and an Educational Technology student who was interested in both Second Life and disability related research.

3. *Absence of a comprehensive theory*: Given that the purpose of the phenomenological research is to understand the uniqueness of one's voice, as well as one's experience, I selected the following research in favor that seemed to be the most inclusive and appropriate when conducting research within the disabled community. As Waite, Bromfield and McShane (2005) have demonstrated, this methodology is one that honors the stakeholder's voice.

Internet Research Ethics

Ethical Dilemmas in Online Research

There are a number of ethical issues that need to be considered when conducting research in an online environment. Although, much of the rules and regulations governing this type of research are unclear, ultimately understanding elements such as netiquette (which go hand in hand with online research ethics) require immersing oneself into the environment/community to be studied, regardless of the methodology being used. Preece (2004) and Zelenka and Sohn (2008) suggest that learning about ethical practices

in mediated environments requires time and active participation "to see how people behave in different contexts online" (p. 14). Essentially, undertaking research in Second Life requires tolerance, acceptance of diversity, compassion and respect (i.e. rules in the given space) as each avatar is being controlled by a real person.

Below are some issues which I considered, before I conducted my research in Second Life.

In reviewing the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS) (2000-2010 edition), recommendations regarding ethics in Internet based research are clearly absent. In 2008, the Interagency Advisory Panel on Research Ethics published a discussion paper suggesting that various changes be made to the TCPSbecause of the advancement of new communication technologies. As a result, numerous debates were stimulated (The American Association for the Advancement of Science, 1999; Association of Internet Researchers (AoiR), 2002; Eysenbach & Till, 2001; Ess & Jones, 2004; Robson & Robson, 2002; Buchanan, 2004; National Committee for Research Ethics in the Social Sciences and the Humanities, Norway, 2003; Sveningsson, 2004; Kitchin, 2003, 2007; in the Interagency Advisory Panel on Research Ethics, 2008). Kitchin (2003) commented directly on the TCPS and the absence of an Internet based research ethics section. She stated that the TCPS

> must establish its position, whether definitional, procedural,
> or both, on the ethics of conducting Internet/cyberspace
> research…That cyberspace is being exploited for research
> is not in question. The question addressed here, rather, is

whether related ethics research protocols are articulated or

adequately inferred in the TCPS, and whether Canadian

researchers are provided guidance by the TCPS when

entering the realm of cyberspace for data collection and

analysis. (p. 398)

There are several bodies who have already addressed Kitchin's, concerns including

the Association of Internet Researchers (AoiR) who have developed a non-binding

document on Internet research ethics and the Norwegian ethics committee who have

proposed several guidelines regarding:

- the value of the Internet research

- the multiplicity of tools on the Internet

- the ethical demands considered the same as for other research

- the difficulties in distinguishing between public and private information

- the issue of online fora with access limitations

- the use of personal and sensitive information

- obtaining free and informed consent in online fora

- using quotes gathered from the Internet

- the protection of children

- pseudonyms and confidentiality

- reporting research results back to participants

Eysenback and Till (2001) suggests that prior to undertaking Internet based research the following seven elements need to be further examined:

1. Level of intrusiveness: Will it be passive analysis or active involvement?

2. Perceived privacy: Is membership required? How do the members see their level of privacy?

3. Vulnerability: Is the population, community, or person, amongst the vulnerable group? What is the fragility of the community?

4. Potential harm: Will intrusion from the research or publication of the results harm the community?

5. Informed consent: Is consent required and how will it be obtained?

6. Confidentiality: How will the participant(s) be protected?

7. Intellectual property rights: Is there copyright?

They also suggest collaborating and investigating these elements in conjunction with members of the online community. Additionally, Kithcin (2007) suggests a general framework, however the ongoing discussion continues, given that there is a lack of consensus regarding the ethical forefront. "For some, the Internet does not differ significantly from traditional research methods. For others, the Internet offers research opportunities not previously available" (Interagency Advisory Panel on Research Ethics, 2008, p. 12). According to Mann and Stewart (2000), Internet research is still in its infancy stage; therefore it is likely that a researcher will be faced with dilemmas along the way. Furthermore, as some researchers seek to empower participants, the exploration of new methodologies which involve creative practice in Internet based environments,

add to the ethical debate. Thus, from a personal understanding the definition of good ethical conduct in Internet based research is multifaceted. Given that the Internet provides global access, the ethical concerns should, for the most part, within a cultural framework consider the diverse meaning of legal protection and traditions of ethical decision making (AoiR, 2002). Would Canadian guidelines be satisfactory? Are these guidelines imposing domination over a particular culture?

Suler (2000), in an article examining ethics in cyberspace commented that "solid research means solid ethics" (online version). Yet, how could this statement be possible if, the guidelines regarding Internet based research are blurred and fuzzy? In light of this comment, and given that Internet based research comes with many nuances, I counter Suler's comment with "solid Internet based research, requiring reflexive practice". I position myself amongst the researchers who attempt to conduct research from a standpoint where one considers the advantages and disadvantages of preceding in a particular manner, as well as questioning if the methodology, alongside technology can cause harm (long term and short term to the participants) . Therefore, I believe that it is necessary to practice an ethics of care, which encompasses honest, respectful and inclusive research (Schrum, 1997; Capurro & Pingel, 2002).

Private and/or Public Space

Thurlow et al. (2004) indicated that the issue of privacy is an imperative issue for online researchers, unfortunately, as Bruckman (2002) indicated there is still no clear division between public and private space in a virtual environment. Whitty (2004) elaborates further on this topic:

Even if we concluded that these spaces are public spaces,

the anonymity they afford can give the illusion that these

are private spaces. Can we, as researchers, ethically take

advantage of people's false sense of privacy and security?

Is it ethically justifiable to lurk in these sites and download

material without the knowledge and consent of the

individuals who inhabit these sites?...It is quite naïve of

researchers to simply equate online media with what on

first thought might appear to be offline equivalents (such as

magazine and videos). (p.211)

According to Nissenbaum (1998) the understanding of public and private space is often examined through legal and political theory similar to that of Habermas. In some perspectives the term private "indicates the realm of familial and other personal or intimate relations" (p. 567), while the term public is considered as "the civic realm of community outside of the personal one" (p.567). Some researchers consider the term private space as a protective environment, from which others might be excluded. "They conceive of this realm in terms of secure physical space, in terms of a private psychological space, or even in terms of a class of information that is sensitive or intimate over which one would have supreme control" (Nissenbaum, 1998, p. 570). "This includes preventing access to materials, as well as using symbols that are not easily understood by people outside the small social group" (Lange, 2008, p. 364). Johnson

(2001) defines public or private space in terms of the role and the activity the participant undertakes within the given environment. According to her, if a participant is considered as a subject, one who participates in MUDs and MOOs, then ethical consideration surrounding autonomy, privacy and confidentiality are to follow (Walther, 2002). However, if a participant is understood as an author, an activist or amateur author, one who posts on listserves or blogs, then the obligation to confidentiality, autonomy and privacy are lessened (Bassett & O' Riordan, 2002; Bruckman, 2002; White, 2002). Some studies (Al-Saggaf, 2006; Barnes, 2006; Sandvig, 2006) disregard the degree of the meanings, hence "they consider either visibility or social relevance to determine public/private boundaries, rather than incorporating both lenses or they do not consider how contexts other than the one they are analyzing shed light on public/private dimensions" (Lange, 2008, p.365). The examination of feminist texts provides a useful method (Landes, 1998; Gal, 2002) to cross examine the meaning of and response to the public/private erosion from digital technologies. According to these texts, the public/private are terms which change according to individual perspectives and envisioned as a "fractal distinction, a shape made of parts similar to the whole in some way…Whatever the local, historically specific content of the dichotomy, the distinction between public and private can be reproduced repeatedly by projecting it in narrower contexts or broader ones" (Gal, 2002, p. 81). The example she provides is the home. A home is viewed as a private space, in contrast, within the neighborhood the home, can be considered both public and private.

Vaughn (1998) in his article entitled *Placing Borders on the Borderless* categorized cyberspace as four distinct spaces: private, publically private, privately public

and private. In his explanation, publically private is a space in which we would expect to have privacy, however if someone wanted to observe the activities or occurrences in the given space, it is possible. Drawing from Waskul and Douglas (1996) and Essenbasch and Till (2001) publically private space is based on the idea of how a user accesses the space. For instance, if an individual is required to sign up and create a password to have access to a chatroom or mailing list and the user can be removed by the list owner, this would be considered as publically private or semipublic space. On the other hand, "private Internet communications that occur behind passwords or firewalls can be considered at best to be only semi private or privately public" (Kanuka & Anderson, 2007, p. 11).

In Second Life, many residents see their actions and environments as an extension of everyday life. To elaborate on this example, a virtual home in Second Life is often associated to the many functions pertaining to real life. "Residents create a place of their own, a place to be alone, to change their clothes, to be creative, to spend time with family and friends…Virtual homes can create a continuous sense of presence…A part of their virtual identity" (Rosenberg, 2010, p. 29). Thus, virtual homes are quite often understood by seasoned residents as a private space, even though they are publically private as pointed out by one resident, Ellen. "I think people will treat their houses as private spaces, regardless of how easy it is to move your view inside" (Rosenberg, 2010, p. 29). Thus, this also raises the question of lurking, "a key step in cultural entrée to an online community as a form of non-participant observation…This rather disparaging term connotes an illicit and somewhat seedy activity…Yet, it is important to learn the norms of the rules or norms of the community" (Catterall & Maclaran, 2001, p. 231).

According to Bakardjiev and Feenberg (2001) members of online communities generally frown upon lurking. Although, as a researcher, I had no intentions on lurking, conducting an autoethnography within Second Life, included the observation of others within this given space. Does this constitute as lurking? Bassett and O'Riordan, 2002; Bruckman, 2002; Walther, 2002; White 2002, raise additional questions pertaining to permission, which is equally important to reflect on. As such, "should the community as a whole give permission? Should the individuals whose texts are beings used be asked? Or are online communities' texts to which standard copyright restrictions and the principles of fair rights apply, therefore removing the need for permission seeking at all?" (in Berry, 2004, p. 327). Although none of these questions were answered, Barth, Datta, Mitchell and Nissenbaum, (2006) provide an interesting conceptual framework for understanding privacy and can equally assist in reflecting on some of the questions mentioned above. "Conceptual integrity is a philosophical account of privacy in terms of the transfer of personal information…Used for evaluating the flow of information between agents, with a particular emphasis on explaining why certain patterns of flow provoke public outcry in the name of privacy" (p. 1). Thus, within a context of an interaction, people have certain attitudes about what information is suitable to collect and whether it should be disseminated. According to Barth et al., contextual integrity can vary across time, place and culture, as such, communities and individuals have different expectations about what information should be shared or what is considered as sensitive information. Hence, the importance of understanding how the participants of the given space define the space; can also provide invaluable ethical information to the researcher.

Finally, in understanding private/public space there is a need to consider that the application of Western views might not always be the best for the given environment. For example, in Capurro (2005), Japanese and Western perspectives of private/public space were examined. For Japanese, "cyberspace is viewed as private, but in a collective non-individualistic way. Japanese weblogs for instance are considered to be media or communication tools for promoting individualism. But at the same time with regards to topics and readers the Japanese weblogs are the media of reflecting the values and meanings of Seken[2], In other words, Japanese weblogs are a continuation of the private diary opened to the public in the Internet" (online version). In the current situation, the issue remains questionable, as Second Life does encompass community members from diverse parts of the world. However, some community members assume that all messages which occur through IM's (Instant Messages) are private, therefore creating an illusion of privacy (Barnes, 2004) and making people technologically vulnerable.

In summary, the idea of public and private space is an essential element, which needs to be considered, if not fully understood by the cyberspace researcher (Thurlow, Lengel & Tomic, 2004). Although, as it was illustrated above, public/private space depends on a number of factors, the "researcher should sufficiently be familiar with the environment to interpret interactional codes and norms in harmony with other users"(Rosenberg, 2010, p. 29). As such, cyberspace, is a culture (with subcultures within) which requires some level of cultural awareness to approach it in an ethically

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[2] Seken refers to the appearance of the total network of social relations that surround an individual. It conveys the corresponding cultural norms and values that function to regulate social behaviour, and hints at how such relations and behaviour are maintained. Ultimately, seken refers to the relation between the individual and society. As seken regulates the behaviour of individuals in relation to norms (Kurihara, 2007).

sound way (Rosenberg, 2010). For a space which can be considered heterogeneous and differentiated (Madge & O'Connor, 2005), according to Eysenbach and Till (2001), several measures can be taken to assess the level of privacy within an online environment. First consideration is the degree of accessibility. If registration is required to gain access to a group, the participants will most likely regard their space as private. Hence, in considering this statement Second Life could be viewed as private space, given that all members are required to register and access Second Life with a password.

Secondly, "the number of (real or assumed) users of a community determines how public the space is perceived to be: a posting to a mailing list with 10 subscribers is different from a posting to a mailing list with 100 or 1000 subscribers. However, as messages sent to mailing lists are sometimes stored in web accessible archives, the actual number of people accessing messages may be greater than assumed and may be impossible to determine" (p. 1104). In Second Life, the community is continuously growing and made up of users from around the world. Lastly, the importance of considering that cyber communities have a value system, norms, rules, a sense of identity, and association, provides an excellent reminder to verify whether there is an information file or rules notecard stipulating, the cultural norms, codes and target audience. By examine this, this assists in determining how the space is considered amongst the cyber community. In Second Life, different environments have particular rules and regulations. An avatar who 'teleports' him/herself from one environment to the next will receive upon arrival a notecard (an information file detailing some of the rules and regulations observed by the community). Unfortunately, details on the notecard can be viewed if and only if the user (avatar) chooses to accept the information file.

Informed Consent and Risk

Obtaining consent is a vital issue in conducting research on human participants. "In Internet based research, informed consent raises a number of problems…And there is no unanimity regarding these complex procedures" (Interagency Advisory Panel on Research Ethics, 2008, p. 5-6). Sveningsson (2001) suggests that technology increases the dynamic speed in the environment; hence rapid conversation and the dynamic change in the participants logging in and off, making it virtually impossible to obtain consent with ease and from all participants. Some of the guidelines regarding the obtainment of consent include the creation of consent forms which were distributed via email attachments. Not any different from the consent forms used in traditional research, thorough details were provided regarding the purpose of the research, the role of the participants within the research, how the data would be used, if any risks were present, the benefits, how privacy would be maintained, and information regarding the rights to withdraw from the research. Some guidelines also suggest that the researcher inform the participant(s) that the electronic consent forms may be downloaded, signed and returned via snail mail or fax. This is simply done for the purpose of authenticity. However, researchers such as Porr and Ployhart (2004) raise the issue that obtaining consent online, in lieu of face to face (FtF) may make it difficult to ascertain that the participant(s) fully understands the consent form. Unfortunately, Porr and Plohart's view can be argued against, particularly if a researcher intends to work with the disabled community. Assuming that the participant(s) have an inability to travel or belong to the deaf community in Second Life, consent using an email attachment(s) would be the most appropriate as well as accessible. Additionally, Wood, Griffith and Eatough (2004)

explain that researchers who intend on obtaining consent online should consider "thinking about the whole picture" (p. 516). In their study on video game players, they raise the question of how is it possible to maintain certainty of who is actually taking part in the study. Are they vulnerable? Under age? Is it legal to ask the participant(s) for identification? Is the person who provided the consent, the actual person taking part in the study? Could someone else be sitting at the keyboard? "Previous research has identified that some gamers actually switch genders whilst playing and it is just as conceivable that participants could lie about their age, their location, or any number of demographic variables…The short answer is that we can never be 100% sure" (Wood et al., 2004, p. 516). Typically, users in Second Life must be 16 years of age or older to sign up. The age verification process is quite simple; users must enter their birth date, month, year and click on "accept". However, in some environments users must be 18 years of age or older (see Figure 4). Prior to 2007, Linden Lab creators of Second life required users to submit a document (i.e. license, passport…) indicating one's age to enter the restricted environments. Since then the age verification method has become lax, and information supporting this change is nowhere to be found.

Figure 4. Age verification test zone in Second Life.

Although this study was a minimal to zero harm study, all the necessary measures were taken in obtaining consent from the participants, as well as ascertaining that there was a full understanding of the project. Furthermore, participants were provided all the necessary contact information should further questions need to be resolved. Secondly, regardless of whether the risk was low in this study, it was still challenging to make certain that the participants, who are under the umbrella of the vulnerable population group, would be emotionally and psychologically well after or during the study. Wood et al. (2004) state that people who may be sitting in front of their computer, could very well be in a state of isolation with little or no social support. Thus, given that participants in Second Life are from a global network, real life support services like Befrienders International (http://www.befrienders.org/) would be the most appropriate referral, as it provides a worldwide database of accessible support services. Alternatively there are a number of licensed psychologists who practice avatar based therapy in Second Life (the

credentials have been verified- http://www.drkerley.com/avatartherapy.html) and they would be most suitable as professional experts.

Withdrawal

The ability to withdraw from the study was made clear in the consent form. No questions were asked, if the participant(s) decided to discontinue being a part of the study. Hence the most common behavior was that the avatar would step on a teleporting hub (found throughout the grid) and teleport him or herself to another location on the Second Life grid (see Figure 5). However, it was equally important to note that Second Life technology is not always stable. At times, technical problems arose, the Second Life viewer froze, avatars stopped functioning (due to scripting issues), detrimental lag occurred (due to a large number of users were logged on at a similar given time, or the user did not clear his or her cache) and some avatars even disappeared off the grid. If one of the following technical issues arose, details in the consent form were provided on how the participant(s) could return to the study. Therefore, I requested that the user send an IM (instant message) indicating that he or she wishes to continue partaking in the study, and then I offered a teleport to the user, so he or she could enter our last meeting location.

Figure 5. Screenshot of teleporting hub in Second Life.

Anonymity and Everything in Between: Is that enough?

A number of studies on virtual worlds (Turkle, 1996; Introna 1997; Taylor, 2002; Becerra, 2008; Messinger at al., 2008; Vicdam, 2008) have explored the issue of virtual identity development. Some studies have suggested that virtual world users spend countless hours developing their online identities. Frankel and Siang (1999) pointed out that "some people invest just as much into their online identities as they do in their real ones" (p. 13). Other studies have (Burbules, 2002; Kafai et al, 2007; Kafai et al, 2010) demonstrated that people explore alternative identities in virtual environments. Gee (2003, in MacArthur, 2008, p. 3317) indicates that there are three identities: the virtual, the real, and the projective.

> The virtual identity belongs to the avatar; it represents the
> personality of the character being played. The real identity
> is that of the person piloting the avatar. The projective

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identity is the interface between the two and the "feedback

loop" through which values are projected upon the virtual

identity by the real identity. Essentially, projective identity

is the space in which the player evaluates and revaluates the

morality that guides the actions of his/her avatar.

Therefore, these aspects raise two consecutive ethical questions: If the person who

has been recruited for the study created an alternative identity with his or her avatar,

should the researcher tell the user to respond as he or she would in real life (Stanton,

2010)? If so, would this act, be considered as alienation and unethical? Secondly, "when

signing up for a Second Life account, users must decide upon a user name for their avatar

which, unlike the avatar's appearance, is permanent. So, while one can continually

manipulate the avatar's appearance, any reputation attributed to the user name is not

easily altered" (MacArthur, 2008, p. 3317). Thus, all avatars in Second Life have a

display name, which can easily be seen over the avatars head or simply by clicking on the

avatar and activating the profile setting (see Figure 6). Hence, should online identity be

protected as well (Frankel & Siang, 1999)? It is not uncommon to Google an avatar's

name and trace this name back to the person's real name and sometimes photo, especially

if the person works in academia or at the corporate level. Given that there is no clear

answer to this question, I brought this issue up in Second Life. However, the answers

differed for everyone. Some online users believe that their display names should be

removed while others prefer to maintain their online display name. Thus, in the study, I

asked the participant(s) what they preferred and proceeded with their request.

Figure 6. Sample of online display names overhead.

NETiquette and Ethics

NETiequette refers to a flexible code of conduct governing communications and interactions in an online space. Essentially, NETiequette is concerned with protocols and courteous behavior amongst online users. Scheuermann and Taylor (1997), and Mann and Stewart (2000) explain that it is often considered as the unspoken rule, but refers to respectful and polite behavior amongst online users. I considered the synchronicity dimension of the technology to guide my NETiquette behavior.

Avatar Appearance: The message it conveys…

McArthur (2010) presented the results of a pilot study examining the importance of avatar appearance in Second Life. Her study specifically examined avatar appearance in the corporate milieu; raising the question whether companies have enforced a virtual

world dress codes for the purpose of developing and maintaining business relationships with virtual world clientele. Although her study concluded that only a limited amount of companies have implemented virtual world dress codes, some companies who deploy their employees in virtual worlds have demonstrated a general interest in developing such a policy. "Professional appearance in real-world situations is important in business relations…When translated into a 3D virtual world such as Second Life…enforcing rules upon attire and hair color, the employer may require that the representative avatar match the employee's real-world physical appearance as closely as possible, within a reasonable degree of accuracy" (McArthur, 2008, p. 3318).

To extend this idea into the virtual world research, Salmons (2010) suggests testing avatar appearance prior to conducting research in virtual world environments. Uncertainty reduction theory suggests that during interaction people's main goal is to reduce uncertainty about the person they are interacting with. In a non-mediated environment, people gather information of others via physical cues, thus "whether they are accurate or not, people feel that they are able to make fairly accurate judgments of other people on the basis of minimal interactions or even mere glimpses of them" (Nowak & Rauh, 2005). In the virtual world, the absence of these physical cues is replaced by visual images. Avatars in Second Life can range from a selection of human to non-human forms. Additionally advanced users, may purchase various design elements or develop items to embellish their avatar in multiple ways. Studies on avatar design have demonstrated that users can become significantly judgmental based on the aesthetic design of avatars. The design of one's avatar can have a significant impact on how and with whom one chooses to interact with (Dehn & Mulken 2000; Nowak 2004).

Avatars may be seen as a source of the message …Different types of avatars have different effects on a person's perception (Koda, 1996; Nowak, 2004; Nowak & Biocca, 2003; Taylor, 2002)…The avatar may be used to provide a means of identifying, recognizing, and evaluating others in a mediated world (Benford, Greenhalgh, Rodden, & Pycock, 2001; Talamo & Ligorio, 2001; Taylor, 2002). Because avatars are a visible representation of a person in an interface, evaluations based on the physical appearance of the avatar may be transferred to them (Rauh, Polonsky, & Buck, 2004)…People use information related to the virtual image in a process analogous to the one they have learned and used to reduce uncertainty during their experience in natural, unmediated environments. Contrary to a face-to-face encounter, where the first physical impression is more permanently tied to its owner, in a mediated environment the characteristics of the avatar can be tailored to elicit any number of impressions and reactions (in Nowak & Rauh, 2005).

Drawing from an example in Second Life, the role-playing group known as the Thirst Bloodlines (vampires and lycans) encourages human form avatars to steer clear

from this community, unless interested in belonging to the clan (see figure 7). These

avatars have been designed to meet the role playing objective of accumulating victims'

and remaining "alive" by "biting human form avatars". Thus, avatar design conveys a

message to other residents in Second Life, as well as encourages or discourages the

initiation of conversation for some residents.

Figure 7. Advanced artistic design strategies used to portray avatars belonging to the Thirst Bloodline community in Second Life.

To ascertain that the ethical standards on human subject research were

maintained, I tested my avatar using four distinct design elements. These design elements

included a human form avatar wearing a lab coat, a non-human form, a human form with

standard clothing, and a human form with modified hair color (see Figure 8). These were

tested in the disabled Second Life community, as well as other environments to examine

whether the graphical representation of my avatar conveyed any significant reaction (e.g.

"fear, avoidance, power") that would hinder my ability to interact with avatar participants

during the research process. There is no current study demonstrating the best practice

method in designing an avatar which will be used to conduct research in Second Life.

Further research is required in this area. However, findings from my pilot study indicated that an avatar with a lab coat conveyed a message of power and made it slightly challenging to initiate random conversation with other avatars. An avatar in non-human form allowed for easier conversation initiation, however the design was distracting for some because of the embedded animations that occurred spontaneously during the conversations. Thus, for this research, the avatar I used was in human form with standard clothing, as this was less visually distracting and perceived as friendly. Additionally most users within the disabled community have gained familiarity with the aesthetic identity of the research avatar.

| NON HUMAN FORM | HUMAN FORM LAB COAT | RESEARCH AVATAR |
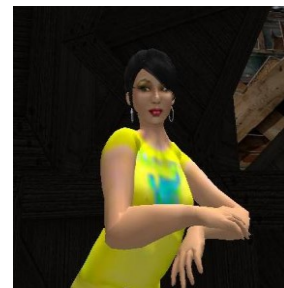
Figure 8. Illustrations of different avatars used during pilot testing.

Second Life's Disabled Community, Fairness, Equity and Everything in Between

Sensitivity to different users in the online space is the forefront of ethical practice in conducting research in Second Life. Second Life invites many disabled users within the virtual space. From an ethical standpoint the online medium provided the researcher an opportunity to access an extremely diverse disabled group of users (some people were excluded for diverse reasons beyond the control of the researcher). Many users, who have

mobility issues or speech impairments, could participate in this research given that travel was not necessary and diverse operating techniques (text or voice capability) "may offer an ideal and equitable environment" which was equally safe, accessible and did not require any modifications (Bowker & Tuffin, 2004, p. 230).

As an additional side note, assistive technology such as switches, wands and screen readers are often used by disabled users. These technologies may create "noise" in the communication flow between the participant(s) and the researcher. The flow of communication may be relapsed by seconds or minutes until the screen reader recognizes the text or the signal received by the activated switch. Thus, referring back to my past projects conducted in online environments, essentially I considered pauses and breaks in the synchronous communication flow. These pauses and breaks, along with emoticons (e.g., ☺) were taken into consideration during the data analysis phase. However, in the current study, after consulting with a number of disabled users in Second Life, I strongly believed that for the purpose of fairness, chronemic variables (personal rhythm may be observed in Second Life conversations, as each posting is time stamped) where not required to play role in the data analysis phase, given that some participant(s) may have used assistive technology devices that could have created a slight delay between the message to feedback channel.

CHAPTER 4 EXAMINING THE TECHNOLOGY

The Virtual World Defined

Second Life is a virtual world, a term many scholars (Bartle, 2003; Koster, 2004; Castronova, 2004) have defined yet have not necessarily shared a common ground, however each definition has uniquely contributed to the overall understanding of the environment. Chesebro (1985), who studied general functions and uses of definitions, stated that essential elements within a definition should illustrate the outstanding and structural ingredients of a situation. Essentially, a virtual world is defined by a number of unique features, and should not be confused with other popular online social networks. At the core of a virtual world, is a sense of place and "worldness" (Boellstorff, Nardi, Pearce & Taylor, 2012), or as Bell (2008) would illustrate, a sense of geography and terrain, this is what contributes to the unique and rather subjective experience of presence in which users speak of "being in" a given environment. Next, the existence of a network of people, a domain of multi-users who may choose to engage in solitary activity or participate in social activities which support the success of the virtual world. To navigate the virtual plains and engage in activity, the creation of a digital self-representation, an avatar is necessary. It is through the means of the pictorial construct which provides the actual point of entry, a level of embodiment by which social life and identity emerge. Communication in the virtual world occurs through real time or synchronous voice or text-based communication which a few researchers have indicated provides a greater sense of presence, the generation of spontaneity (Hines & Pearl, 2004) and the emergence of a community of practice (Branon & Essex, 2001). Additionally, the virtual world is a

persistent, contiguous world where activity within the environment continues regardless of whether a user has logged off. From a technological perspective, capabilities afforded by the networked computers offer the level of persistence in the virtual world; supporting the management of all objects and environments created, additionally storing and maintaining social interactions, transactions and conversation. Therefore this persistence alters the way interactions occur amongst other users and the environments (Bell, 2008). From an ecosystemic perspective, the actions of a user ripple through the virtual world affecting every other part of the system. Thus, the focus is no longer simply on one user; instead the focus is on dynamic community who may affect the change within the environment.

The Second Life Community: A Social Virtual World

At a first glance, Second Life (abbreviated as "SL" by the online community) may be perceived as a video game however, Linden Lab creators of this platform provided an immediate response stating that "there is no manufactured conflict or set objective. It's entirely an open-ended experience" (Kalning, 2007). Juul (2005) explains the distinction between gaming virtual worlds (GVW) and social virtual worlds (SVW). Gaming virtual worlds, such as World of Warcraft are gaming environments which have pre-defined structures and involve quest driven behaviors. On the other hand, social virtual worlds, such as Second Life provide open-ended experiences associated to autonomy. Each person, also known as a resident, determines his or her personal goal for partaking in the Second Life adventure. Pence (2007) drew a comparison to real life, stating that goal setting is equally important in Second Life. Thus, in the absence of goals, people may become frustrated, confused and fail to remain in Second Life.

The California based company, derived the concept of the social virtual world from a book entitled *Snow Crash* (1992) by the American author Neal Stephenson, who in his science-fiction novel describes the Metaverse, an environment with various architectural structures, some identical to those found in reality. Amid these structures, numerous inhabitants represented by avatars, some in human form and other with less realistic looking characteristics.

Thus, similar to the descriptions found in Snow Crash, people from Western and non-Western countries, of various ages, genders and abilities explore limitless numbers of locations in Second Life. Residents have the opportunity to partake in individual or community activities as well as events which quite often blur the boundaries between the real and the virtual. Therefore, it is not uncommon to stumble upon different locations for the purpose of socialization, entertainment, education or commerce. On any given day it is possible to attend a language class, receive first aid training, learn about world photography, discover Machinima, or watch cinematic productions created in Second Life. Interested in visiting a university campus, but various physical factors are preventing you from doing so? Many universities offer campus tours and online recruiters are quick to respond to questions that may come to mind. Several multinational companies, who have established their presence in Second Life, host recruitment days, conferences, and staff training without the requirement of travel. Numerous non-profit organizations, such as the American Cancer Society, have also made their presence in Second Life, mobilizing volunteers, hosting fundraising relays, raising awareness, and networking with a broader online community. As one organization made it clear, the real advantage was not necessarily the cost-efficiency of disseminating information, but rather

the solidarity they felt within the online community-"the shared experience created a bond" (Bettger, 2008, p. 44). Additionally, certified mental health clinicians offer a range of counseling services answering questions related to identity or conducting group counseling sessions, which strengthen emotional support and the practice of interpersonal skills.

For people who enjoy music, real life musicians, singers and deejays share their talents with the online community. The live streaming of various music genres can be located on the Second Life community events calendar. These venues draw a large number of participants who claim that these are one of the many ways to meet and chat with fellow residents who may have similar interests.

Within the Second Life environment, the implementation of a map tool has two significant purposes, one being a navigational aid or way finding tool and secondly, a tool for social visualization which may significantly affect the social environment, create a shift in group dynamics, and stimulate the practice of social production.

When the map is activated, an aerial view of Second Life is displayed with visible green dots which represent Second Life residents (Figure 9). Some of these dots may be displayed as clusters, while others may be dispersed across the Second Life map. In general, locations which tend to be very populated encourage additional user traffic. A number of researchers have provided insight on issues related to social visualization, particularly examining why certain online locations generate greater traffic over others. For instance, several complex theoretical perspectives of human curiosity may lead to a number of these answers, as curiosity "has been consistently recognized as a critical motive that influences human behavior in both positive and negative ways at all stages of

the life cycle" (Loewenstein, 1994, p. 75). Conversely, Curtis (1992) who has examined

text-based virtual realities provides detail on a social phenomenon known as social

gravity. He explains that people tend to be attracted to crowds who are easily visible.

Gilbert and Karahalios (2009) also claim that it fulfills social and psychological needs.

Both Taylor (2002) and Boellstroff (2008) expand on this phenomenon stating that the

importance of crowds in online communities lessens the feeling of emptiness and

abandonment in virtual worlds. As Boellstroff (2008) explains, the presence of other

persons is a key to a sense of place…The people that inhabit this space are what make it

real. (p. 182).

Figure 9. A screenshot of a partial view of a map in Second Life. The dispersed circles on the map (green in color) represent people who are actively logged in throughout the various islands. Screenshot courtesy of Second Life resident.

Description of the Virtual World Environment

Virtual Ability Inc. maintains five regions for health related education and support

in Second Life. The first, which is considered the main community getaway for the

arrival of new avatars, is Virtual Ability Island. This island consists of an Orientation Pathway, (Figure 10) which is a learning tool to help avatars learn the most basic and advanced skills of navigation and communication. Furthermore, this region consists of two classrooms environments, the Yellow Hibiscus (Figure 11) and Blue Orchid Cabana, small sized classrooms for group discussions or presentations. These environments were designed with characteristics that focus on environmental variables; in this case the seating arrangements. Benches placed in a horseshoe format are implemented as objects of inclusiveness allowing avatars who use guide dogs or canes to easily move from a standing to a sitting position. Furthermore, they are considered as sociopetal spaces, a term coined by British psychiatrist Humphrey Osmond, to describe a spaces that brings people together (Seabury, 1971).

Based on the research conducted by Rosenfield, Lambert and Black (1985) on seating arrangements within a classroom environment, findings indicated that the horseshoe or semi-circular format within a classroom environment intended to encourage a sense of freedom and facilitate wider participation during discussions.

Furthermore, omitting the traditional classroom desk and chair, offers avatars with wheelchairs the adequate dimensional space for easy wheelchair mobility, and furthermore removes the traditional authoritarian model of learning, as the community emphasizes on the importance of learning as a social process. For larger presentations, such as academic conferences, the Sojourner Auditorium (Figure 12) was designed. Once again, the feature of the benches and ramps place emphasis on the inclusiveness of the space. Finally, to further encourage interaction amongst members and non-members alike, Mentor Park (Figure 13) was designed as an accessibly-friendly environment

modeled after a park space including wildlife, plant life, swings, and a slide. Drawing from the values and attitudes towards open green spaces in community life, the park was first seen as a gateway for interaction, serving as a reminder of the importance of community life amongst Virtual Ability members. It was also designed as an exploratory ground encouraging avatars to learn how to interact with objects in conjunction with the assistance of mentors, in what is considered a safe environment.

The next region is Health Info Island which houses several community health education and research buildings. This region is considered a resource area, providing accessible information on topics related to emotional, physical and mental health. Information is presented on various posters, and didactic panels which are interactive, allowing for links to external resources (websites). Furthermore, a pathway appropriately named the Pathway of Support (Figure 14) consists of 124 didactic panels, strategically categorized into the following areas: disabilities, chronic illnesses, addictions, caregivers and mental health. These didactic panels provide access to various peer support groups in Second Life. There is also a building known as the Consumer Health Library, a virtual library operated by a medical librarian who assists avatars with the selection of appropriate resources, in addition to providing personalized reading lists for health related education. The Research Pavilion is a showcase area for members who conduct research in Second Life on topics related to health education and disabilities. Furthermore, didactic panels display recruitment requests for participants, and provide educational resources on Human Research Participation rights. Finally, a number of exhibits are displayed throughout the region on such topics as medication, accessibility

issues, grief and trauma. These exhibits designed by volunteers are interactive and change on a monthly basis.

The Cape Able Island was a region created for the deaf and hard of hearing community of Virtual Ability. As a community space, this area includes the Deaf Chat café, a coffeehouse displaying numerous informative didactic panels intended as educational material for avatars. These panels educate avatars on how to interact with the deaf and hard of hearing community. In addition, various posters display the American Sign Language Manual alphabet, numbers and other useful tools and information. Sponsored by the Starbucks® Corporation, this communal space, hosts a number of community events such as dances, poetry readings and discussions (which take place in text based format). Furthermore, a number of art galleries have been created which include art works of various members with disabilities from the community. Drawing from the area of Expressive Art Therapies, these galleries were integrated within the environment for a variety of reasons including: empowerment, healing, self-expression, to encourage community gatherings and community contributions. This island is also considered a residential space where a number of avatars, including some who do not belong to the Virtual Ability community, purchase land to build homes.

Cape Serenity is another residential space, which is often referred to as the "quiet and peaceful community of Virtual Ability." A number of members and non-members have purchased land to build homes, to create a place with meaning, however this meaning can be ever-changing and quite complex to understanding. Some avatars claim that their home is for comfort, security, belonging, or self-expression. Furthermore, this island also features a tiny bookstore (Figure 15). Numerous popular classic books can be

accessed by a simple click to a free external link. Additionally there is an ongoing project allowing for members with disabilities to become authors, to contribute their personal written pieces in the space.

The final location is the VAI Sanctuary. Considered as a community center for Virtual Ability members and visitors, this area is intended for multiple uses such as leisurely play, group activities, information sharing and social support. Overall this area continues to emphasize the importance of community development where volunteers host a number of activities in turn, both contributing and supporting the tight-knit community. At a glance, the space has been designed with objects to encourage social interaction. Dating back to research conducted by Maudry and Nekula (1939) and Mueller and DeStefano (1973), the majority of early peer encounters occurred around objects, specifically toys. They further studied object-centered contact, to determine whether it fostered subsequent interaction within playgroups. Their study revealed that objects can both "invite" and "demand" social interaction. Thus, various similarities could be drawn from the earliest of studies. Within the VAI Sanctuary objects, considered as social objects, have been implemented within the environment to bring avatars together and to encourage participation of various sorts.

Upon arrival, one enters the Welcoming Center, an area which includes a calendar of daily activities hosted at the VAI Sanctuary or other affiliated Virtual Ability islands. There is a "what ought to be seen and done" guidebook encouraging avatars to explore, and discover the hidden treasures of the island and a suggestion box, specifically created to encourage creativity and integrate practical ideas amongst the community or sometimes used as a springboard for discussion.

Moving along, one can find a swimming pool area surrounded by lounge chairs, blankets and benches, and nearby Gentle's Beach Café™ (Figure 16), a uniquely designed space, for unplanned conversation such as gossiping and other social grooming functions intended to preserve group cohesion (Dunbar, 1997). There is a meditation and Tai Chi area, a parachuting deck and zip line. These areas are considered informal spaces for learning. They are used as places for friendly "hang outs", solo activities, or small, informal group meetings on diverse subjects, not necessarily related to disabilities. Furthermore, there is a sandbox area, an open space intended for avatars who are interested in practicing and developing building skills in Second Life. Within this space there is a small platform with a sign that reads "Gifts for VAI members" intended to encourage avatars to show and share their creations with other members. In his whitepaper entitled "If it Doesn't Spread, It's Dead" (2009), Henry Jenkins explains that it is through the process of spreadability, and the making of shareable objects that helps people learn. Finally, for entertainment, an interactive gaming area was designed for solo or group play. Modeled after various classic board games, videogames and card games such as Mahjong, Backgammon, Checkers, Chess, Zyngo, Black Jack, Whack-a- Mole, Bowling and Space Invaders each game was designed with issues of accessibility in mind.

Each region has been strategically designed and related to the Therapeutic Environment theory. This theory stems from: (1) the field of environmental psychology which examines the psychosocial effect of the environment on a person, (2) neuroscience which examines how the brain perceives the architecture/aesthetic structure and (3) psychoneuroimmunology which further examines the effect of the environment on the

immune system. The aesthetic merit of the five regions is based on design features related to nature's imagery (i.e. animals, vegetation, and bodies of water) and sounds. iSkye and Gentle Heron have often discussed, the tranquil imagery of nature and its positive effects on members with disabilities, however it is important to note that these islands were not designed for therapy related medical treatments, instead they were designed to provide a sense of control and freedom, offer social support by minimizing images of disability and eliminate environmental stressors by taking into account the importance of accessibility.

Figure 10. A screenshot of the Orientation Pathway located at Virtual Ability Island. *Source: VAI Member .*

Figure 11. **A screenshot of the Yellow Hibiscus Cabana located at Virtual Ability Island.** *Source: VAI Member.*

Figure 12. **A screenshot of the Sojourner Auditorium located at Virtual Ability Island.** *Source: VAI Member.*

Figure 13. **A screenshot of Mentor Park located at Virtual Ability Island.** *Source: VAI Member*

Figure 14. A screenshot of the Pathway of Support located at Health Info Island. *Source: VAI Member.*

Figure 15. **A screenshot of the Cape Serenity bookstore which includes various personal written pieces by VAI members.** *Source: VAI Member.*

Figure 16. A screenshot of Gentle's Beach Café. A unique space for social interaction. Source: VAI Member.

Exploratory Behavior

Similar to other virtual worlds, Second Life has always been considered an environment for experiential learning, where interaction with avatars and the exploration of objects and other built structures within the environment occur quite frequently (Boulos, Hetherington, & Wheeler, 2007; Stieglitz & Lattemann, 2011; Miller, Allison, & Getchell, 2012). The action of teleporting or navigating to different islands (environment) can be done, in most cases fairly easily with little to no restrictions, unless

the land owner prevents access to an object, denies entrance to a structure or prevents unwanted avatars from visiting an island by adding a barrier, known as a restriction of land access.

Teleporting or navigating from one island (environment) to another is common behavior executed by avatars. However to generalize on the frequency of exploration, and whether this behavior is executed as a group or solo activity is unclear. By studying the World Map, a geographical tool in Second Life which provides an aerial perspective of the different islands (environments), one can observe the numerous green dots (representing avatars) lighting up the computer screen. Some dots may appear scattered or secluded, while others may appear in a clustered structuring or dense bunch. At times, the structuring may be quite dense, making it impossible to determine how many avatars are present in a given location. Furthermore, some green dots may appear compressed or overlapping, thus rendering it impossible to determine whether avatars are in direct contact with each other, or in close radial proximity on an island. Some avatars may be located in what is known as a skybox, a home or office in the sky which unless the location is revealed to another avatar, it is not possible to find. Thus, even though there may be a large presence of green dots, representing avatars on the World Map, this does not necessarily mean that they are interacting together. The only way to verify if avatars are clustered together is to enter the island (environment) and observe whether the avatars are interacting.

Clustered and Dispersed Community Living

As for Virtual Ability members (myself, included), it is not uncommon for them to explore different islands in Second Life. However as proposed in various theories of exploratory behavior, this could be dependent on a number of factors including motivation, levels of fear or anxiety, levels of curiosity and other appetitive desires which may be required to fulfill. Thus, exploratory behavior may vary from one individual to another (Russell,1973; Spielberger and Starr,1994; Litman,2005).

Some members enjoy exploring the different islands alone; however they often return to the Virtual Ability community to share their numerous discoveries during group discussion time. Often, if the island (environment) is deemed appropriate and accessible, a group field trip is organized. These field trips are announced on the community bulletin board which is located at Virtual Ability Island and the VAI Sanctuary.

In the past, various field trips were organized at different locations. Some of these locations included the Science School, an island dedicated to science related research and learning, the Seven Seas Fishing Pier, a model of a fishing pier where one can observe the different aquariums containing a variety of sea life or partake in a fishing activity to explore numerous fish species. Finally, the RMS Titanic, a virtual model of the passenger liner was also visited by Virtual Ability members.

Members are invited to explore an island (environment) as a group which may also result in a learning activity, such as advanced skills training in avatar navigation.

Given that these field trips usually occurred on a regular basis, I also noticed various elements which emerged, similar to what was proposed by Cuseo (1992) as he operationally defined collaborative learning. Particularly, during these explorations members remained engaged in conversation and ascertained that everyone remained

comfortable or did not require immediate assistance. Furthermore, some members also demonstrated a strong awareness of the surrounding environment, particularly noticing the absence of a missing or lost member during a field trip. Therefore, the organized field trips resembled a team building activity, helping create a social and emotional climate conducive to the development of strong interaction, bonding and social cohesion, possibly enabling the formation of this tight-knit community.

At the other end of the spectrum, Virtual Ability members who start off by exploring an island independently may send an invitation to a friend, (an avatar who has been added to a friend's list) offering a teleport invitation in which the avatar is directly transferred to the assigned location from which the invitation was sent from. However, it is also important to note that not all islands (environments) were designed for people with disabilities. Some islands are missing certain accommodations such as attributes which are used in conjunction with screen readers, or high contrast colors to help discern images or text on the screen. Thus, in the absence of these accommodations, even if the need for exploration is present, it is more challenging for some members.

Finally, to strictly categorize the Virtual Ability members as a clustered or dispersed community would be impossible. However, it is possible to conclude with the following remarks: Virtual Ability members belong to a very close knit community, and usually tend to remain together, but at time they also spread out to explore other island (environments) in Second Life or for other reasons which would require additional research. However, there a number of factors which seem to support group cohesiveness including the ongoing organization of daily community activities. This includes: the constant updating of educational resources, from the member's collective efforts, and the

ongoing notification deliveries of events, as well as the development and maintenance of

the residential housing complexes located at Cape Able or Cape Serenity which are

places to support community living.

**Virtual Ability Island: An Encouraging Environment for People with Disabilities, a
Resourceful Community Space for Families and Friends.**

With the advancement of technology, there is an increasingly growing use of

social networking applications such as virtual worlds for collaborative practice, social

interaction and support. Researchers such as Preece and Ghozati, 2001; Verhaagen, 2005;

Bausch and Han; 2006; and Lipsman, 2007 have illustrated that the exponential growth in

use has also redefined the meaning of community, human interaction and exchange.

Furthermore, there is ample discussion surrounding the inability to find one common

definition applicable to the term online community. It may be defined from a

technological standpoint where greater focus is placed on the design and analysis of tools

for communication and group building (Preece, 2000; Preece & Maloney-Krichmar,

2005). Others see online communities or virtual communities made up of people

aggregating in public or private spaces to foster empathy, support and friendship

(Rheingold, 1993).

For people with disabilities, the general advantages of using such technologies are

fairly the same as for others, including participation in live musical events, undertaking

numerous learning activities, and maintaining in world employment. However as Gentle

Heron (2013), one of the founders of Virtual Ability Island, and a woman who faces her

own disability in real life explains, people with disabilities are greatly advantaged as a

result of being in a virtual world community. People with disabilities experience very explicit benefits, including medical, where therapeutic treatments can be delivered to decrease Post Traumatic Stress Disorder (PTSD) symptomatology. For people with PTSD group therapy can be conducted by trained professionals and virtual worlds can be utilized as preventative medicine to demonstrate the effects of lifestyle choices or educate them on health related issues and positive life changes after an amputation (Tartaro & Cassell, 2008; Hall, Congoy-Hill, & Taylor, 2011). Socially and emotionally, virtual world communities can be equally beneficial, providing higher levels of empathy and social support for the disabled community (Gilbert, Krueger, Ludwing, & Efron, 2013). Exploratory research, which has examined people with disabilities in online virtual communities, has outlined that virtual presence reduces stigmatization, and decreases loneliness and isolation (especially for homebound individuals) by providing access to a broader community where like-minded or individuals with similar abilities can interact (Bradley & Poppen, 2003; Bowker & Tuffin, 2002, 2003).

Community Gateway

In 2008, Virtual Ability Island located in the three dimensional world of Second Life, officially became a Community Gateway, a term used by Linden Lab to describe a main entryway for noobs – a slang term for newly created residents (avatars) in Second Life. The main feature of the Community Gateway is to provide new residents with guaranteed synchronous support delivered from residents (avatars) who have greater knowledge of the in-world environment. The Community Gateway also affords a sense of

comfort, safety, engagement and helpful challenges while allowing noobs to acquire in-world familiarity during their visits. The secondary purpose of the Community Gateway is to ascertain community retention and growth, by demonstrating that there is opportunity for constant support and assistance.

Thus, it becomes the responsibility of the virtual region's (a delimiting virtual space) owner(s) to ensure that a member is available at all times to greet and mentor new residents. As a result, a great deal of timely commitment and effort is provided by region owner(s), mentors and volunteers alike. While the original Community Gateway model, known as the CG Program introduced by Linden Lab no longer exists, Virtual Ability Island maintained the concept of the Community Gateway, emphasizing the importance of online "human touch".

As Gentle Heron and iSkye [Last name omitted for privacy] (2013) explained, Virtual Ability Island became the first island to help people with visible and non-visible disabilities, as well as chronic illnesses make a smooth transition into the Second Life. By creating an Orientation Pathway, an interactive self-directed learning tool designed around the Seven Principles of Universal Design, the characteristics for usable products and environments (equitable use, flexibility in use, simple and intuitive in use, perceptible information, tolerance for error, low physical effort, size and space for approach and use), as well as the applying Malcolm Knowle's (1984) theory of andragogy into the virtual environment, avatars learn the fundamental skills required to be thriving community members in Second Life. These fundamental skills include navigation, communication, inventory management, as well as advanced skills such as photo taking and avatar personalization.

Access to Virtual Ability Island and Membership

Since Virtual Ability Island collaborates with a number of organizations throughout the world and has developed close partnerships with medical and academic institutions. People with disabilities as well as their family members are often referred to the Virtual Ability Inc. website, a website for the non-profit organization based out of the state of Colorado whose mission, amongst other objectives is to help people with disabilities thrive in online worlds. Unlike the standard signup process, which occurs directly from the Second Life website and introduces a new avatar (noob) to Help Island, a location which includes tips, tricks and tutorials about Second Life, the Virtual Ability Inc. website is considered as an alternative starting point. This alternative starting point allows people with disabilities to signup and access the Virtual Ability Island Orientation Pathway. This environment is also compatible with computer assistive technology devices.

Individuals who choose to signup up via the Virtual Ability Island Inc. website (http://www.virtualability.org/) are considered members and receive information regarding group events, activities, discussions and major announcements. Thus, members hold the group title "Virtual Ability", a group tag which is displayed above the avatars head, and as one anonymous member indicated, "it's like having a secret handshake…I wear it with honor!" However, because there is an option within the settings of the viewer to toggle the group display name on or off, or select different group names based on affiliation, it is often not possible to determine whether an avatar is a member of Virtual Ability Island. Alternatively, some individuals, who signup via the Second Life website can also become members of Virtual Ability Island by contacting avatars such as Gentle

Heron, iSkye [Last name omitted for privacy] or Ladyslipper [Last name omitted for privacy] and request membership which is open to people outside the disability community as well. However, an avatar requesting membership must undergo a screening, a process which is conducted by volunteer members or leaders (The term "leader" is loosely used, as the Virtual Ability Island community often promotes a sense of equality amongst members. Hierarchical status words and symbols such as "leader" are not used as there is a belief amongst the community that everyone has the ability to contribute something within their own particular way). These "leaders" maintain certain roles throughout Virtual Ability Island, these include organizing conferences or conducting mentorship training programs. A potential Virtual Ability member will be greeted at Virtual Ability Island with engaged conversation over an indeterminate period of time before the potential member is granted membership.

The goal is to potentially determine whether the avatar will benefit from being a member within the community. This could include improving one's understanding of disability related myths or gaining access to disability related information which can be applied in an offline environment. Secondarily, during the screening process the members critically reflect on whether the potential member will cause any harm to the community. As iSkye [Last name omitted for privacy] once said: "it's not a country club – we screen as a protective measure because we have members in our community who are vulnerable due to their disabilities and we want to be careful about potential harm to those members." Thus, this description can be comparable to that of a community of practice which is an open social system but not necessarily boundary-less (Zhang & Stork, 2001). Finally, once membership is approved, it is the expected that the avatar agrees, accepts

and follows the Virtual Ability Community Standards available at

secondlife.com/corporate/cs.php.

Over time, some avatars seek membership with the Virtual Ability Island Resident Help Network (RHN). This volunteer-run network is made up of people with different abilities and diverse backgrounds who receive specialized training at Virtual Ability Island on how to adequately assist and mentor people with real life disabilities in a virtual world. Some topics explored during training include: how to communicate online with someone who has a disability; discussions on strategies for motivating, supporting and encouraging; how to assess and determine the needs of the avatar; and some technical related support training for assistive technology users. Overall the training provides the mentors with the adequate skills to support and provide high quality assistance to new residents (noobs) entering Virtual Ability Island.

During the research period, approximately twenty mentors were available to assist newcomers with real life disabilities gain access into Second Life. However, in general as I have previously observed and noted within Virtual Ability Island, the community consists of plenty of committed members who have not received any of the above described formal training, but nonetheless engage in altruistic or prosocial behavior, as defined by Eisenberg and Mussen (1989) as "voluntary actions that are intentioned to help or benefit another individual or group of individuals" (p.3). At any given time, avatars who may be demonstrating difficulty with navigation (behavior includes frequent bumping into objects, inability to navigate out of bodies of water or unable to complete touch-click action to generate a specific behaviour such as sitting on an object) are quickly greeted, sometimes asked whether they require assistance or directed towards the

appropriate avatar who can respond to their issue. Prior research on digital media technology including social media, gaming devices and immersive virtual environments indicates that these environments can help promote and support altruistic or prosocial behavior due to the immersive situations one may experience (Quandt & Kroger, 2014; Rosenberh, Baughman, & Bailenson, 2013; Gillath, McCall, Shaver, & Blascovich, 2008).

Finally, to add to the complexity of membership, there is also those avatars who for a number of reasons do not request community membership, however these non-members or peripheral members "share identity, communication repertoires and a sense of engagement" (Zhang & Storck, 2001, p. 6) with members of the Virtual Ability Island community. They are often considered as "supporters or friends of the community" and unlike other online communities, where peripheral members are considered as free-riders, lurkers or loafers and often unwanted within the community (Zhang & Storck, 2001) Virtual Ability Island members equally embraces the non-members. A personal recollection of my early onset experience as a peripheral member allowed me to note that knowledge sharing, and other forms of participation were never forced upon, if contribution occurred it was embraced, encouraged and accepted. Essentially the community members believe that peripheral members are needed, and assist with such things as community growth and social bonds.

Demographics and Typology of Virtual Ability Members

At the initial start of the research journey, Gentle Heron explained that Virtual Ability Island consisted of over 700 members; most recently the current number has increased to over 1000 members, representing every continent with the exception of

Antarctica. These members can be divided into two categories: people with visible disabilities, for instance a physical disability such as spinal cord injuries which result in paraplegia and quadriplegia or people with non-visible or invisible disabilities, which are invisible to others, this includes such disabilities as chronic fatigue/pain or post-traumatic stress disorder (PTSD).

A Brief Word about Narrative Research

> *Narrative inquiry is a way of understanding experience. It is collaboration between the researcher and participants over time—simply stated…narrative inquiry is stories lived and told.*
> *-Clandinin & Connelly, 2000, p.20.*

Narratives are stories, tales, accounts, or descriptions which Aristotle noted over 2000 years ago in his writings, especially *Poetics*. They have a beginning, middle, and an end, which may flow in sequence or offer a journey into the realm of the unknown. They "preserve our memories, prompt our reflections, connect us with our past and present, and assist us to envision our future" (Kramp, 2004, p. 4). A part of human nature, we have been familiarized both culturally and socially to understand the narrative form (Shankar & Goulding, 2001). Narratives have afforded opportunities to allow us to explore the path of our identity, to take a closer look at our history and our culture. In his writings, Bruner (1986) has also suggested that we have been genetically programmed to understand the narrative form. "The respect for stories and appreciation of their value has grown as we have come to understand more fully how they assist humans to make life experiences meaningful" (Kramp, 2004, p. 3).

As a qualitative research method, the use of narratives has been considered as an alternative method of inquiry. This method has increasingly gained credibility over the

years (Angus, 1995; Clandinin & Connelly, 2000; Lieblich, Tuval-Maschiach & Zilber, 1998; Pinnegar & Daynes, 2007; Webster & Mertova, 2007) as researchers in such disciplines as education, psychology, and anthropology felt that observation alone provided only a fraction of the picture. Thus, narrative inquiry provides an enriching picture, "revealing both the uniqueness and complexities of the individuals"…It is "a way of coming to understand by being open to the stories individuals tell and how they themselves construct their stories and therefore, themselves" (Kramp, 2004, p. 8). It is a method which may involve the gathering of stories in oral, visual or written form and provides an opportunity to seek out an experience or understand a phenomenon, rather than devise a scientific or logical explanation.

Narrative inquiry is an appropriate method to represent the actions of the relatively unknown, such as the ignored or oppressed groups whose agendas and meanings have often been neglected in theoretical, practical and policy issues (Lincoln & Guba, 1985). Narrative inquiry has the potential to be a vehicle of empowerment for the storyteller (Goodley, 1998). It is through these stories, with a setting of time and place that something is revealed of "how the persons we are studying construct themselves as the central characters and narrators of their own stories" (Kramp, 2004, p. 9). In this method, the relationship between researcher and participant remains open, boundaries, very often broken as friendships may evolve, and this may create a "more emotional, dialogical and ethical researcher" (Tillmann-Healy, 2003, p.744). Given that there is not one specific way to carry out this type of research, Polio, Henley and Thomspon (1997) suggest that the conversation remain unstructured and unforced. The informality of the conversations contribute to the storytelling.

The researcher must be open to respondents and

adapt her questions, tone, and interest to both

respondents' commentaries and to her own shifting

understanding as she learns more about the

phenomenon… Uncertainty and spontaneity that

must be accepted and transformed into possibility

and pattern…A particular phenomenon must be

developed creatively and allow for a fluidity of

methods and research process. (Seamon, 2000b, p.

163)

Contrary to many lingering beliefs, this research method is far from the simple

gathering of stories. Instead, the researcher considers how the facts got assembled that

way. Reflecting on such questions as "for whom was this story constructed, how was it

made and for what purpose? What cultural discourse does it draw on-take for granted?

What does it accomplish?" (Riessman & Speedy, 2007, p. 429). Furthermore, the

researcher must be mindful of personal biases at all stages of the research. As Kramp

(2004) explains "knowledge of your bias can inform you as you work to achieve a clearly

stated description of the experiences of those to whom you listen, and those whose stories

you engage" (p. 13). Reading through the stories, engaging with them at various levels,

stepping away from them and returning, collaborating with colleagues, and repeating

these actions many times over, lends itself to the creation of an artistic mosaic of

emerging themes. It is through these emerging themes that the researcher must make a choice of how to present these voices which have been heard. Do "you present your findings in an appropriate pragmatic structure that ideally allows you to move between the particular and the shared or common elements"? (Kramp, 2004, p.17) Do you recreate the story told, "a method that returns a story to the teller that is both hers and not hers, that contains herself in good company"? (Grumet, 1987, p. 322). Or do you mesh these methods together, drawing from the analyzed themes and reconstructed stories, and then returning to the participant to affirm your findings -demonstrating respect and consideration "as you begin and end with the storyteller"? (Kramp, 2004, p.18). What follows, is the latter.

CHAPTER 5 NOTES FROM A VIRTUAL RESEARCHER

Taking a Reflexive Lens: Dealing with the fears of research

> *I do keep files of ideas and stories…I come back to them later and I look through the titles. It's like a bird coming with a worm. You look down at all these hungry little beaks — all these stories waiting to be finished — and you say to them, Which of you needs to be fed? Which of you needs to be finished today? And the story that yells the loudest, the idea that stands up and opens its mouth, is the one that gets fed.*
> *-Ray Bradbury*

The journey began with a simple blank page, then bravely yet cautiously, the ink from the pen made contact with the paper. It was these words that created the path that steered the research into numerous unknown directions. While the main purpose of the research focused on obtaining an improved understanding of how people with disabilities live and feel within Second Life, I also wanted to critically reflect on my own research process, as well as examining my lived journey as a researcher/instructional designer within Virtual Ability Island. Therefore, I have chosen to share with the reader some of the reflexive extracts from my personal research journal. Although quite discomforting at times, by opting to challenge the boundaries of acceptable writing, and sharing it with the reader of this dissertation, I hoped to illuminate a space for conversation.

> *…However, it has also occurred to me that by opting to break free from the traditional writing style, I take the reader on various journeys that encompass multiple voices…I cycle back and forth, attempting to position the reader in my shoes…And although, at times the writing style may read as something "fragmented, patchy, scrappy, disjointed" I attempt to provide the reader with the closest possible experience that I encountered during this research which at times felt rather chaotic in nature.*
> *–Extract from personal research journal.*

In my initial journal entries, I mostly documented my fears of entering Second Life.

> *...I find it challenging to believe that other researchers who have undertaken similar research in online environments have not experienced some of the messier aspects of this type of research...The issues I have encountered... (Why do so many researchers avoid to write about their challenges?) Some of the studies that I have examined seem to make the research experience so simple! I sometimes wonder if the reader is getting the full picture or a partial view?...How could the "interested" continue raising deeper questions, enter into discussions or examine some of the ethical issues, if we are left with partial views...I will take an alternative route, I will share my story...*
> *-Extract from personal research journal*

In part, the anxiousness stemmed out of the idea of logging into Second Life and navigating through the virtual plains to find myself - my avatar, in Virtual Ability Island (VAI). Although, I had logged in countless times in the past, one would wonder what would be so different.

> *I can't help but think of the role expectations...Has the technology altered these expectations?... "We are expected to act in accordance with given rules and regulations attributed to that position, as well as to informal norms and expectations directed at the holders of that position (Kyvik, 2013, p.526). I feel a separation between the external expectations and the internal expectations (the one's from my online community)... My identity feels fluid...*
> *- Extract from personal research journal.*

In my journal entry, the word **"DIFFERENT"** appeared in big, bold, red letters. The "different" that I was referring to in my journal was that I would be entering as a researcher/instructional designer, and not simply as a fellow Second Life resident, a friend.

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I feel that the role of friendship, tied into research, makes it slightly more demanding…I find myself constantly questioning: what are my responsibilities, what are my obligations to my respondents?...
-Extract from personal research journal

The idea of friendship tied into research was intriguing. Sometimes I had to learn how to step back (especially when I was in "research mode") and embrace whatever was going on at that given moment at VAI (i.e. I entered on that given day with the intention of collecting some information from my respondent, instead my respondents happened to be organizing an online game which suddenly I became a participant of –therefore I never actually collected any information on that day!) I had to decipher between wearing my research hat and/or simply being a friend. I had to learn that it was "ok" not to take notes on certain discussions we shared (even though I felt that it would make great research data)…And I had to surrender to the idea that collecting data would emerge slowly, freely and unforced… And sometimes, my role as a friend tied into the research process made me feel awkward (flustered), as though I was breaking the written rules of academic research, the one's I encountered early on in my academic studies…
-Extract from personal research journal.

I was trying to make sense of this new role that I would eventually be undertaking. My thoughts were clouded, as I sat their thinking about the significance of this new role which I evidently linked to the idea of conducting ethical research in a virtual environment. Was this any different to the traditional type of research I conducted in the past?

"… She'd been plagued with strange dreams, the sort that lingered upon waking but slithered away from memory as she tried to grasp them. Only the tendrils of discomfort remained."
–Extract from The Forgotten Garden By Kate Morton

Unlike previous times where I felt that I exuded greater confidence in undertaking my role as a researcher/instructional designer, this time I was plagued with uncertainty. Amongst other things, I was caught between the various debates, (see Azar, 2000; Clark,

2004; Edwards & Ribbens, 1998; Kralik et al., 2005; Krantz & Dalal, 2000; Kraut et al., 2000; Suler, 2000) which have surfaced numerous times regarding the two opposing forces arguing for or against conducting research 'on' rather than 'with' people who have disabilities. As I reflected on these arguments, I could not help but consider how technology may be broadening participation, diversifying the meaning of accessible research and altering the researcher-participant relationship, in turn, opening entirely new avenues to the previous debates which have emerged through the years in disability research.

I was also lodged between the questions that have been raised regarding the ethical implications of conduction research in a virtual environment, the types of questions that have challenged the meaning of temporal, spatial, verbal and sensory aspects of human interaction online (Wishart & Kostanki, 2009). Unfortunately, the countless debates provided no definitive rules or guidelines, and absolutely no cookbook chapter stating exactly what needs to be done to do this type of work, in addition to doing it ethically (Josselson, 2007). I was looking for straightforward solutions, which I could compile and place in my practitioner toolbox and simply access whenever it would be necessary, instead, I returned with questions, the type of questions that made me think about professional practice along with the significance of the "generic and vague, do no harm" (Ellis, 2007). As I moved ahead, I found myself deeply reflecting, questioning every decision I made. I had to learn how to adapt and adopt as a "researcher" wearing multiple hats within the virtual world.

> *"It not always easy!.I often got caught in between the ideals*
> *and realities of conducting research in such an environment…*
> *–Extract from personal research journal.*

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At times, I was puzzled; however, I would immediately find solace in returning to the community (my community) of Virtual Ability Island in search for some help.

> *I press [enter] on the keyboard, the screen illuminates:*
> *Researcher: What do you think if I do it this way?*
> *Researcher: What do you think I should do next?*
> *-Extract from personal research journal.*

These questions were ongoing, as I was seeking approval and affirmation from the community who placed great value in their virtual space.

> *"It was a sense of comfort. I did not necessarily want to walk outside the community's boundaries (ethical culture)...It was a way to avoid unethical research"*
> *–Extract from personal research journal.*
>
> *Various residents did remind me about the movement - "nothing about us, without us"...What provoked this behavior -this continuous reminder that was being sent out? Was it my profile? Was it their way to remind the "researcher" to further examine her research practice, to consider if there was a way to create a partnership at all stages of the research process or to further question whether the research I was doing really is addresses the communities' needs? ...Some residents raised the question "All we want,... [researcher] get to know us.*
>
> *Note: Reflect on Oliver (1992) statement, as disabled people have increasingly analyzed their segregation, inequality and poverty in terms of discrimination and oppression, research has been seen as part of the problem rather than part of the solution...Disabled people have come to see research as a violation of their experiences, as irrelevant to their needs and as failing to improve their material circumstances and quality of life (p.106). –Extract from personal research journal.*

The community guided me on multiple occasions, as I shared my research plan. And yet, simultaneously the various dialogues and interactions which occurred often challenged our relationships, creating a shift in how one would normally understand the researcher-participant relationship.

> *...I question whether the online environment is the cause of the "shift"...the bigger question: why the shift? I have never had "participants" provoke my thoughts like this...It's strange!? Is it the technology giving the "participants" a new opportunity*

*for them to interact with a "researcher" A FRUITFULL
INTERACTION???!!! (Instructional design/education
question: in an online environment→ would the physical
distance between instructor and student alter the power
relationship ??)The technology is altering the research
environment, barrier/barrier free? - Think: what is it doing for
the "researcher"? Think: what is it doing for the participant?
Is it the physical distance, the online disinhibition effect?...
-Extract from personal research journal.*

Suddenly I was being interviewed, questioned, provoked to think more deeply about what

I was doing.

*I feel as though I am becoming an object of scrutiny, of
inquiry...
–Extract from personal research journal.*

Who was the researcher? Who was the participant?
I would often ask myself. *The "researchers exclusive
powers are only partially true"...I had a conversation with
member X of VAI (I consider her my "go to" avatar in SL)
today. She was very helpful. She gave me various key pointers,
ideas. I "spoke" to her about my research design and she
reciprocated with many questions. She provoked me "think
more deeply"...She wanted to know why I was so interested in
this type of research, she asked the hard questions –should a
non-disabled person be undertaking this research...I didn't
know how to answer!!!*

*...I will be using a combined method -"show and tell"
(researcher and participant will stay in one place and "talk"
about something within the environment) and "field trip"
(researcher and participant will move around throughout VAI
or other islands). We determined that it would be the most
"natural way" (many other members of VAI agreed). After all
many members of VAI are accustomed to these two methods...
She gave me key pointers. First, to consider that some
members use assistive devices for communication –Hence, be
patient, let one question be answered before typing in a new
question (there may be a delay in chat). Secondly, let the
participant determine the amount of time spent in the
"research environment" (consider various needs, such as
break times, tiredness)...
-Extract from personal research journal.*

These struggles along the way became a learning
process. *At various points throughout the research, I
entered into a shared learning dialogue. The online
environment became an equalizing ground in which*

communication ran freely and the sharing of knowledge and
experience was mutually valued
–Extract from personal research journal.

They provided a platform for reflection, which assisted in examining both personal and professional growth and development. Most importantly it opened my eyes, allowing me to reconsider the type of researcher/instructional designer I wanted to be and the type of relationships I wanted to maintain with my participants/clients.

Abraham Maslow once said that "if the only tool you have is a hammer, you tend to see every problem as a nail." With this comment in mind my objectives were twofold. First, I was hoping to encourage other researchers/instructional designers to consider the possibility of non-traditional or alternative research methods to possibly improve participants' accessibility and conditions at all phases during research. Furthermore, to stimulate dialogue and transform the researcher-participant relationship; in turn raising new questions towards alternative research possibilities and yield outcomes that could provide greater insight and richness into one's interest. Secondly to consider the value of reflective practice as an integral part of the research process, as a research tool, to help harness a deeper view of personal and professional growth, to act as a magnifying glass, to observe hidden biases and assumptions and becomes a safe ground to examine struggles or failures during the research. Whether it is through the use of creative journaling and meta reflections (as it was applied in the given case) or other significant methods, disclosing one's stories (which could be very frightening at times) assists others to probe deeper into their own assumptions, and help initiate a learning circle.

Returning to my journal.

> ... I feel that I am re- entering VAI on a "mission ", "a
> purpose". Somehow this idea, places a BIGGER responsibility
> on my shoulders. Will this be a "relationship changer"- They
> [Second Life residents] already know me – the PhD student...,
> the fellow resident, the community member. We have
> interacted on numerous occasions: group discussions, online
> conferences, games –emotional attachments, sharing of
> personal stories, different bonding experiences...I am left with
> various questions: Will this be "real" research –re-entering
> with pre-knowledge, judgment, lots of emotions (should these
> be suppressed) - not necessarily objective! How do I answer
> these questions?
>
> ...Ethics, procedural, in practice, relational...How much is
> too much? Where do I draw the rights from wrongs?...Harm,
> do no harm? Sufficient? So much to think about..? Am I the
> insider -a fellow resident of the community or an outsider? I
> am both, if that is even possible?...I wonder which identity will
> I be given by them [residents] during the research...How will
> they feel during the research? How will my role affect theirs
> [the residents]?
> - Extract from personal research journal.

Perusing through the journal, and rereading the endless scribbles on the pages led

me to consider this new role that I undertook as a "rite of passage", not necessarily in a

hierarchical sense, where the word "power" would find itself at the forefront of the

definition, but rather I saw it in terms of a transition, a change in one's life or experience.

The work of van Gennep (1960), entitled the *Les Rites de Passage* examines the role of

transition as a three phase process: (1) the rites of separation, (2) the rites of transition or

adventure, and (3) the rites of incorporation or return. The first phase is a physical or

metaphorical parting; the person disconnects from the familiar to enter a new unfamiliar

environment or role.

> "I feel like I am leaving home…It was the nametag;
> "RESEARCHER" [Blah! I don't feel comfortable with that
> title –a pecking order, a status hierarchy]
> I had to wear it. For the purpose of ethical, professional,
> practice…It was a warning to the community, just in case

someone decided to walk in during the research process! A
warning to them, but a detachment for me…Sporting the
nametag over my avatar began this change [for me]…"
–Extract from personal research journal.

The second phase, known as transition, is the period of adjustment, the person is not fully

integrated into the environment or role, and instead he is taking the necessary time to

adapt. This is also known as the "in-between" period. I briefly share my thoughts, as I

experienced this during my initial entry as a researcher in Virtual Ability Island.

"…This is somewhat scary…The transition from community
member, to friend to researcher…I feel marginally situated in
different worlds…Challenging to take up these roles,
together…I have left my world of comfort to enter a new
realm, I feel the new demands, what lies ahead, what
challenges might I face?"
–Extract from personal research journal.

Turner (1969) elaborates on van Gennep's theory, with the phrase "betwixt and in

between", the period of liminality. This is the place within which the transition unfolds; it

is the phase which bridges two thoughts: "what is" and "what can or will be", it "is a

movement between fixed points and is essentially ambiguous, unsettled, and unsettling"

(Turner, 1969, p. 95). The final stage, known as incorporation: provides the person an

opportunity to re-enter the environment, physically or metaphorically with a "new" role.

In part, considering the idea of a transition, defined as "any move from one position to

another, conceptualized as a phase of change bridging two or more stable zones"

(Mayrhofer & Iellatchitch, 2005, p. 52) seemed to be fitting at the onset of the research

journey. As I continued to think about the "rites of passage", I realized that along with

my transition, the members of Virtual Ability Island would be undergoing their own

transition as well, as their roles would shift and relationships transform as we embarked

on this research journey together.

CHAPTER 6 APPARENT TRANSITIONS

Changing Roles and Relationships within the Community?

Any change, even a change for the better, is always
accompanied by drawbacks or discomforts.
-Arnold Bennett

Over the course of the years, I observed and noted how my relationships transformed with various members of the online community of Virtual Ability Island. However at the earliest stages, I nearly found myself dabbling at the surface, never analyzing the extent of these relationships, never fully probing the broader meaning and value which they withheld and how (once I decided that the members of Virtual Ability Island would be involved in the research) they would influence many aspects of my research and ultimately challenge my position as a researcher.

As I prepared to move closer towards the in-world research doorway, I received an email from a fellow resident. It was an invitation requesting my attendance to a community ritual celebration, specifically a member's Rez Day party (Figure 17). As a side note, ritualistic celebrations such as Rez Day celebrations honor the "birth" or creation of an avatar and therefore are analogous to birthday celebration offline. These rituals are quite common throughout Second Life; however, celebration practices do vary from one subculture to another. A few members from Virtual Ability Island claim that community-related rituals and celebrations enhance one's sense of belonging. Bryce-Davis (2001) in her study on virtual learning communities also points out that there are five critical elements which foster community growth and create a sense of closeness. In her list, she includes rituals and ringers, which she describes as surprise elements tossed into communities for the purpose of disrupting established patterns or expectations to

help ignite or maintain interest within online communities. Hence, a Rez Day celebration in Second Life may have similar disrupting effects, in turn igniting additional interest and creating a bond within the given online community.

Figure 17. Screenshot of email invitation for a Rez Day celebration party.

Thus, I decided to accept the invitation. On the computer screen, images of avatars in various siting poses surrounding a virtual campfire. Some opted to extend their actions with the use of virtual props including marshmallows on a stick or Lawgweiser, the virtual beer of choice in Second Life. The crackling sound of a virtual campfire and the hooting sounds of an owl, mixed amongst the streaming background music filling my office space; I was watching the words on the computer screen appear. In our celebration, I along with some community members unintentionally became nostalgic around the virtual campfire. We found ourselves sharing snapshots[3] from our past, reminiscing, discussing about our initial encounters, how our relationships evolved and what we learned from each other through the years. The technology provided a platform for an act

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[3] Snapshots are photographs taken inworld.

of shared learning and shared compassion which served a very special purpose - that of

creating an interpersonal bond, based on a sense of shared history. "In the process of

recounting, interpreting, and evaluating our experiences together, we were creating a

shared understanding and representation of our world, a look into the ways in which our

lives were intertwined" (Fuvush, Haden & Reese, 1991 p. 3410) and yet at the same

time, so separated. As I sat there in front of my screen rereading the words, I was

overcome with that indescribable feeling of unease, the type of feeling that provoked me

to want to investigate further. I realized that this was a good time to retreat from Virtual

Ability Island, to deal with the infinite thoughts that filled my head.

> …These relationships were as real as face-to face
>
> relationships…
>
> - (Peris, Gimeno, Pinazo, et al., 2002, p. 44)

Something was wrong; the issue of researcher membership emerged, apparently

much stronger this time around.

> …Researcher membership in the group or area
>
> being studied is relevant to all approaches in
>
> qualitative methodology…Whether the researcher is
>
> an insider sharing the characteristics, role, or
>
> experience under study with the participants, or an
>
> outsider to the commonality shared by the
>
> participants, the personhood of the researcher,

including her or his membership status in relation to

those participating in the research, is an essential

and ever-present aspect of the investigation.

(Corbin, Dwyer & Buckle, 2009, p. 55)

The role of examining "my already established relationship" with the various

community members was a topic presented on numerous occasions in my journal. I felt

obliged to look more closely at these relationships, especially as I was preparing for the

next phase of this journey. The entry in my journal read as follows:

> *"... It [referring to relationships with community members] is
> an important topic. I believe it has been seldomly examined
> within educational technology. Why? Social media is
> ubiquitous. With the proliferation of social media I would
> assume that it is not uncommon for an instructional designer
> to be a part of "some" online community. Right?*
> *–Extract from personal research journal.*

Thus, to achieve a clearer picture I began by reexamining the meaning of our community,

as well as the meaning of our relationships but, most importantly I needed to closely

examine the identity which was assigned to me by the community members.

> *"...We sat around the virtual campfire today. We "spoke". It
> was a good way, an attempt to view myself through "their
> eyes"...Great! Now, I am rethinking about this idea: how the
> researcher perceives her identity vs. how the participants
> perceive the researcher's identity...Its hard for me [NOW] to
> move forward-knowing how they see me, how I see them".*
> *–Extract from personal research. journal*

The Community Connection

  The community of Virtual Ability Island, in its broadest sense has pieced together a strong identity, one that represents itself as a community of support for people with disabilities; however, it also serves the non-disabled community who maintain an interest in and about disability related topics.

> *…As an "outsider", a non-disabled member of the group, I observed that members who within their profiles disclose information about their disability demonstrate eagerness to share, answer questions and provide additional information on their disability…This provided a clear picture of the disability*
>
> *…[Member X] explained how she used SL, assistive technology and what doesn't work well for her [Important for instructional design, investigate further]*
>
> *…Members who acquired a disability later on in life [i.e accident, illness] came to VAI, to learn how to cope with the "new" disability [seeking support from others, learning]. Other members provide multiple reasons…*
>
> *…I have "heard" various stories…And had many questions answered, it was a learning tool."*
>
> *- Extract from personal research journal.*

  Built on voluntary action, members with various skills and abilities, including myself have contributed to the thriving community in various ways whether it is through building, coordinating activities, collaborating or disseminating. Essentially, a community as diverse as the one present at Virtual Ability Island may be a source of community strength, as the absence of homogeneity provides additional interest and prevents community stagnation (Rotman & Preece, 2010). However, a separate investigation would be required to examine the impact of community heterogeneity and community strength.

The implementation of key principles for fostering offline community development[4] has equally been applied in Virtual Ability Island. Thus, providing ongoing information sessions *(informing)* to strengthen the awareness of available services and resources to the residents, the creation of Town Hall meetings to discuss *(consulting and involving)* and bring forward issues that affect the residents, ongoing *collaboration* with various external stakeholders to encourage new ideas and increase participation and finally *empower* through dialogue, collaboration, and educational training opportunities.

At a glance, a high level of motivation is exhibited by diverse Virtual Ability Island residents and this is one of the numerous key factors supporting the ongoing community engagement. Engagement continues outside of Virtual Ability Island for some members. Email is often used to maintain community cohesiveness. Misanchuk, Anderson, Craner, Eddy and Smith (2000), explain that in the context of online learning teachers can attempt to entice the learner to become involved, but essentially it is the learner who determines the emergence, engagement and quality of collaboration in the environment. Various trust-mentors, within the community of Virtual Ability Island have expressed this idea in broader detail, explaining how residents remain dedicated to the environment by providing ongoing, unguarded accounts, and constructive feedback, as well as turning negative experiences into topics for discussion which inevitably transcend into other social media networks. Hence, as discussions move into other platforms, community engagement expands broadening their performance as agents of change. An added observation was noted, various behaviors and occurrences within Virtual Ability Island, fulfill different stages of Maslow's Hierarchy of Needs, which may be difficult for

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[4] The key principles of community development include: informing, consulting, involving, collaborating and empowering (International Association for Public Participation, 2007).

some residents to fulfill offline but, again additional observation would be required to obtain a full understanding of this phenomenon.

Overall the attitude of the Virtual Ability Island residents, is that

"…every resident has something to contribute here…there is absolutely a way to contribute here!…Everyone has the opportunity to contribute in their own way, even if it is just standing around…"

–Anonymous Resident, Virtual Ability Island

"…there's no obligation to do anything, you are able to contribute or not, we encourage people to come and they don't have to do anything more than merely observe, or they can choose to participate, or they can share their skills and time and make contributions to the community… They do because the people behind the avatars are real people, with real feelings. We never forget that… It's not a 'pretend world', it's an environment where people can safely meet other people and form friendships and close bonds with others that would otherwise not be possible... it evens the playing field for PWDs… I think it's important to enable people to find their strengths and utilize them rather than

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force them to use or be things in a way that doesn't help

them…

–Anonymous Resident, Virtual Ability Island

As a community of emotional and practical support, the members of Virtual Ability Island come together on occasional and unplanned encounters, as well as on ongoing planned encounters to interact.

We do a bunch of things, to get people here…

–Anonymous Trust-Mentor Resident, Virtual

Ability Island.

The environment is treated as a space for learning and research where conferences are hosted, discussion groups are held and the distribution of online resources is provided in various accessible formats. As a space for mentoring, it provides assistance to members who require basic or advanced training to navigate the virtual environment. Training occurs online. The guided training pathway which was designed, and embedded in Virtual Ability Island, is accessible for various needs and abilities (see Figure 18).

Figure 18. Screenshot of training path, also known as the Orientation Pathway in Virtual Ability Island to teach avatar navigation, one of the many basic skills required in Second Life. Designed to encompass the needs of various learners (visual, auditory and linguistic). *Source: Virtual Ability Island resident.*

Furthermore, for added support, the trainee is accompanied through the session by one of the many avatar-mentors serving as the "trusted guide on the side". Alternatively, an avatar-mentor is always available at the end of the training pathway in case the trainee may have any unresolved questions.

…There is always mentor here or there to greet…

−Anonymous member, Virtual Ability Island,

November, 27, 2013.

Finally, the community also provides psychosocial and emotional support, hence, one of the many criteria for the emergence of communities, "the bond between people with feelings of linkage, of belonging, (and) of group devotion to a transcendent goal" (Tambyah, 1996, p.173). One of the key factors which supports the formation,

development and maintenance of our relationship is "finding the similar other",

specifically known as homophily. The general principle of homophily stipulates that

"contact between similar people occurs at a higher rate among dissimilar people"

(McPherson, Smith-Lovin & Cook, 2001, p. 416). Traditionally, homophily research

which takes place in the physical world, mainly focuses on sociodemographic

characteristics (Monge & Contractor, 2003) such as race, age, gender, social class,

education and locality due to geographic proximity; however within the virtual world

certain sociodemographic characteristics are not available to study. Thus, similar to

theunique structure of the World Wide Web, Second Life has embedded a search feature

offering its members an opportunity to simply conduct word searches throughout the

various islands or within avatar profiles to quickly identify others or areas of similar

interest. Overall the community of Virtual Island is built on the spontaneous expressions

of sociability, the emphasis of equality and comradeship as an unwritten norm.

The Researcher's Space: Where is my space in this place?

> *"To every disadvantage there is a corresponding advantage."*
> *–W. Clement Stone*

Contrary to the various arguments stating that reflexivity about one's own

positionality may be too self-indulgent, often coined as "navel-gazing"; I have aligned

myself with those individuals (Koyabashi, 2003; Unluer, 2012) who strongly believe that

it is an essential part of the social research process, essential to achieve credibility. It

provides the researcher an opportunity to closely reflect on various questions pertaining

to power, it offers the ability to examine imbalances and finally consider issues of

redistribution. Furthermore, it provokes the researcher to think more closely about how

one's positionality influences method(s), interpretation(s) and overall knowledge production. However, in an attempt to understand one's positionality, what is less explored are the challenges a researcher may face when "trying to make sense of this" (Extract from personal journal). I came to this realization through my own confusions; struggling at various times to see the clear divide between the personal (insider) and professional (outsider) was the most daunting task I had to face.

As I noted in my journal, the ability to obtain a clear understanding of positionality within the online research environment was far less "tidy", clear-cut, and mostly elusive, however it was through this messiness that I was able to clearly reflect on both the advantages and challenges of the outsider and/or insider role.

Becoming the insider, becoming the outsider

Like an ethnographic researcher, I spent a significant amount of time exploring Second Life. The process was iterative, open-ended and emergent. I progressed quite slowly, as I entered on a basis of trial and error, simply logging in on regular occasions (approximately four to five times a week, over the course of two months). Spending endless hours (anywhere from two to four hours a day) learning the basic skills of navigation, customizing avatar appearance, attending world tutorials to gain familiarity with building[5], and discovering the various embedded media features, and overall acknowledging the powerful functionality of the technology itself. The ongoing persistence and motivation was necessary to adequately overcome the fairly steep learning curve one may experience in Second Life.

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[5] Building is a term used in Second Life which refers to the creation or modification of three dimensional objects.

As time progressed within the virtual field, I knew that I needed to shed my noob profile. During that time, I learnt about the online community. The cultural diversity was quite apparent; the different uses of language and communication methods were beyond creative and various behavioral patterns I observed helped generate an "ambience" for a specific online lifestyle that I had desired. With time and through ongoing interactions with other residents, I too generated my own meaning and understanding of "living in an online world" and thus, in that very sense I felt like an insider.

> *Prior to conducting the online research, I decided to refer to the general discussion forum as I was seeking some pointers from the community on how to be an effective researcher within Second Life. To my surprise, a vast number of residents had posted thought provoking notifications to researchers who were requesting participants for their studies. In general many residents prefer that the researcher invests a certain amount of time within the environment to gain a general understanding of the meaning of "living in Second Life". The residents who voiced their opinions in the forum felt that some prior knowledge of the environment allows the researcher to better shape his/her research question, in turn providing some added value to the community. Thus, based on their comments I am left with the impression that residents prefer that research within Second Life be conducted by insiders, as opposed to outsiders, however a thorough investigation would be required to draw a solid conclusion.*
>
> *A quick data analysis of the discussions revealed that many residents are opposed to researchers who enter the environment without necessarily gaining some understanding of the basics of navigation, the vocabulary or terms used within the environments, and a general understand of Second Life. Furthermore, an additional running theme emerged; residents would like to have access to the research thus making it more publically available*
> *.-Extract from personal research journal.*

Eventually, I found myself at Virtual Ability Island. I entered with a fairly solid first hand pre-understanding (Ryan, 2011) of "living in an online world" as well as some preconceived assumptions which I developed as a result of working with and observing members of the disability community interact with assistive technology in the offline

world. Herein, I use Persons A and B to describe two such residents and used a neutral

pseudonym to protect the identity of these participants.

> *The pre-understanding did provide a number of advantages…*
> *I was able to draw upon my past experiences (watching people*
> *interact with assistive technology, their likes and dislikes…) to*
> *better position myself when I was collecting information from*
> *Person A. I was able to connect; using "proper language",*
> *and probe further with questions that are deemed acceptable*
> *by the community…Rereading my previous research journals*
> *was a necessary part of the process…I used it as a constant*
> *reminder (introspection) to treat this experience as a*
> *new/fresh experience…I was fearful that I would overlook,*
> *ignore, assume too much from my previous experiences.*
> *-Extract from personal research journal*

However, I realized that Virtual Ability Island was the home of a new subculture

with various unique features and characteristics which did not match my previous

learning experiences or understanding. The residents of Virtual Ability Island had their

own unique customs, traditions, values and beliefs, therefore setting them apart from the

Second Life community I first encountered. It was within this new subculture that I felt

as though I was

> *…pushed towards the outer boundaries once again… A new*
> *phenomenon needs to be examined with open eyes.*
> *-Extract from personal research journal*

Thus, parallel to a description of a young child first learning about the community

of which she later becomes a member of,

> *"I, too felt as though I was that young child"*
> *- Extract from personal journal*

as I moved through a cyclical process of discovery.

The child's eyes follow, taking in everything that

you are doing…This is the way the child begins to

learn the rules and routines that are associated with

the first cultural system that they are consciously

aware of. As the toddler begins to talk, and to

formulate questions, the questions then come

continuously. The child then experiments, or

participates in the various activities she has

observed, as well as attempt new ones…

(Whitehead, 1989, p.10).

I began observing the built environment and the residents who lived there. I

cautiously and continuously asked questions, reflected and interpreted. During this period

I captured snapshots and maintained a journal. As time progressed, my role and

interactions within the community changed and although my online profile clearly

illustrated that I was an instructional designer/researcher (which I exercised much later

within the community) the residents of Virtual Ability Island did not seem bothered by

this title.

> *…My initial identity in Virtual Ability Island is that of a community member – within my online profile I describe myself as an instructional designer/researcher (which makes me feel as though I am constantly displaying this outsider role!) I haven't used this role yet. I have implanted myself within the Virtual Ability Island culture [not necessarily for research, instead, personal…] – I have shared information and my knowledge on various topics, I contributed, I have built objects, and had my avatar wear a funny hat to partake in a virtual Easter activity…I have been offered a number of friendships…With a click, I have added them to my list…*
> *-Extract from personal research journal.*

I was slowly moving away from the outsider position that I once held. Entering a new position, I was considered a full-time committed resident, a contributing member of the community and a close friend to some who took the time to introduce me to other residents' within their established circle of friends.

PERSON A: Hi Nia!
PERSON B: HiHo
PERSON A: Hi PERSON B
Nia: Hi PERSON A
PERSON A: This is my friend Nia Cyannis.
PERSON B: Welcome to Virtual Ability
Nia: nice to meet you and Thank you
PERSON A: Feel free to sit on a chair here, Nia
PERSON A: Grab a seat, PERSON B
PERSON A: I'll sit too
PERSON B: I like this one, it matches my curtains

Although there is much criticism attached to being an insider researcher due to a high personal stake and a substantive emotional investment in the setting which in turn does not necessarily conform to the standards of intellectual rigor (Alvesson, 2003), there were some apparent advantages which emerged over time. Particularly, I noted how the residents were willing to share their time and knowledge,

> *"to go that extra mile to provide resources and offer detailed clarifications to questions that lingered in my research journal. At times they would spontaneously engage in conversations or share snapshots in line with my research objectives" -Extract from personal journal*

regardless of whether I requested their participation in the research.

> *This is a rather difficult and awkward moment. I question whether it is truly my insider position that is encouraging the "sharing behavior" or is the nature of the technological environment? Could it be other factors?*
> *-Extract from personal research journal*

Therefore, what developed and later solidly sustained itself between the community and myself could be easily described as a harmonic and meaningful,

relationship entwined amongst the formation of trust. There was a higher degree of interaction and solid interpersonal communication which emerged over time.

> *Creative forms of expression may have brought us closer together, enhancing the overall quality of the interactions… We revealed our emotions through our avatars [i.e. used predefined animation gestures, or commands "/me or /<gesture>" to emphasize a feeling or action]…Some use of affective text, emoticons, capitalization of words, ascii art, colors…"*
> *–Extract from personal research journal.*

Similar to a multilayered onion, an analogy proposed for Altan and Taylor's (1973) social penetration theory, there was a mutual shedding of layers.

> *Text appears on the screen…I am being questioned about my online profile [the public self]. In return, I undertake the same action. The exchange of text coming at a rather slow rate- It's the beginning!? The discussions, superficial… [Approximately 4 weeks later].There has been a shift. She shares more information about her disability, how her disability impacted her family growing up. Her relationship with her siblings, her parents…I share my stories of."*
> *-Extract from personal research journal.*

As each layer was peeled away, there was a greater level of vulnerability and disclosure, a reciprocal sharing process occurred -"we learned from each other". Within days, this vulnerability and disclosure enhanced a mutual understanding of why we were in Virtual Ability Island; there was a building of trust and a strengthening of ties. As a group, our activities of disclosure also enhanced the bond of trust within the community. Transparency was often seen as a way to validate our group membership or to strengthen our group identity. There was an existence of varying degrees of social connectedness, or a range of relations which can be observed on a continuum scale; I referred to this in my journal as "diverse neighborly relations" which I linked to offline behavior.

*...Like neighbors – no two relationships are alike. Some
interactions are friendly – a wave "hello" as you are getting
into your car to go to work, striking up a conversation on the
front porch, meeting midway on the sidewalk for chit chat, an
invitation –coffee, bbq? While others, live next door, across
the street, you see them, they see you. There is an awareness
of each other's presence. Shared space (the street), shared
objective(s), yet, there is no further interaction.*
-Extract from personal research journal.

Of course, it is also important to mention that not all relationships were

spontaneous or emerged with ease. Some were more distant and weak, a set of boundaries

established early on. The level of disclosure was controlled by what was simply displayed

and revealed by clicking on the person's online profile. We very seldomly engage in

conversation, however regardless of the lack of interaction, I took note of this "felt

connectedness". "The sense of being with other people in a shared virtual environment,

equivalently, the sense of togetherness" (Durlach & Slater, 2000, p. 214).

*...Visually, you (the avatar) are present. We are in a shared
space, the same space. Presence...*
–Extract from personal research journal.

Sense making and Ethics

*Sense making is not about finding the "correct" answer; it is
about creating an emerging picture that becomes more
comprehensive through data collection, action, experience,
and conversation.*
–Deborah Ancona

Returning to Virtual Ability Island (one week later)…

I returned to Virtual Ability Island; however that feeling of burden, of unease which I

experienced on that given day around the virtual campfire was still present.

I continued examining the meaning of our friendships…How
would this affect my role, their role during the research?
Would anything change or will everything remain the same?
–Extract from personal research journal.

I kept pondering on a statement once made to Ellis (2007) by Hebert Gans, "be friendly but not friends with those you study" (p. 10).

…Gans' quote, be friendly but not friends…I wonder if this
applies in a virtual environment. The understanding of
"friends" has always been debatable in this space [referring
to online environments]. How do I see the people in VAI? I
refer to them as friends [they refer to me as friend]…simply
avoiding think about this interpersonal bond with the residents
of VAI is not an option…
-Extract from personal research journal.

Gans' words lingered. I knew that it would be impossible to break free from my previous role. Unfortunately, I was unable to recall whether during my academic training as a qualitative researcher, a similar issue was addressed and if so, what would be the best way to confront it?

In the "absence of absolutes or solutions to these dilemmas"
(Stern, 2003, p.262), the alternative suggestion is to develop a
plan or examine what other researchers did.
–Excerpts from personal research journal.

I questioned, on numerous occasions, whether I was adequately prepared to take on

"the pressures of professional responsibility, coming face-to-
face with this roles' duality."
-Extract from personal research journal.

I also considered abandoning or looking for a new topic, given the extensive closeness to the community of Virtual Ability Island and the numerous residents I became friends with.

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I find myself struggling to understand how to position myself within the research. I have been involved with the disabled community for quite some time, as a teacher, a behavioral technician, designer, an advocate, a family member and friend.
I take my knowledge/my position and enter VAI…Suddenly, it all feels unclear-"murky"…In a sense, an outsider, a non-disabled researcher, but also an insider, a member of the community. Some of the members refer to me as an ally…
-Extract from personal research journal.

The alternative option was to deal with the complex realities of practice (Ellis, 2007) and reflect on my concerns which could be used as a learning tool in the future. As I enumerated my apprehensions in my journal, a pattern emerged. I noticed that I was continuously revisiting identical issues. Thus, I decided that it would be helpful to share my thoughts with someone who could help me work through and unravel some of the complexities I was being challenged by.

Looking back, I do regret not approaching my committee or some of my academic colleagues (who are all very supportive) much earlier to share with them some of the struggles I was encountering. However, I thought that being so emotionally tied up in my research, was something unique to my experience. I only realized after discussing with my friend that my situation wasn't so unique after all…
-Extract from personal research journal.

However I felt that it was important to select someone who had no previous knowledge or attachment to Second Life, someone I could freely express my thoughts to. Fortunately, I had a close childhood friend who was pursing her academic research in the area of cultural studies during the same time frame. She was, what Costa and Kallick (1993) described as a critical friend. "A trusted person who asks provocative questions, and offers critique of a person's work as a friend…A critical friend takes the time to fully

understand the context of the work presented and the outcomes that the person is working

towards. The friend is an advocate for the success of that work" (p.50)

> *We thought that it would be equally beneficially to discuss*
> *our research progress and helpfully extract something from*
> *the experience…*
> *-Extract from personal research journal.*

Given the level of comfort I had with her, I recalled using the words "help, I'm

stuck", as I handed over my research journal. I recalled pointing to the pages which I

identified with orange colored sticky notes (a color I selected to identify "uncertainty" or

to highlight something that required further exploration), a technique that I had known for

mapping out ideas or adding written thoughts and expressions that I manipulated from

my research journal, to a larger visual space resembling a wall to link multiple elements

together.

It was through the sharing of my written words and our discussions which helped

me realize that I was in the right place and this was an acceptable place to begin my

research.

> *The angst that you are feeling is normal. I think we all feel*
> *something like this at one point during our research…*
> *–Comment from confidant.*

I simply wanted to maintain an ethical commitment to the community and

ultimately I was fearful about altering the dynamics or creating a disturbance. I was

concerned about preserving the relationships that I had built throughout the years with the

various members of Virtual Ability Island. I ultimately wondered whether these

relationships would change or dissolve after the research, especially knowing that I had

absolutely no intentions on simply gathering the information and once done, returning to

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my professional life. Gerrard (1995) describes this concern as "parachuting into people's lives …and then vanishing" (p.59) or Drew (2006) who uses the analogy of a seagull flying into a community, making a mess and leaving the community to tidy up for themselves.

Amongst the pendulum of emotions I had written down in my journal, numerous ethical issues and questions transpired as well. Some of which were procedural in nature, such as examining the meaning of adequately obtaining consent in an online environment or determining the difference between public and private online space. As a framework for thinking through these issues, I found relevant literature across a number of disciplines (Buchanan, 2004; Wankel & Malleck, 2010) which offered numerous suggestions I deemed partially useful. However, much of the emerging literature on online research ethics presented various perspectives, "from anything goes, to developing and negotiating best practice and understanding based on experience from a growing number of studies carried out" (Bromseth, 2002, p.34).Therefore, given the variability, I proceeded with caution and at times I referred to traditional ethical principles. Ultimately my focus was on the well-being of the person who was on the other side of the screen.

My other concern involved situational ethics, also known as ethics in practice. Ellis (2007) describes this as the unpredictable moments, for instance having someone disclose something harmful or extremely personal, requesting help, or expressing discomfort. Although I felt that my research project fell under the realm of "little to no risk", I was compelled to think of the "what if moments, in online research", which I briefly explored in my journal.

> *…My experience in the online world has taught me that people disclose*
> *different things about themselves. Whether it is true, I don't really*
> *know! There is no accurate way of checking…It's quite bizarre to*

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explain. You enter into a world, and on the screen you see avatars
(people) sharing information about everything and anything. Thoughts,
words, disclosing the unthinkable…In a world with no contextual cues.
The idea of not being physically present, hidden behind the screens
does something to people. It gives them a "power"…In an online
world, how should I (the researcher) respond? How should I
intervene? Does the physical distance created by the technology alter
my ethical responsibility?
–Extract from personal research journal.

However, a large part of my journal entries involved relational ethics where the researcher is required to operate from the heart and the mind and be conscious of the interpersonal bond to others, provoking such questions as: "what are your ethical responsibilities towards your friends? How can you act in a humane, non-exploitative way, while being mindful of your role as a researcher? (Ellis, 2007, p. 5). Thus, in order to place emphasis on the importance of these questions during the research, sticky notes were used throughout the journal as a technique to extend ideas, add thoughts or insert quotes that could be easily moved around to create various connections.

CHAPTER 7 ENTERING SECOND LIFE

A traveller without observation is a bird without wings.
– Moslih Eddin Saadi

To begin the exploratory journey into Second Life, the setup of a free, basic account is required which includes the development of an avatar display name, and the opportunity to pursue and select from a number of generic looking startup avatars whose physical appearances can be easily altered to fit one's real life traits. Other available avatar choices included robots, vehicles and animals. As it was brought to my attention by a number of Virtual Ability Island residents, amongst the vast selection Linden Lab offers, they have yet to include a startup avatar with a visible disability (i.e. an amputee, with a wheelchair or prosthetic), an option for people who chose to represent their disability in the online world. Instead they are required to select a non-disabled startup avatar and purchase items from the Second Life Marketplace[6] to create various modifications. Therefore, a number of residents did suggest the absence of startup avatars with visible disabilities does send out a message to the community, and therefore they have suggested that this should be something Linden Lab looks into. From an instructional design standpoint, this can be an exploratory avenue as well, especially when designing online instructional content which includes a selection of virtual characters used as mentors to guide learners. The current research in this area is limited, and does not necessarily focus on design and development of online environments, but rather in the area of print media, particularly early childhood curriculum design. One of

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[6] The Second Life Marketplace https://marketplace.secondlife.com/ is similar to an online store. Purchases of various items can be made using Linden dollars, the currency used in Second Life.

such study includes Blaska (2004). She examined children's literature that includes characters with disabilities or illnesses. In her findings, she also noted a limited presence of persons with disabilities. "While more books with characters with disabilities are published today, the percentage is still very small when compared to the total number of children's picture books published each year" (p.1).

An alternative to a free, basic account is the premium account. At a nominal fee, a premium account may be purchased in turn providing additional privileges within the online community. These privileges include access to a piece of land, a weekly stipend of Linden dollars, the virtual currency used in Second Life for the purchase of virtual goods and services and finally, a highly customizable, virtual home.

In a very engaging and friendly conversation with a fellow resident who offered a tour of her Tudor style home located in an area adjacent to Virtual Ability Island, she clearly explained that her virtual home was designed with a dual purpose in mind. First, it was referred to as a space of comfort and relaxation tied into "hominess or at-hominess" which she shares with her partner and invites friends. Secondly, the design of the open concept space was also used a communal space, where university classes meet on an occasional basis to discuss and study virtual art. Resulting from this tour, one might question what implications the creation of "home" (even if virtual) has on the individual and the community interaction? Does it provide a personal and communal sense of identity as well as belonging? Does it afford a sustained commitment to the online community, a sense of rootedness, a reason to return? All these fundamental questions, as they relate to the understanding of the online community may be reflected in Goyen's (1950) passage:

...People could come into the world in a place they could not at first even name and had never known before; and that out of a nameless and unknown place they could grow and move around in it until its name they knew and called it with love, and call it home, and put roots there and love others there; so that whenever they left this place they would sing homesick songs about it and wrote poems of yearning for it, like a lover.
(p.1)

The next step, involves the installation of the software known as a viewer which is downloaded onto one's computer. Alternatively, access to Second Life may occur through many of the third-party viewers created by developers who are not affiliated to Linden Lab, however are seeking to provide optimal experiences for various users with different needs. In a recent exchange with a resident from Second Life, she spoke of the importance of third party viewers. Particularly expressing how third party viewers provide access for people with disabilities to the online community.

Nia Cyannis: *With regards to the viewer, is it accessible for people with disabilities?*
PERSON B: *Yes and no, for people who are quadriplegic, not completely. They've managed to find workarounds and some software that lets them use SL but the viewer itself isn't the best for accessibility.*
PERSON B: *I'm deaf - so the only real accessibility issues I encounter really are when people choose to talk rather than type.*
PERSON B: *When there is audio without text to go with it.*
PERSON B: *In an ideal world, SL's viewer would have speech to text built in, but the technical requirements for that make it just too difficult.*
PERSON B: *Heavier server load*
Nia Cyannis: *what about third party viewers?*
PERSON B: *I am using one now - I use Firestorm.*
PERSON B: *I just like the way I can customise the viewer better than the standard viewer.*
PERSON B: *There is a third party viewer that blind residents can use, Radegast.*
Nia Cyannis: *Customize it in what sense?*
PERSON B: *I can have the look and feel the way I like it, arrange icons where I want them, the colour scheme is lighter and feels more opened up than the dark one that the standard viewer has.*
PERSON B: *I use some features in Firestorm that are not available in the standard viewer*
PERSON B: *They are not accessibility related, just preferences.*
PERSON B: *Being Deaf, all I really need is to be able to read text - oh, and the font choices in Firestorm are more to my liking.*
PERSON B: *Easier to read and size to what is comfortable for me.*
PERSON B: *I just like that.*
Nia Cyannis: *I see.*

According to Krug's (2005) first law of usability, he states that an interface which is complicated and requires excessive thinking creates a gap in the user's workflow which may lead to psychological frustration and eventually abandonment, therefore having implications on the survival of the online community. In contrast, an interface which provides the ultimate experience of flow elevates the overall user experience including levels of enjoyment and sustained motivation. Many of the third-party viewers prioritize flow in their design providing not only the ultimate user experience but enhancing the level of online social presence an issue which is relevant in how one thinks, feels, acquires knowledge, develops trust and interacts with others in an online community (Faiola & Smysolva, 2009). Furthermore, as it was explained by the Second Life resident, if the third party viewer malfunctions, it would alter the online community dynamics. It would become more challenging for some residents to interact as well as share and receive from the online community which may have them questioning their overall roll and purpose within the community.

As Lazar and Preece (2002) point out, usability and sociability are closely linked. The role of the software impacted the success or failure of an online community in various ways. A running theme which was encountered during various discussions with fellow residents, both disabled and non-disabled was that the smallest elements (which are often overlooked), such as challenging registration processes may impede the social network demographics, in turn creating a digital/social divide that affects the community. Although, one of the foci of this dissertation is not explicitly to create a link between the impact of interface design or functionality and how this affected the emergence, strength,

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growth and diversity of the online community, it is a factor to consider especially when

people with disabilities are involved.

CHAPTER 8 USER GENERATED CONTENT, COMMUNITY ENGAGEMENT & FRIENDSHIPS

User Generated Content Platform

The user generated content platform is unique to this three dimensional world. In general, such platforms are often considered as advancements in social learning. Within a learning context, it adds a different dimension to the teacher[7]-student relationship, by altering the traditional flow of knowledge to one that is multi-directional (Harden & Crosby, 2000). The platform also encourages a profound engagement with learning, simply through the act of authoring or creating, while acknowledging the presence of an audience (Jacobs, 2003). It also assists in the development of critical thinking skills and risk taking, it encourages creativity, enhances communication skills, collaborative problem solving, and networking (Wheeler, Yeomans & Wheeler, 2008).

Thus, Second Life has been designed based on a user generated content approach. The process of building may occur through individual or collaborative practice and the role of the Second Life residents often shift from builders or content creators to consumers or both.

> Since the 1980's the term 'prosumer' has been
> deployed by various academics to denote how
> users' agency hover between the bipolar categories
> of producers versus consumers, and of professional
> versus consumer. New hybrid terms such as

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[7] In this context, teacher is broadly defined to include anyone who shares knowledge or expertise.

'producer' and 'co-creator' have meanwhile entered

academic parlance to accentuate users increased

production prowess. (van Dijick, 2009, p. 42)

In a conversation with several members of Virtual Ability Island, a recurring

theme emerged from the act of building as a form of collective and/or individual

empowerment. Furthermore, the act of designing an object or space provided a form of

enjoyment and "a pleasurable loss of time" (Anonymous, Virtual Ability Island Resident,

2013). In Czikszentmihalyi's (1975) study of flow association, he indicated that people

who take pleasure in what they do, tend to concentrate their attention on a limited

stimulus field, in the process they overlook their personal problems, get lost in

themselves and their perception of time, while gaining a sense of competence and

control, and finally feel a sense of union and harmony with their surrounding

environment. This is similar to what is described by the resident builders of Virtual

Ability Island.

> *I am left with the impression that building is "an*
> *empowerment intervention" for some people with disabilities*
> *at Virtual Ability Island…"*
> *-Extract from personal research journal.*

Several members agreed that the act of building, which provided an opportunity to add a

personal touch (as described by one member as *"something I place my efforts in, my*

thoughts…a piece from me. I'm doing something for myself, but I know others will benefit

from it...I am contributing something…) to an object, helped enhance their identity within

the environment. Some residents also claimed that the act of building provided a greater

opportunity to control their contribution and design objects which they specifically

needed in their environment, somewhat similar to designing for personal learning space.

According to Jenkinson (1993) who studied decision-making opportunities and

the importance of self-determination in the lives of people with disabilities, she indicated

that freedom of choice is a method to assert one's identity and decision-making is the

fundamental factor in a person's quality of life. The experience also fostered a feeling of

mastery and control, as building is considered one of the many "life skills" in Second

Life. Furthermore, the act of building also enhanced their sense of capability – pursuing a

real life goal, as it offered an opportunity to contribute something back to the community,

"some homebound people cannot do this but insist they can" (Anonymous, Virtual

Ability Island Resident, 2013). With regards to collective empowerment, I was informed

that the process of working towards a common goal enhanced group cohesiveness or as

one member stated *"I know I belong to something…"* It also promoted a sense of power

through the showcasing of skills and increased knowledge. Finally, similar to the various

perceptions and attitudes observed through the years with regards to disabilities (see

Roeher, 1969; Munyi, 2012), the community building experience altered the perception

of the non-disabled builder as *"some people simply assume that we can't do it…"* instead

they demonstrated their competencies and skills via collaborative-creative expression.

In a sense, like Freire (1997) who viewed knowledge as power, the act collective

building fosters an awareness of what members from Virtual Ability Island can do

together in the act of building. As one member elaborated:

Nia Cyannis: Err! Could you please explain this to me. I'm not sure I understand?
PERSON B: Building together is not about creating something
PERSON B: What happens when you build with someone?

Nia Cyannis: Well (thinking) (thinking) a few things come to mind but I'm remaining: I silent- lock and key HA!
PERSON B: Ok, well I can only speak for myself but when I build with someone, we are sharing an experience together. Sometimes I'll just do it to make time go by.
NiaCyannis: Nods
PERSON B: There is a common goal, during the process as we are talking about it we are sharing knowledge
PERSON B: Often we will try to get others involved or ask them for their input. It's about sharing what we do and getting others involved.
NiaCyannis: One moment please.

Without going into extensive detail about the process of building, there is an integrated tool which is also known as the *create tool* (see Figure 19). Found in the viewer, this tool allows the user to create objects based on a selection from 15 basic shapes which may be edited to become sculpties, identifiable organic shapes which can be programmed to execute certain behavior(s).
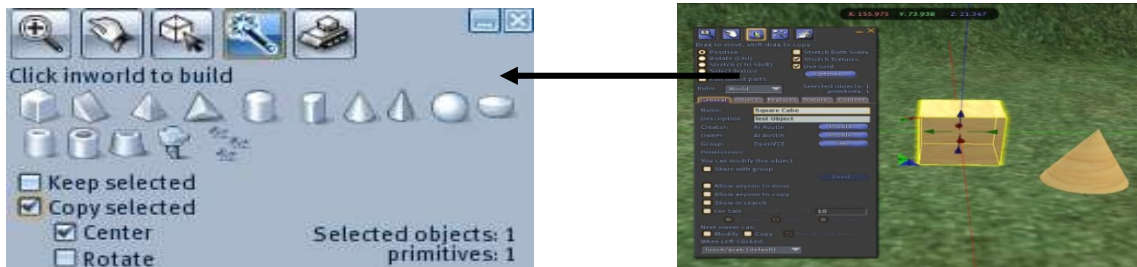
Figure 19. Screenshot of the creation tool window with a selection of 15 shapes, the building blocks of all prims which could be made into sculpties.

Training schools, such as Builders Brewery, created by Second Life residents offer various lessons and assistance to fit the needs of the beginner to the more advanced content creator. Therefore, it is noteworthy to mention that the action of building produces a number of observable social benefits. For instance, the engagement of various relationships, collaborative problem solving and group discussions which augment interpersonal bonds, a necessitating factor for an online community to thrive.

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In a roundtable discussion about the various activities hosted on Virtual Ability Island, including large scale projects, such as an annual health related symposium and conference, or small scale projects such as island field trips, the topic of volunteering or mentoring was also discussed. Voluntary contribution may occur in various forms, including building, authoring, greeting and accommodating. As Person A of Virtual Ability Island explained, various skills sets are necessary.

PERSON A: Oh if you give something to VAI you get it back tenfold
Nia Cyannis: Reciprocity
PERSON A: It's not even that, because you help to build the community by contributing in whatever
PERSON A: The way you wish
PERSON A: We need givers
PERSONA: And we need takers

Given the diversity of the community, there are a few builders and content creators who are residents' with real life disabilities. Therefore, they demonstrate a dual understanding of internal needs, which are described as disability related needs within the virtual world (i.e. color contrasting, or alternative text for objects) and the external needs, the technological needs (hardware or additional software) required to navigate within the virtual environment. Resulting from this understanding, the design decisions taken are often based on accessible builds[8], something more challenging for the non-disabled content creator, who may work on assumptions, guidelines, and techniques alone, as expressed by one resident from the visually impaired community. She explained that accessible builds offer greater *"autonomy, and make the virtual world [experience] empowering and efficient...I don't need to rely on anyone..."* (Anonymous, Virtual Ability Island Resident, 2013). Another member who spoke of the user generated content indicated that accessible builds, could include simple solutions such as the inclusion of

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[8] Accessible builds is a term introduced by the Second Life residents with disabilities.

metadata which is descriptive labeling and naming of objects, two properties necessary

for screen readers to "read back" the contextual information of the object (see Figure 20).

However, simple solutions are often neglected in the build of an object. I was told that

descriptive labeling and naming remains under-utilized by builders, as there are no

standards such as the web design standards detailed in Section 508 of the Rehabilitation

Act, §1194.22.

Thus, as I was gathering information from the residents, I continued reflecting on my instructional design practice. I wondered whether some of the residents of Virtual Ability Island could provide invaluable information – the question: what would be "necessary" "important" instructional design skill sets – the one's I would need in order to build for the disabled community in SL…
–Extract from personal research journal.
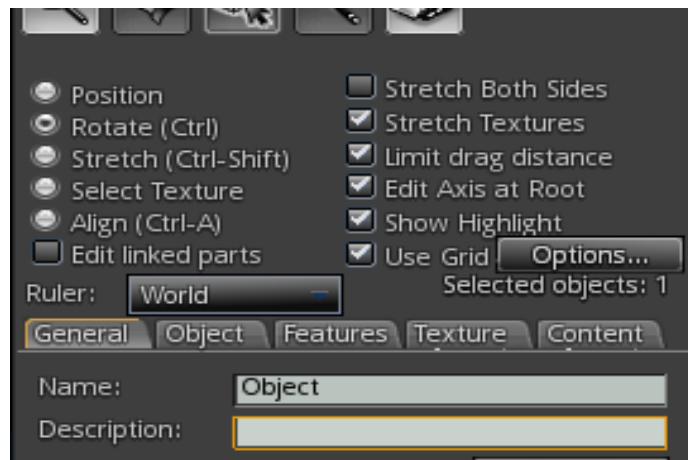
Figure 20. Screenshot of the creation tool window. Two property fields (name and description) allowing the builder to include a description of the object within the virtual world. If a screen reader is used within the virtual world, the description will provide audio feedback.

I asked one member from Virtual Ability Island the question I extracted from my

journal and my computer screen illuminated with the words

design success is based on the residents you

know…Designers need to spend more time in the

environment and not simply observe and focus on

accessibility… But interact with us [the residents]

get to know us…Get to know us differently, play

with us, chat with us, take us dancing :)… At

different levels…Closely involving us in building

projects, let [avatar name removed] show you…We

are different experts. We all have something to

contribute … We need to collaborate...Have you

heard of Alan Cooper? [Nia Cyannis: No???]

Google his name. You should read his book,

prisoners are running the asylum: why high-tech

products drive us crazy, maybe it will help you on

your quest for answers.

-Anonymous, Virtual Ability Island Resident, 2013.

Another resident added,

"don't put the disability ahead of the person-the key

is to realize the person is the expert - the one who

lives with the disability… so it's important for you to

perhaps share that point, that the researcher is not

the expert, but is the one drawing information and

understanding from the experts in order to design

spaces and tools so they are easily usable by

anyone; think that about sums it up :) "

-Anonymous, Virtual Ability Island Resident, 2013.

As I continued probing for information, a few residents made it clear that accessible builds *"come into our lives and then they go"* (Anonymous, Virtual Ability Island Resident, 2013). With additional questioning, I learned about Max, the once "working" virtual guide dog designed for people from the visually impaired community of Second Life. Max, as an assistive technology tool, was scripted to decode information with text-to-speech technology. If Max was attached to an avatar, he would be "working". His job was to describe or "read back" the surrounding environment and assist a user with a visual impairment to locate an item or point of interest in the virtual environment. However, *"Max no longer works"* (Anonymous, Virtual Ability Island Resident, 2013) and like other accessible builds that disappear, a number of supporting reasons have been justified. For instance,

there may be a shift in the builder's interest...Or, it

can no longer be used, coding changes and the

creator can't or does not have time to figure out

how to update their code...Users find another way

to achieve the same ends (access) more easily,

quickly, or robustly...Or, in this case, if a blind user

decides he/she does not want to self-identify in SL

as blind…he/she may instead choose to use a text

viewer…Radegast has become the "viewer of

choice" among all the blind people I know in SL. In

fact, two of our VAI members wrote an entire

handbook for users...

-Anonymous, Virtual Ability Island Resident, 2013

Community Engagement and Friendships

According to Ondrejka (2004), more than one million objects and over 300,000 objects with scripted behaviors were created in 2004 in Second Life. Large and small grade objects which make up virtual landscapes with panoramic views, engulfed by a myriad of colors, sounds and animations are designed based on user creativity, imagination and skills which range in degree from beginner to advanced levels. Objects created in Second Life do not require pre-approval by a governing body and intellectual property rules attached to objects were defined by individual builders (Ondrejka, 2004). Resulting from this, there is an increase in online community sharing and the offering of a user experience that affords different human needs similar to the one's proposed by the Institute for Management Excellence (2001), namely security, adventure, freedom, exchange, power, expansion, acceptance, community and expression.

For the most part, informal learning occurs throughout Second Life. Sandboxes[9] may be located throughout various islands[10] providing potential builders numerous opportunities to experiment with the integrated building tool and interact with fellow

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[9] A sandbox in Second Life refers to a place to experiment and create different objects.
[10] An alternative name used for locations in Second Life.

builders who are very often keen to share knowledge, answer questions and provide various resources. Alternatively, a formal approach to teaching is also employed. A number of advanced builders offer classes on texturing, a term used to signify the visual look applied to an object and scripting, in which a programming language is applied to an object to stimulate behavior. For residents who have less of a desire to build objects, it is possible to exchange real life currency for Linden dollars. Numerous stores operated by residents throughout Second Life carry almost anything which can be imaged. Maybe you need new sofa to furnish your in-world home, a bouquet of flowers, or a new hairdo to alter your appearance? These can all be purchased with Linden dollars.

A topic which has often been explored in sociology, anthropology and philosophy is the exchange of gifts. Anthropologist such as Malinowski (1922), Levi-Strauss (1949/1969), and Sahlins (1972) have closely examined how this action fulfills a significant function in the growth and stability of a society and culture. Additionally the act of giving gifts may display a level of emotional involvement, feelings for another person. They also specify that a feeling of moral obligation stimulates a pattern of reciprocity, "I give so that you give in return". Sociologists such as Gouldner (1973) have also examined gift giving and noted two distinct norms, one involving the reciprocal act which stimulates social interactions and the other being altruistic in nature. Mauss (1923) indicated that the reciprocal act of giving a gift resulted in moral ties between people which is one of the basic elements in the development of social relationships. Clark and Mills (1993) examined how the nature of the gift exchange differentiated in exchange relationships versus communal relationships. In exchange relationships, which occur amongst strangers, a reciprocal behavior is expected, whereas in a communal

relationships, amongst family and friends, giving is referred to as someone fulfilling a duty which may be based on love and concern rather than repayment (Komter & Vollebergh, 1997).

In Second Life, acquiring objects may also occur through the action of gifting. The exchange of objects[11], between residents is not an uncommon practice. However, equally pointed out by numerous residents, is that this behavior is often done with caution. Many residents claimed that it is highly dependent on levels of trust, a very important element in offline communities and equally applicable in online communities, according to a number of researchers (Senecal & Nantel, 2003; Chevalier & Mazlin; 2003; Dellarocas, 2004; Lampel & Bhalla, 2007). Whereas Ridings, Gefen and Arinze (2002) claim the lack of verbal cues, facial expressions makes it virtually impossible to foster trust, but with that claim it is also possible to point out that levels of trust are subjective and based on personal beliefs, experiences, and desires, making it a complicated topic of discussion in relations to online communities as I have demonstrated below.

One Second Life resident explained that he assessed levels of trust based on the information presented on the resident's profile, as well as one's listed in their group affiliations. During the discussion, the resident referred to my profile and group affiliations, which range from academic groups to personal interests groups (see Figure 14 for a visual representation of my avatar). My profile reads:

> **BIOGRAPHY**
>
> This is my research avatar, without her I would not
> be here today! She is a controller of wind, with the
> help of an Earth Elementalist. She creates vast

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[11] Objects may also be referred to as inventory in Second Life.

tornadoes of knowledge. A natural beauty, brave,
and inquisitive. Always looking for new challenges,
opportunities, and adventures. She will not accept
"no" for an answer. If she fails, she will try again.
Every day is a lesson. Nothing is challenging.

REAL WORLD BIOGRAPHY

Phd student/Teacher
Research area: a mix of social media, HCI, special
needs, information sharing/learning, communities of
practice, and viable system models. Always
questioning, always exploring. Lifelong learner.
Ask, I will answer. If I don't know, we will learn
together.

In referring to my profile and group affiliations, he noted that we were both in the

"academia business". Thus, my profile corresponded to his professional and/or personal

circle in his offline community; in turn creating this online community link which he

indicated would to a greater extent to elevate the bar of trust to accept a gift; however this

incident is not generalizable. Whereas another resident, stated that she would "*just feel it*"

in the conversation. This sensation of "feel" gives rise to an issue examined by Stone

(1991). Very often in online environments, where people participate in online community

conversations, they tend to remove the idea of the geographical distance of physical

space, thus treating the "experience of electronic space as a 'real' experience" (p.118), in

this case judging the observation of online words as a determinant of trust. Finally, it was

also noted that the strength of interpersonal ties might also have a significant influence on

defining levels of trust and the exchange of objects.

Sitting around a virtual campfire, a number of residents agreed to offer their

opinion on acquiring and giving gifts in Second Life. Given that some of the residents

were unknown to me around the campfire, during the conversation, I conducted a brief

gifting experiment to observe and reflect on action(s) and behavior(s) of the online community. The offering of an object entitled "*chocolate chip cookie*" was given to two residents. One resident, Person B, was already listed as a friend, who sent an instant message (IM) with a "MMMM, ty[12]", of course it is worth mentioning that the social bond which was previously created might have influenced the acceptance of the gift, regardless of its value. The other resident, Person A, was more cautious in accepting the gift:

PERSON A: *You wouldn't take candy from a stranger, so when I bring my students into SL, I often tell them to be cautious when accepting inventory..."*
PERSON B: *As [PERSON A's name] said*
PERSON B: *Best done with people you know!*
PERSON B: *There is too much bad going around just to accept everything.*
PERSON B: *Griefers, etc*
[Time Lapsed]
PERSON A: *I have seen items with this name before [Referring to the "chocolate chip cookie"]*
Nia Cyannis: :)
PERSON A: *I will not accept it because I don't know you [**Nia Cyannis**] and the ones with this name in the past were jokes*
Nia Cyannis: So you don't accept gifts from strangers?
PERSON A: *In a virtual setting yes, if I were to meet a stranger on the street then I have their face and body language to help me decide how I feel about them but in a text based world it takes longer*
Nia Cyannis: Alright, I understand.
PERSON A: *Also, I don't need to have things in my inventory that I won't use*
Nia Cyannis: Clutter :)
PERSON A: *Such as a cookie, it isn't real, I never would have a use for it*
PERSON A: *If it were real however :)*

Thus, in this discussion, the refusal to accept a gift was based on a lack of interpersonal strength between the two residents, the sender (me), and the receiver (person A). Even though they belonged to the same online community the attempted exchange was refused as the giver was labelled a stranger to the receiver. Additionally, the level of uncertainty to accept a gift from a community member may have possibly

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[12] Ty, acronym for thank you in online conversation.

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been due to a past experience with griefers – a resident of Second Life whose main purpose is to act or do things to disrupt the other online community members. For one resident, a chemistry teacher in real life, who brought her student into Second Life, felt that it was important to teach her students about receiving gifts from the online community. Would the same behaviour occur if she directed her students to another online community environment, for instance website forums or chatrooms? How might this impact the online community? How might gifting as a unidirectional act, affect the social bond of the online community?

Alternatively, another form of gift giving in the online community of Second Life occurs through the exchange of information sharing, assistance, and opinion giving. During the virtual campfire conversation, a question of whether a notecard, which contained information, was considered as a gift and if it would be accepted from a stranger within the online community was examined closely. Surprisingly, the responses obtained from the residents were quite diverse. Within the following two scenarios, notecards that were potentially viewed as gifts, notecard were given a value based on the type of information it contained and the notecard was judged on the resident's needs, however there was still a level of reluctance in receiving a notecard from a stranger.

SCENARIO 1

Nia Cyannis: So this brings another interesting question to the "table"
PERSON A: :)
Nia Cyannis: Would you refer to the exchange of information, resources and opinions as a form of "gifting"?
PERSON A: Hummmmm........opinions definitely not, information? I don't think that qualifies either, resources though, yes that would fall under gifting
Nia Cyannis: Why resources and not everything else?
PERSON A: Information and opinions are thought based, resources are material
Nia Cyannis: Resources are material.....
Nia Cyannis: What is your definition of resources?

PERSON A: Resources can be held on to and touched
Nia Cyannis: What if I give you a notecard
Nia Cyannis: And it contains...a reference list or a recipe?
PERSON A: I suppose in a virtual world a representation of a material thing such as a notecard would be material
Cyannis: :) So given that I'm not a friend, but I wanted to share a notecard, would you accept it?
PERSON A: That would depend on its content and if we had previously discussed its exchange, I never accept anything like that

SCENARIO 2

PERSON B: Lots of notecards get given out on lists that one joins.
Nia Cyannis: So if I understand you correctly you wouldn't accept something from a stranger?
PERSON B: Yesterday I "gave" some notecards to a sim for which I wrote some notecards to be given out by [name removed] dispensers. Research I did about an artist that I had researched for them.
PERSON B: That is correct, I would be reluctant at a minimum to accept anything from a stranger.
Nia Cyannis: What is a stranger?
PERSON B: An avatar that I did not know operated by a person that I do not know
Nia Cyannis: But a notecard is not viewed as a gift?
PERSON B: This environment is full of creative generous people and the opportunity to get to know them is good and getting "gifts" from them is wonderful if safe.
Nia Cyannis: Well, a gift is "something of value"?
PERSON B: A notecard with 10 hours of research on it, I would consider of value.
PERSON B: And that goes on to inform people for free -- so a gift that keeps on giving.
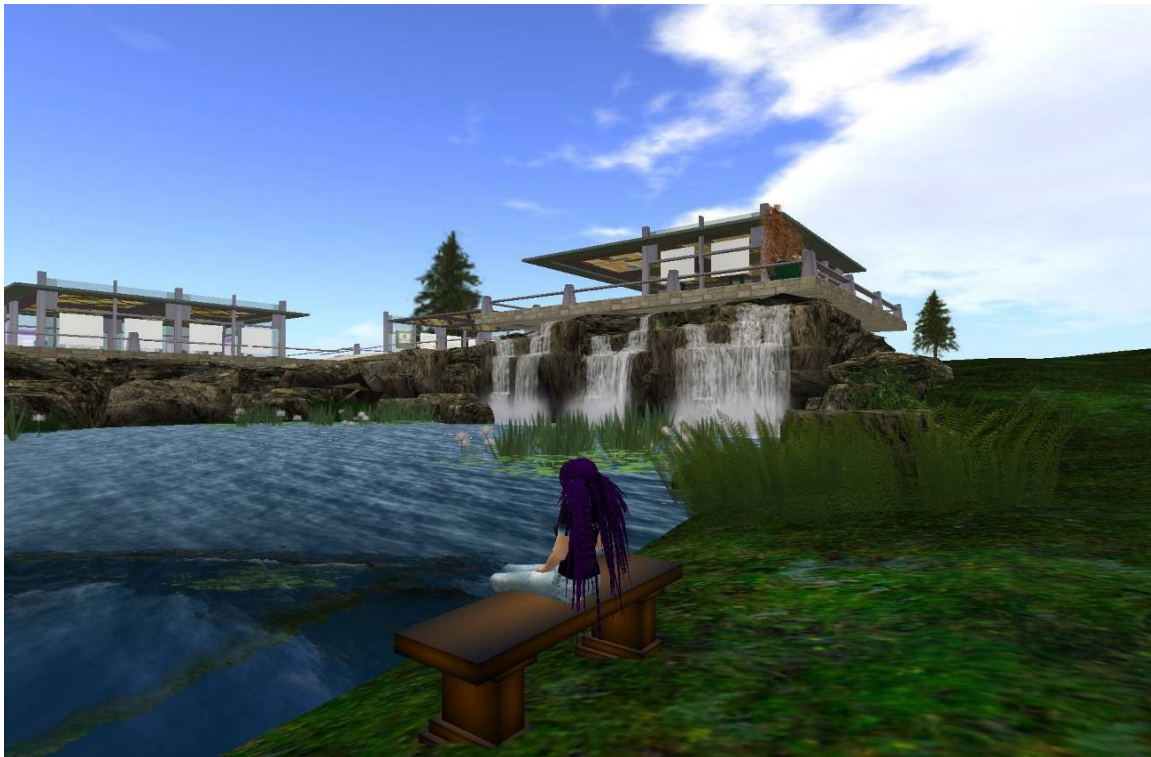
Figure 21. Screenshot of the researcher, Nia Cyannis, taking some time out to enjoy the scenery and sounds at Virtual Ability Island. Screenshot provided by researcher.

CHAPTER 9 VIRTUAL ABILITY ISLAND

Teleporting to Virtual Ability Island

I stood there for a moment, idle on the bridge examining the space around me. A background of colors, make up for a serene landscape of birds flying overhead, butterflies in a distance and cherry blossom trees. Slight movements –the leaves blow. I look down. Below…Are those fish? Further in the distance, I see a sailboat... [Click]. Ride. In an instant, I am ready for my sailing journey. [Click]. Stand…Over there, a hot air balloon... [Click]. Ride…Maybe later!

I continue walking, despite the fact that I can fly. Click, clack, click, clack. Click, clack. The sound of my shoes heard through the speakers. With every controlled movement, I watch my purple hair move freely in the wind. I continue walking… Two swift Click ,Clacks and I pause. My hands off the keyboard. I come up to a sign. Welcome to Virtual Ability Island. Virtual Ability Island…Hum?...Google… Virtual…I open my notebook and start jotting down some notes…Virtual: occurring or existing primarily online…Ability: the quality or state of being able; especially physically or mentally…"YES! It makes sense"…

Suddenly, a young man in a wheelchair goes by…He stops. From my office chair, I see the words "Hi" illuminate my computer screen. I look down at my keyboard. I look up at the screen. Thoughts pending in my head…"Hello"…
He replies, "Welcome to VAI"…."can I help you"…
A mentor? A guide?..
"Yes"…Actually, I'm looking for Gentle."
(Field Diary, 2010)

History

I met Gentle Herron the founder of Virtual Ability Island, a woman with Multiple Sclerosis, some time ago. Through our continued interactions, she quickly learned of my seriousness of wanting to improve online learning conditions for people with disabilities. A "mutual interest" we both thought to ourselves. Over time, the written words on the screen, from Second Life to emails, fostered a new type of relationship, that of a friend. She helped me explore and question the various connections made between space and community. I was offered the opportunity to gain "inside access", to debunk the various mysteries, I once thought were answers to design and development problems. In this process, I was never judged. I was introduced to members who graciously shared their personal stories of struggles and how the online community afforded transformative powers which eventually transcended into their offline personal lives. They provided insight on what it meant to be part of a community that thrives on supporting people. As this was occurring, only now do I realize, how I too

*"I couldn't find the community I was searching for in Real Life, so I am working to
create it in Second Life" –Gentle Heron*

The story of Virtual Ability Island (VAI) is a story of hope and inspiration
embedded in the continuous acts of dedication and tireless efforts provided by the
community both online and off. The foundation of VAI began in another online world,
known as LoveByrd, an online dating website for people with disabilities, no longer
serving the community. There, a group of friends exchanged many hours of conversation,
reflecting on the concept of "community". Very inquisitively, they began examining the
overall significance of community for people who encountered different challenges.
Particularly, they examined their ability to participate and contribute to the community
within their physical, geographical space. It is with this idea that they began asking other
people with disabilities to provide them with personal insight on their understanding of
community and what would be some of the needs the community would fulfill.
Numerous conversations with members from VAI, repeatedly brought my attention to
how people with disabilities often feel excluded from their community, whatever that
community might be. One resident stated that being homebound, created a divide; one
that includes physical, social, and emotional isolation between her and the community. In
a study exploring loneliness and social networks of people with cerebral palsy, Ballin and
Balandin (2007) stated that very often "deficits in a person's social relationships lead to
loneliness…Deficits in a person's social relationships can result from lack of
involvement in a satisfying social network or from the absence or loss of meaningful
friendships" (p.315). As Gentle Heron informed me, when they started gathering

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information many people defined community with words such as friendship and companionship, relationships which would provide them with close social ties and understanding. She also explained that many of the people they communicated with were seeking to create a bond with others who would identify with them, in that sense "people who understand the limitations placed on us". Many people were seeking a learning community, one that fostered the exchange of information to gain an understanding of their disability and to talk about health and wellness issues. Finally, they were also seeking an entry point, active-participation, a way to give back to the community through employment or volunteerism (all tied in to pleasure and enjoyment[13]). Below is a conversation provided by two Virtual Ability Island residents, Persons C (a participant newly introduced to the narrative) and B (who has been previously introduced) who explained the reason for which they entered VAI.

PERSON C: I became disabled and was looking for people who knew something about it. I turned to the resource I knew best, my computer… and here I am
PERSON C: I was looking for people who knew what it was like to be disabled.
PERSON C: Here I hang with people who know what it is like to be me
PERSON B: Nods
PERSON B: Community of support
PERSON B: And friends
PERSON C: Disabled people share a common thread. We are different in a world of "Normal" and still face the same attitudes and other things in our way
PERSON B: You know, a lot of the time, it's not our conditions that make us disabled - it's the structures and institutions and thinking of people in everyday society
PERSON B: Disabled*
PERSON C: [name omitted] May not have to worry about navigating stairs, but I understand her frustration if someone makes her watch a instructional video that is not closed captioned
PERSON B: Once I joined Virtual Ability I never left
PERSON B: I may get involved in other things around SL and in RL but I consider Virtual Ability my home
Nia Cyannis: home?
PERSON B: A place where I'm understood and accepted
PERSON B: I'm more free to be ME, here, than in RL
PERSON C: Ben Franklin said "we hang together or we hang separately" I think there is a lot of that to being in Virtual Ability
PERSON B: Very true
PERSON C: When I needed to start using a wheelchair, it was SL that got my head around it. I used one in this world until I got over my pride and stubbornness to admit I needed to use one

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[13] Refer to Csikszentmihalyi,, M. (1990). Flow: The Psychology of Optimal Experience. New York, NY: HarperCollins.

Nia Cyannis: wow.
PERSON C: It's more than hair stores and sex parties, some people use it for real stuff
PERSON C: When I encountered virtual ability, besides meeting people like myself, and also touched me as far as my desire to see virtual-reality used for real-world applications.
PERSON C: Last year we had Philip Rosedale Creator of Second Life here to give a talk
PERSON C: When asked "did you ever envision Second Life helping the disabled." He honestly replied no.
PERSON B: That's right
Nia Cyannis: Huh...

Thus, as these three friends from LoveByrd started gathering information, they decided to create this community that many people with disabilities were seeking. To do this, they turned to technology, particularly virtual world technology. However, the notion of "if you create it, they will come" was quickly erased from my thoughts as Gentle explained that the community "did not develop overnight".

Several preparatory activities occurred over the course of a few months. Particularly researching websites of various virtual worlds and seeking to build a stronger foundation in their mission by searching for resources that would significantly answer if the use of virtual world technology afforded beneficial outcomes for people with disabilities. This was a starting point in defining their supportive community.

In their research, they came to a general understanding that "when a major communication technology is introduced into a culture, this new technology could have profound cultural consequences" (Barnes, 1996, p.26). There was also a limited amount of models that would relate to the formation of online communities for people with disabilities in virtual worlds. Instead they got answers as to how these three dimensional environments, with highly detailed and realistic sceneries would help people with cerebral palsy improve their spatial awareness and offer them the sensation of mobility, with minimal physical stress. Furthermore, acquiring and gaining an understanding of how people with ADHD and autism were provided with the ability to maintain

interactions and practice communications skills which would otherwise not be possible in real life. In a sense one could say that although unclear at the time, the information they were gathering provided fuzzy answers which would set the path for important elements such as a social and cognitive presence as it related back to community formation.

Finally, it was agreed upon that Second Life, was the environment that was significantly developed and culturally abundant. However, it is important to mention that even today the research on the formation of online communities for people with disabilities in a virtual world and the use of virtual worlds as an educational tool for people with disabilities remains quite scant. From a recent conversation with Gentle, who shared a literature review conducted by Stendal (2012), the findings demonstrated that there is only a minimal amount of empirical research detailing the work opportunities, personal values, and social aspects of virtual worlds may afford for people with disabilities. Thus, the mission is ongoing and contribution is always necessary as an effort to improve and answer the needs of the community.

Exploring Second Life

In the summer of 2007, the three members found themselves in Second Life with a goal, to explore what was already being offered for people with disabilities. To begin this exploration, Gentle and her friends decided to strengthen their "already existent" alliance by selecting similar last names for their avatars. However, their last names was not randomly selected from the preconceived list offered upon registration in Second Life. Instead, as she explained, it was carefully selected by these three individuals who felt that "Heron" - a bird that often stands on one leg, but equally able to support himself -aligned with their mission of providing support for people and would be a good

identifier within the Second Life community. That being said, their initial exploration took time, as they needed to learn about the functionality of the software which would help them operate their avatar. However, Gentle emphasized that they met some "wonderful" residents who were quick to demonstrate altruistic behavior, particularly offering advice and help both during the initiation phase of the project and throughout. One resident in particular, a librarian outside of Second Life, who was equally active in-world assisted in the onset of the project providing them with guidance and a "piece of land" situated on EduIsland, a place for educators to discover the multi-faceted world or teaching and learning in Second Life.

With the assistance from various volunteers, a committee was formed to examine some of the required needs for people with disabilities coming into Second Life, after all it was important to provide the community with "a place of comfort in which they can learn and grow". They took the time to examine every orientation island that existed in Second Life. These orientation islands are walkthrough tutorials that provide people with the opportunity to have greater control over their avatar and enhance the overall user experience in the environment. These elements include movement tutorials, how to use search tools, how to communicate using voice or text chat, and how to modify avatar appearance, which for some residents with disabilities, helped recreate their disability in Second Life and foster a personal identity within the community. These are but a handful of elements which needed to be learned in order to become functional (e.g. contributing and interacting) a member in the online community.

Gentle explained that upon their research, they found that a universal design approach in which environments are able to be used by as many people, regardless of

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ability, age, or situation was the most fitting. As we spoke, she drew my attention to the importance of colors, angles, font style and size elements often overlooked, however they have a strong meaning to the Virtual Ability Island members. "Human Design" she said, considers how people use the build. She provided detailed examples of how the design of objects as simple as panels required a textured characteristic to specifically answer the reading needs of people with visual impairment and elaborated on the design of the seating area located at the Sojourner Auditorium (see Figure 22). She explained that the seating which ranges in hues from light to dark assisted in spatial awareness. Equally important were the types of objects displayed on Virtual Ability Island. Surprisingly there was not one sign about disabilities, as they wanted to appeal to a greater diversity of members within the community.

Figure 22. Screenshot of the Sojourner Auditorium at Virtual Ability Island. The seating in the auditorium is considered an accessible build as each seat includes a textual description (a numbering system). Using a screen reader, the assistive technology 'reads back' to the resident which seat is available in the auditorium.
Screenshot courtesy of Virtual Ability Island resident.

In examining much of the literature on psychotherapeutic gaming interventions, Gentle explained that they wanted to create a space for learning and socialization which also evoked a sense of calm, safety and support. The implicit comparison: a tropical island (see Figure 23).

Gentle: *The design incorporates the Theory of Andragogy and the Principles of Universal Design.*
Gentle: *We use a lot of nature, plants, animals, water, to evoke calm.*
Gentle: *We even have water inside the auditorium.*
Nia Cyannis: *Suggestions from a psychologist?*
Gentle Heron: *And lots of reading and study!*
Nia Cyannis: *So everything in the space which has been designed is very much calculated.*
Gentle Heron: *I don't know about "very much" but definitely "calculated" yes*

Thus, visually the space has been designed with waterfalls, animals, and plants, but within that design element, it is also a space which encourages learning and fosters community interaction (e.g. a playground, campfires and many benches). Furthermore, the influence of sounds, for relaxation and learning was closely examined; however the latter demonstrated a small amount of research findings with greater focus on people with autism and profound learning disabilities. Thus, sound and music have various levels of influence on the psychological processes, psychological activity, and human behavior. Auditorily, low frequency sounds from nature and slow music was selected. This can be heard at various points throughout the environment and deactivated by user if necessary. Below is an example of how a resident remarks on the community space.

> First of all, the VAI training course ("Orientation")
>
> is really well designed, using principles of adult
>
> learning. And, it is designed to encourage
>
> interaction with other avatars. Secondly, many VAI
>
> members, including me, choose to sort of "hang
>
> out" at VAI periodically and chat with people,
>
> welcome them, help them, etc. That does not
>
> happen at a lot of landing places in SL. Often you
>
> can be ignored or even griefed if you don't know
>
> anyone. At VAI the normal thing is to at least say
>
> "Hi! Welcome! and Can I help you with

something?" Third, VAI's islands always have

places for people to interact- either sitting/chatting

(there are a couple of fireplaces with logs,

actually!), and there's a couple of seating areas, a

treehouse or two (I think one is on the island with

all the VAI apartments on it). There's a pool to hang

out in, a "tavern", and various rides, etc., that small

groups or pairs of people can do together. So, while

you can do these all "solo", the environment is

created to allow interaction

-Virtual Ability Island Resident, email

communication, 2013.

Thus, linking usability to community participation is equally possible. An
environment which is considered "user friendly" rather than "threatening" may encourage
a person to be compelled to contribute within the community (Rojo & Ragsdale, 1997).

The Heron Sanctuary: A Fourth Place

"Our mission is to help people go do whatever they want to do
in SL as a whole."
–Gentle Heron, 2013

Not long after the team conducted the initial research, several virtual buildings were designed by the volunteers and built on EduIsland 4. Amongst those buildings, a walkthrough tutorial, the New Resident Orientation path which is the first place new members land on when entering Virtual Ability Island. Gentle explained that prior to this walkthrough tutorial, members were taught on an individual basis; however, this did not foster the freedom to experiment or attempt to try new things. In many ways, the walkthrough tutorial was a method to foster a sense of control and independence within the community; with this they would also find a sense of purpose, a necessary starting point to later become fully functional members. Unlike the other walkthrough tutorials offered in Second Life, which according to Gentle often *"assumed that people came from a gaming community"* or *"did not require assistive technology"*, their self-paced tutorial was designed *"assuming that people knew nothing."* Incorporating a learning model based on Malcolm Knowles theory of andragogy and applying principles of universal design, the walkthrough tutorial assisted members of the community in learning how to control their avatar. In one situation, she spoke of the online safety of the community members, specifically indicating that some people who have difficulty holding down keys on the keyboard, would demonstrate a harder time controlling their avatar to perform the fly movements. She elaborated, stating, "it could be a frightening experience watching an avatar fly away" and indicated that this may elicit a fear or frustration to return to the community. Thus, to take control of this problem, the design team came up with the idea of a "butterfly aviary", for community members to master their "flying" safely (see Figure 24).

Figure 24. Screenshot of an aerial view of the Butterfly Aviary located at Virtual Ability Island. Used to teach flying skills. *Screenshot courtesy of Virtual Ability Island resident.*

Since their initial opening, Virtual Ability Island (and its other affiliated islands)

is not only a port of entry, which provides orientation training for people with

disabilities; it also affords numerous services, activities, in addition multiple

opportunities to encounter design elements foster support to the online community.

> *Personal Observation and Reflection #12*
>
> *As I step back, from Virtual Ability Island (truly an information rich environment!!!), to examine the chat logs gathered during my conversations with Gentle, [name omitted], [name omitted] in addition to some other residents who were eager to provide their perspective on how they feel and experience VAI, I am amazed - I have been able to attach a concept to what is occurring in the environment - a pattern emerged…WOW*
>
> *…I find myself rereading the chat logs (multiple times), highlighting key words – a port of entry, creating unity, a place for gathering and having fun, creating community,*

learning, relaxation, safety, enjoyment, rooted/grounded, warm and fuzzy, autonomy, and control…As a whole these keywords seem to be conducive to Oldenburg's (1982) description of a third place…AND MORE…He describes the first place as home, the second place as work and the third place as "a place on the corner". But, as I think of this in the context of VAI, and from what I have gathered from the people, for them, it is all three and more! - I'm attaching the term "A fourth place to VAI."

→Side Note –COMPARISONS
See description: Oldenburg (1982) page 268, 270,273.
*Blue color: is representative of Oldenburg's concept.
* Red color: is how it compares to Virtual Ability Island.

1. Third places help unify neighborhoods, can bring youth and adults into association with one another, can serve as a "sorting" area.

A third place is more than an escape, more than a respite from obligations to be derived from third places and the quality of human association which they offer…They provide opportunities for important experiences and relationships in a same society, and are uniquely qualified to sustain a sense of well-being among its members…p.268

In conjunction with the use of technology, Virtual Ability Island has unified people from around the world - young and old. People demonstrating interest in disability related topics and people with disabilities localized to one space/place. It places people with the same interest in one environment in which they can share a common interest and learn from each other.

2. Third places serves as a point of entry.

Third spaces exist outside the home, and beyond the work lots…They are places where people gather primarily to enjoy each other's company…A third place is a public setting accessible to its inhabitants and appropriated by them as their own…For visitors and newcomers, directions and information can be easily obtained and it provides a means of getting acquainted quickly and learning where things are and how the neighborhood workplace…p.268 & 270

The first point of entry at Virtual Ability Island is the Orientation Path, which provides people with "life skills" training necessary to navigate the virtual environment…There are plenty of mentors throughout the island to provide assistance when necessary and design elements implemented within the environment respond to various learning needs.

3. Third places help care for the neighbored.

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There are social observers in these places…Public characters…They seem to know everybody in the neighborhood; they keep an eye on the local kids and what they are up to; they do favors for the locals; and keep regulars up-to-date on all variety of local matters…p. 270

Gentle has maintained the role of trust-leader (equivalent to the description of social observer provided by Oldenburg) at Virtual Ability Island. Along with the help of her trust-mentors [names omitted] she informs people of daily events, activities and occurrences at Virtual Ability Island.
On multiple occasions, during our interactions she would stop and help out a resident. If I had a question, she would guide me towards the appropriate person or share learning material.

4. Third places give the gift of friendship, are a place of entertainment and are important for retired people (in this case people with disabilities).

It [third place] is simply there, providing opportunities for experiences and relationships that are otherwise unavailable…Opportunities…Pure sociability… Entertainment, sustained activity…in the course of it people become very near and dear to one another…A neutral ground…people avoid obligations of both guest and host and simply enjoy the company…They come and go without making arrangements or excuses…They provide a means for keeping in touch with others and continuing to enjoy the life of the community…

Participation in the third place does not guarantee anything…However, it appears that continuous evolvement does provide individuals with a realm of social experience and relationships that are increasingly unavailable. P.28?

Thus, a few residents have discussed the formation of friendships and friendship development within Virtual Ability Island - the feeling of community connection which is otherwise absent or unattainable in their offline world. As one member pointed out, Virtual Ability Island is a neutral ground, an unbiased - place where the feeling of acceptance appears at the fore forefront. Another resident explained the value of the place, a place of empowerment, an access point for people with disabilities who are homebound, who are looking for a "new home", a place of employment or other (entertainment, learning, friendship…)

Based on the key characteristics and elements extracted from the chat logs, I do believe Virtual Ability Island is a third place. However, as I continue to examining the chat logs and reflected on the information gathered, I cannot help but think that it is a combination of "home", the first place," work", the second place and third place "the informal space", thus the "fourth place".
–Extract from personal research journal, 2013-2014.

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Group Identity: "What's in a name?"

Still absent during the initial phase was a clarification of the group identity which would not only be the name given to these buildings, but also the name attached to one's group tag[14]. In their selection, they considered the overall safety of the community. Already the Herons' were faced with the challenges of encountering griefers in Second Life and bullies, offline. These experiences made them consider the importance of selecting a name which would not hinder community membership. Gentle provided her opinion on this stating that "the Crips would not be a good name for us" this would create a persistent stigmatization or isolation, "you would not want people to say there goes another person with a disability", they were seeking to have their "voice" heard in the online community.

In a broader sense, it is important to consider how the group tags, which quite often are descriptive in nature, create an online community-informed status label. Group tags may or may not effect online community integration, they create an obstacle or assist in how the broader online (learning) community may choose to socialize or accept user generated content, in whatever form it might be. Thus, with the help of a volunteer who ran a website development and branding firm in Second Life, he assisted the Herons' in designing a logo, a blue heron, standing on one leg. Along with this logo, they named themselves the Heron Sanctuary, an online community which would afford safety, comfort and trust intertwined in online support. However, the community name was eventually changed to Virtual Ability Inc., as many residents in Second Life assumed that

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[14] A group tag is a name acquired by an avatar after joining a group in Second Life. Very often these group tags are descriptive.

this subculture was "an organization that was created to provide a safe haven for blue feather birds".

Decision-making power was a method that was used to provide the community members with a greater sense of integration. They were asked to come up with a new identity, and in doing so members were actively engaging in conversation, collaborating on ideas, which for many members became apart an overall enjoyable experience. Furthermore, Gentle pointed out that throughout the development of the online space, community contribution remained pretty stable.

Grand Opening and Thriving Membership

The initial opening, which occurred approximately eight months later, was an invitation for various members of the media and a select number of people to join the community and "test" the space they had built. Eventually it was opened to the public. Initially, "word of mouth, as many of the community members are good ambassadors," helped people locate the Island. Alternatively, the use of the 'Search' a tool integrated in the viewer, information provided on the Second Life Destination Guide, a virtual directory and Events Listing also provided a means to locate Virtual Ability Island.

The community thrived at a steady pace over the course of five years from 40, 70, 150, to currently over 700 members at this point. However, in the beginning non-disabled people were outnumbering the members with disabilities. This included "members with several kinds of mental or emotional disabilities, Autism spectrum disorders, learning disabilities, bipolar disorder, and social anxiety disorders. Some with physical disabilities and others with mental health symptoms, such as memory loss, depression, or impulse control issues; Gentle elaborated: "we know that about 1/4 of our memberships are those

who are not yet disabled, but have an interest". This would include teachers, students, parents, advocates, and professional from all walks of life.

Interestingly, unlike some of the other subcultures explored in Second Life that often thrive on individualism, the Virtual Ability community members take pride in collaborating with a number of Second Life institutions. It is not uncommon to find the Virtual Ability community members making their presence and "voices" heard at conferences and events of all kinds; thus at the same time encouraging the diversity of the membership. It is through this presence that they are working to create an awareness campaign; one which fosters recognition regarding the importance of disability access issues, technological tool requirements, and adaption needs which will help them in many ways become fully functional members of the Second Life community. However as Gentle pointed out, community participation and outreach goes beyond Virtual Ability Island, where the use of social media tools such as Facebook, Twitter, and Blogger, have proved to enforce the collaborative cultural nature.

Activities: Living, Socializing and Educating Oneself at Virtual Ability Island

Since their grand opening, the Virtual Ability Island has grown both in service and support (as of December 2014). While still sitting in Gentle's office, she offered to provide a 'grand tour, through her eyes' of the Virtual Ability Island, of course there was the possibility of using the hot air balloon, but instead she offered to teleport my avatar. The first location, known as HealthInfo Island was an ongoing initiative by a number of dedicated Second Life volunteers (see Figure 25). This island is about providing evidence-based health information to people. Additionally, people can access e-books and reading lists from the Consumer Health Library and participate in university-led

studies at the Research Pavilion. Gentle, along with another Virtual Ability Island resident commented that the creation of this space was designed to easily access information and resources in various modalities was purposely intended to afford a feeling of empowerment and help residents feel a part of the Virtual Ability Island community.

Figure25 . Screenshot of aerial view of HealthInfo Island located at Virtual Ability Island. Screenshot courtesy of Virtual Ability Island residents.

At a glance, the design of the space is very inviting; allowing for individual and communal activity. Health facilities, gardens and quiet readings rooms are all neatly and purposely integrated into the highly interactive learning space which was designed with the consideration of diverse needs. Members can acquire accessible information on various topics related to health and wellness at the Health Exhibits (Figure 26) or travel

down the Path of Support to explore the numerous peer support groups created by various Second Life members.

Figure 26. Screenshot of the various exhibits and presentations at Virtual Ability Island. *Screenshot courtesy of Virtual Ability Island resident.*

Our next visit led us to Cape Able Island, an environment which is considered as "a residential space first for the deaf and hard of hearing community, followed by an information center, [that] disseminates all sorts of information" (Anonymous, Virtual Ability Island resident, 2013). It was purposely designed with community interaction in mind. Quite significant to this area, is the art gallery, this was purposely designed as a means to empower the community through art making. Amateur and professional artists are offered a space to contribute their digital artwork which allows members from the larger Second Life community to visit and purchase the artwork (Figure 27). She also spoke of the diverse activities, some of which are hosted at the Deaf Chat Café –"an open

space to mingle…a coffee shop with a coffee machine :)... posters, learning material to teach ASL finger spelling, " (Anonymous, Virtual Ability Island resident, 2013) and modeled after the social gathering groups established throughout local coffee shops in the United States (Figure 28). She explained that during various weeks' activities such as 'poetry readings' and collaborative storytelling are done with the assistance of a voice to text transcriptionist. Additionally, she mentioned that medical professionals are often presenting on topics such as hearing loss and other disability related issues.
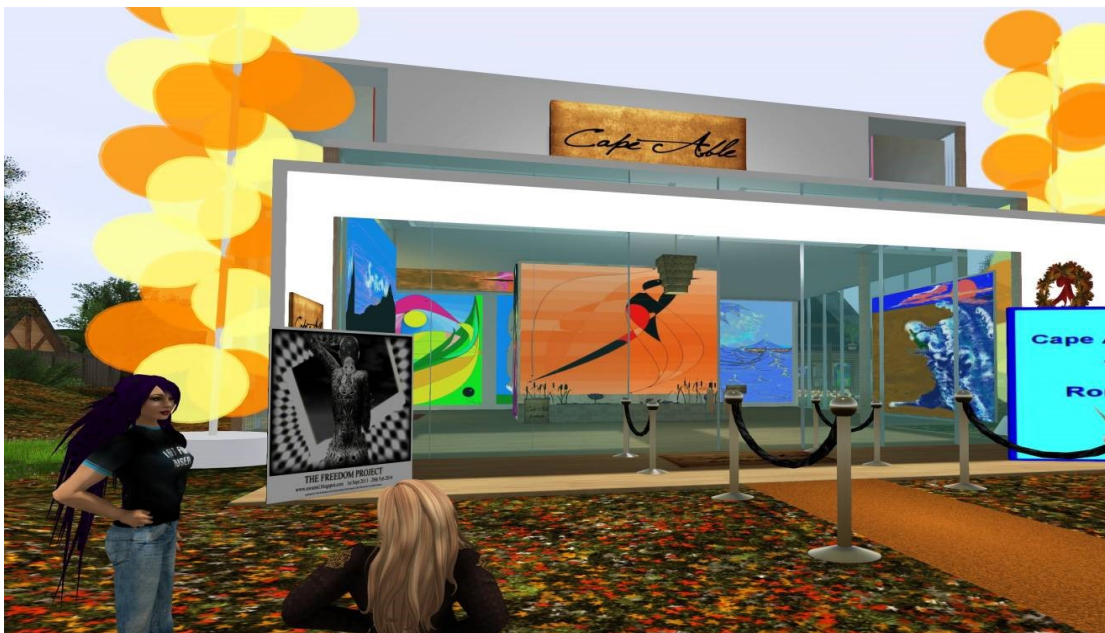
Figure27. Screenshot of entrance to Cape Able art gallery. Digital paintings created and contributed by members from the disability community. Also in the screenshot, Virtual Ability resident (right) and researcher (left). Screenshot courtesy of Virtual Ability Island resident.

Figure 28. Screenshot of entrance to Deaf Chat Café, a communal space for storytelling and poetry reading sessions. Also in the screenshot, Virtual Ability resident and researcher (with purple hair). Screenshot courtesy of Virtual Ability Island resident.

Unlike some of the other subcultures which I have explored in Second Life which offer help through the use of 'bots', defined as avatars controlled by machines, specifically known as artificial intelligence, Virtual Ability Island is unique. There is

always human help available nearby, ready to offer assistance or answer questions, with

the exception of "Bob the Monkey" (Figure 29), a chatterbot based on artificial

intelligence which is used as a tutorial tool to teach interaction and communication skills.

Figure 29. Screenshot of "Bob the Monkey", the artificial chatterbot. Screenshot courtesy of Virtual Ability Island resident.

At many of the conference events, Virtual Ability Island greeters are in place, to

offer assistance to the community with media (e.g. how to watch a video) or to help

people with visual impairments locate an empty seat which is numbered and read back to

them using text to voice software. Below, I provided an example of an encounter,

between myself, and Person D, a mentor from Virtual Ability Island.

PERSON D: *Hi,*
NiaCyannis: *Hello*
PERSON D: *I was just wondering if I needed to throw you a life preserver...*
Nia Cyannis: *Hehe. Thank you*
Nia Cyannis: *Just looking at the fish*
PERSON D: *Ah.*
Nia Cyannis: *Well, that's a good SL hobby, I guess.*
PERSON D: *I'm [Name Removed]..*
Nia Cyannis: *Nice to meet you*
PERSON D: *I am a volunteer mentor here at Virtual Ability.*
PERSON D: *Is there something I can assist you with tonight?*

Usually these residents are known as mentors and may be identified with a display tag worn over the avatar's head or otherwise identify themselves to the avatar in need, "if they notice an avatar in trouble!" Gentle and a number of Virtual Ability mentors explained that in order to acquire this responsibility, one must demonstrate both capability and loyalty to the community. Loyalty and capability, includes maintaining presence, "just showing up" in the community or as one mentor explained, may be "people contributing their skills however they wish"; she elaborated "some of us do so in a more structured way, like teaching classes." Furthermore, they must undergo a special mentor training, as one mentor stated in simple terms it is "a crash course - how to interact with people." More specifically, it is training on how to interact with people who have disabilities in Second Life.

Other than offering assistance on Virtual Ability Island, mentors act like 'officers'. Although Gentle, made it clear that the word 'officer' should not be mistaken for the one's associated to the larger Second Life community; which often ban or remove griefers from their groups. Instead, for Virtual Ability Island, these are volunteers who extinguish disturbing situations, through means of education and understanding, as demonstrated in the examples below. However, in most cases, the community is quite respectful.

Conversation 1

Nia Cyannis: I guess if someone enters your island and starts acting disrespectful towards the residents, you will kick them out?
Gentle:Aactually, first we try to find out what is going on
Gentle: For example
Gentle: Once one of our low mental capability members told us someone was saying mean things to him
Gentle: We came over to investigate
Gentle: It turns out the person doing the harassing was ALSO disabled, and simply wanted to be left alone
Nia Cyannis: You confront the avatar directly?

Gentle: We didn't understand why he was "pestering" her.
Gentle: Yes, we prefer to do that
Gentle: So we can get the "real story, from both sides"
Gentle: and also do some educating
Gentle: We had an incident where one of our members who can't type well because of a physical disability was being teased for being slow
Gentle: So I IMed[15] the person doing the teasing
Gentle: and requested that he read our member's profile
Gentle: where it states HOW he has to communicate
Gentle: (using a switch and word prediction software, which is slow)
Gentle: and then that person had a whole change of attitude

Conversation 2

Gentle: In all our years, our griefing experience is so minimal as to be ignored.
Nia Cyannis: Wow that is interesting
Gentle: Most folks after you talk with them understand the rules and abide by them.
Gentle: We really don't have a lot of issues, Nia.

In a previous conversation, we spoke of the use of a notecard, a message which may sometimes stipulate rules of the community and is automatically sent to the avatar upon entering the island. Again, Gentle clearly emphasized that it is not necessarily in the culture of the community.

Nia Cyannis: Do they automatically receive a notecard stating how they should act on the island?
Gentle: No, we don't do that.
Gentle: Other places do.
Nia Cyannis: If you don't mind me asking
Gentle Heron: Nope, we didn't want to feel so "clinical"

Having left this space and returning to the Virtual Ability park area, Gentle and I chatted on topics such as the annual conferences organized by the volunteers, the numerous graduate students who take pride in presenting their topics to the community, and the medical professionals who seek to improve their understanding of "disabilities" by calling upon the community for help. Eventually a discussion about the virtual field trips organized for community members followed. Of course these field trips offered a

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[15] IM refers to instant messaging.

number of benefits, including learning how to explore other spaces or islands in Second

Life, interacting with other members of the Second Life community, and practicing

newly acquired skills as a result of participating in the walkthrough orientation.

Gentle: We have had field trips to art galleries
Gentle: to nature sims
Gentle: to places like amusement parks
Gentle: all varieties
Gentle: This month we are the official "post" of the SS Galaxy Cruise Ship, so we will go to many events aboard.
Gentle: Tonight there was a cheerleading demonstration in the ballroom on board.
Nia Cyannis: When you offer the field trips have you aligned any learning objectives
Gentle: often
Gentle: When we go to art galleries, we ask the artist to explain how they make their art
Gentle: Fascinating!
Gentle: Other times, like when we go to Loch Ness or places just for fun, we choose places that require walking or climbing or pose balls or other SL skills to practice
Gentle: I took some newcomers Easter egg hunting last month
Gentle: Then we came back to the sandbox to learn how to unpack boxes
Gentle: and THEN we talked about sorting their inventory and keeping it neat

Not long after our conversation, I had a genuine opportunity to observe how the

ongoing commitment of this community positively affected some members. Furthermore,

I observed how some members were granted various opportunities to give back by

performing tasks that would otherwise not be possible outside of this environment.

> *"I'm deaf, but here I can collaborate on with anyone…I*
>
> *worked on a project with a man who is severely dyslexic…This*
>
> *would not be possible otherwise…"*
>
> *(Anonymous, Virtual Ability Island resident, 2013).*

From the profile description, the following key words were extracted: Down

Syndrome, friendly, understands basics sentences, ask simple questions. Thus, given that

I was standing near the park area located at Virtual Ability Island, this is where the

interaction was initiated and continued for approximately five minutes within limits of

the park. The resident, - who I call an "ambassador" for the sake of the narrative -

possessed an avatar wearing what resembled to be a superhero costume initiated the

conversation with a "hello" and then proceeded in verifying my means of

communication, whether it was text or voice. Once I responded, the ambassador

continued asking whether I enjoyed certain objects such as slides, turtles, fish, and

seesaw. These were objects visible in the space at Virtual Ability Island. In responding

"yes" to his questions, the ambassador would encourage me to follow him. If I did not

follow, he would return to the location in which I was standing and repeat the word

"please" and "come" until I followed. As I followed, the ambassador would lead the way,

bringing me to the objects he named. Then he would perform the action, as a

demonstration. Following this, the ambassador would instruct me to click the object in

order to enable an action, such as clicking on the slide to perform the sliding action. If I

performed the task correctly, he would reward with words such as "good job." Gentle

explained that in his offline community it would be quite impossible for him to teach

people how to do things, generate new friendships, and be regarded as an equal or avoid

various stereotypes, but given the current environment, he is considered a "great

ambassador" who is fully functional within his world community.

Nia Cyannis: He likes showing me things in VAI
Gentle: *He likes to teach people how to do the things he knows (climbing the tree) and to show the things he enjoys (fishes!)*
Gentle: *and he's GOOD at it!*
Gentle*: He would never get a chance to do this in RL*
Nia Cyannis: *I see that and I can't keep up with him :)*
Nia Cyannis: *Me thinks maybe age is creeping up*
Gentle: *He moves FAST!*
Gentle: *He has a lot of energy*

On two separate occasions, I spent some time with a Virtual Ability Island member, Person E, who invited me into her virtual home nestled along the shorelines of Cape Able, followed by a virtual field trip to Cape Serenity, the home of the public library which houses e-book by authors who have various disabilities. I was granted with the opportunity to acquire a closer understanding of how a person with a disability views and engage with the virtual space. Furthermore, through the exchange of information, I was left with an opportunity to rethink of the power of customization and personalization attained by people with disabilities and how these two elements can influence the development of less constraining learning environments, to ones that focus on the development online personal learning spaces fitting for their needs (whatever those needs may be) instead.

Thus, as Person E invited me into her virtual home, the words "welcome to my little corner of SL :)" flashed on my screen.

> *At that very moment, I returned to my journal.*
>
> *I can't help but think of the possessive nature, the characteristic of ownership she assigned to something which does not exist in physical form. I am left perplexed (VERY), and wonder whether this could somehow extend or create new avenues for instructional design practice. So as I continuously write my thoughts down in my journal, and generated questions which appear as follows, I feel that its leading to "nowhere" (FOR NOW)…*
>
> *Could the possessive nature, the characteristic of ownership assigned to a virtual object or space by a person with a disability help us [the instructional designer] improve our understanding of the design of digital learning content or spaces for people with disabilities? Could the perceived value that people with disabilities assign (to something) help develop an online learning space more conducive to their learning needs, something less constraining? More empowering? Flexible? Adaptable?*
>
> *– Extract from personal research journal.*

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Walking past the entranceway, Person E guided me towards the back of the

house, to the patio overlooking a virtual body of water, a picturesque scenery made up of

numerous pixels in shades of blue, green and pink.

PERSON E: But Virtual Ability is 'home'
PERSON E: I have a little cottage that is on land owned by Virtual Ability
PERSON E: Do you want to see it?
Nia Cyannis: Yes!
PERSON E: Welcome to my little corner of SL :)
PERSON E: Let me know when you've rezzed
 Nia Cyannis: ok im good
Nia Cyannis: Who designed this place?
PERSON E: Let's go inside
Nia Cyannis: So I was wondering who designed the space we are standing on
PERSON E: My partner and I did
PERSON E: Come on in
PERSON E: I'm in a Tudor style cottage
PERSON E: This is my home, my cottage and this little forest
Nia Cyannis: Thank you for inviting me in
Nia Cyannis: So did you build this house with your partner
PERSON E: He bought this then we altered it by opening up the upstairs and adding a basement
 Nia Cyannis: There is an upstairs and a basement?!
PERSON E: We built the seating area you see here - to accommodate a university class [omitted]
PERSON E: oh yes
PERSON E: Basement and upper level.
PERSON E: You see the pendulum clock on the wall? I work with [omitted] who created that.
PERSON E: Let me show you a few things on the wall that I'm facing, there's a slideshow also created by the [omitted] I work with
PERSON E: If you want to sit here or out back on the patio we can
 Nia Cyannis: I'll follow you
PERSON E: Ok let's go out back
PERSON E: The water is just a few steps outside the door, we're on the shore, so you know
PERSON E: Over here is the patio
PERSON E: Grab a seat :)
PERSON E: The bench is comfy *grin*
Nia Cyannis: :)
PERSON E: You can touch the cushion to get a menu of other sit poses, I believe
Nia Cyannis: pretty
PERSON E: Fun, aren't they, these seats? Homey relaxing and conducive to friends gathering here
PERSON B: I just like having a piece of SL to call 'mine' with [omitted partner's name]…

PERSON E: I find this a very relaxing place to be, I like having a place on the grid I can call home, my little corner of the grid
PERSON E: the grounds are open for anyone to visit - I just ask that no one goes inside my house without asking first, same as in RL
Nia Cyannis: Could you tell me a bit about the importance of having a home in SL
PERSON E: for me it's usually the first place I rez when I log in and I come home from wherever I go on the grid, last thing before logging off…a safe spot to come back to

[…]

PERSON E: How do people perceive that is as important as any other detail

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PERSON E: and it is also a living space for them
Nia Cyannis: Living space, would this not be the same term as "home" or do you have an alternative view?
PERSON E: Many members of VAI don't have a virtual home
PERSON E: But they "live" in SL
Nia Cyannis: Interesting ...so live is similar to hanging out?
PERSON E: More like experiencing, existing
PERSON E: My existence in SL is equally as valid as my existence in RL
PERSON E: I live and work in SL, just as I do in RL
PERSON E: I may not get paid for what I do in SL but the benefits I get are equivalent to payment in my mind
PERSON E: The ability to do things for others, create things, help [name omitted] the way I do, all of those things can be just as satisfying as a paycheck

As she offered a seat and multiple cups of virtual tea, she provided her description on some of the positive opportunities Second Life afforded for people with disabilities, like herself. We chatted for a while about the experience of building her virtual space and at that very point she emphasized that the design goes beyond the aesthetics. The objects she creates have an inherent meaning, set within the backdrops of the environment, this is what elicits an emotion for her.

She began with the notion of her 'home' and based on the conversation that unfolded, it was clear that the design of 'home' was more than a simple virtual dwelling, instead it was a place attached to various personal, social and cultural dimensions and significance. As we continued chatting, she elaborated on both the purpose and use of her virtual dwelling. Person E explained that it is both a communal learning space and a personal space which elicits feelings of safety, comfort and ownership.

Nia Cyannis: You said that this is a safe spot?
Nia Cyannis: How do you define safe? Sorry lag again
PERSON E: This sim is 'safe' in terms of being a private residential sim
PERSON E: The people who have parcels here are Deaf, hard of hearing or have a disability
Nia Cyannis: So if I understand correctly, you mean a safe environment for people with disabilities
PERSON E: More for me
PERSON E: But generally yes it is a place where pushing is not allowed, you have control over your parcel and who you want to allow to access it, and other things

The virtual dwelling helped her maintain and create memories, particularly through the gathering of snapshots which she displayed on her virtual walls. She also

considered it as a grounding place in which she could return to at any time and easily

make changes as necessary – her "[my] sense of ownership". Later, she explained that her

love for the visual arts and nature in the offline world crossed into the design of her

virtual space. The notion of personalization and customization, added an element of value

to her space in which she had the capability to add her personal identity.

> *"I like that I can express myself through the art*
>
> *pieces…"*
>
> *(Anonymous, Virtual Ability Island resident, 2013)*

During this conversation she indirectly introduced two terms: immersionist and

augmentationist.[16] Thus, an immersionist user is a person who engages with and uses the

virtual space to create or achieve an experience which would otherwise not be possible

offline. While an augmentationist user is a person who enters the virtual space to engage

in a real life activity and in most cases his/her offline identity coincides with his/her

online identity. With additional probing I learned that these two categories can also

overlap and therefore people with disabilities may seek both an augmentationist and an

immersionist experience. As she provided these examples, she explained that people with

disabilities enter Virtual Ability Island, for a number of reasons. For one, the flexibility

of environment is less constraining and helps people with disabilities take greater control

of the experience they are seeking, which could also include learning.

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[16] Refer to Duranske, B. (2008). Virtual Law: The Legal Landscape of Virtual Worlds: Chicago, IL: ABA
      Publishing.

Figure 30. Screenshots provided by Virtual Ability Island resident during our discussion about the importance of personalization of a space for a person with a disability. In these screenshots the resident indicated that her love for nature and the visual arts in her offline world is also expressed and recreated in her online world.

Figure 31. Screenshots provided by Virtual Ability Island resident during our discussion about the importance of personalization of a space for a person with a disability. In these screenshots the resident indicated that her love for nature and the visual arts in her offline world is also expressed and recreated in her online world.

CHAPTER 10 THE REFLECTIVE JOURNEY CONTINUES

Today's instructional designer has to learn how to function in a complex and often ever changing environment. According to Schwier (2010), the preparation of the instructional designer begins with the completion of courses or entire programs in instructional design, with guidance in both technical and process skills which include competencies in conducting need assessments, writing learning objectives, selecting content and methods, and determining appropriate delivery strategies. Furthermore, the neophyte instructional design student often gains familiarity with the mantra which states that good theory often leads to good design practice and vice versa (Wilson, 1997, p.134).

Upon completion, the student graduates with the basic skills and knowledge, fundamentally important to enter the professional arena, and respond to the demands of the instructional design practice. However, the transition from student to professional may not always be easy. And it is not necessarily a topic which is thoroughly examined in instructional design practice. In sociological literature, uncertainty and unfamiliarity has been associated to what Schuetz (1944) refers to as strangeness. Schuetz goes on to explain a typical situation of "a stranger who finds himself in his attempt to interpret the cultural pattern of a social group which he approaches and to orient himself with it. In nursing literature, uncertainty and unfamiliarity is considered as the climate of conflict. Marlene Kramer (1974) specifically introduces the term transitional shock, to explain how new graduates entering the professional arena for the first time are often confronted with numerous realities during the transition period, as students move from the "thinking orientated" environment of academia to the "practice orientated" environment of the

field. She describes this transition as a non linear, individualized experience, where one is moving from the known role to that of the relatively unfamiliar, in which the new graduate often encounters physical, intellectual, emotional, developmental and sociocultural changes. She goes on to speak of this transitional shock in which the student feels unprepared to bridge curricula with the workplace realities and expectations which also creates a sense of uncertainty in one's positional identity. She adds that it is a period of in-betweeness, stages which subsume elements of transition theory, reality shock, cultural, and acculturation shock, growth and development, and change theory. Finally, Villachica, Marker and Taylor (2010) refer to the entry level instructional designer, as someone who often find him/herself dealing with uncertain terrain and despite receiving assistance and instruction often finds it quite challenging to deal with. While Kirschner, Carr, van Merriënboer, and Sloep (2002), explain that experienced instructional designers will deal with uncertainty by relying on previous experiences and adapt accordingly.

Thus, at some point during one's instructional design practice he or she may be confronted with uncertainty, whether it is concerning one's professional identity, or a challenging experience within the field. At times, these challenges or these strange, uncertain experiences, (which may very well be difficult to describe in words) can afford an opportunity to let go of what was learned within the "thinking oriented" environment of academia, and become a playing field to thoroughly examine (as in my case) the meaning of "becoming a user-centered instructional designer" and experiment with information gathering techniques which fall further away from the traditional design practice.

Therefore, how does the above relate to the current research project which was undertaken and how does this connect to my professional development? As I look back on my experience, I acknowledge that it was quite challenging to proceed with this research journey due to the various emotional dimensions I encountered throughout the research process. First, I openly admit, that I had extensive experience with the disability community, however very little professional experience as an instructional designer, and far less experience as an advanced qualitative researcher within the virtual world. Because of this I felt that it was important to use journaling throughout the process, as a critical part of my learning and development, as I moved through various roles during the research. According to such learning theorist as Dewey, Kolb and Schon, reflection as they have pointed out is an essential part in human learning and development and it is not merely thinking or musing, it is a complex and intentional intellectual activity which generates learning from experience. Grumet (1990) has stated that "…any writing and reading of our lives presents us with a challenge that is at the heart of every educational experience: making sense of our lives in the world" (p. 3). In higher education, journaling supports the student; to identify, articulate and make decisions on issues which may be deemed disquieting, discomforting or self-questioning, and as Morrison (1996) states "it is seen by many students as a major significant feature of their development in all spheres"…To trace the development of any emerging interest and provide a personal account of any growth with a factual reference, that was repeatedly examined in order to create some personal meaning (p. 328). Most importantly it is an excellent tool for both personal and professional growth.

Thus, at first glance, the inquiry which I have provided may seem to resemble a mere personal account of my experience as a PhD student writing a thesis, however there is a greater significance behind this form of free writing in which "the learner determines how much and what elements of [her] journal to disclose" (Boud & Walker, 1998).

This was the starting point in which I began questioning and examining my beliefs about user-centered design, values about participant-research relationships and various emotional biases which influenced my decision making -all important parts of professional development. It was an opportunity to examine the discomfort I felt, transitioning through multiple roles during the research journey. These transitions which I experienced, although personal, may serve as a source of meaning and may consequently serve as a catalyst for other researcher-instructional designer to further examine the type of researcher-instructional designer they want to be and the type of relationship(s) they are willing to create with their participant-client.

Furthermore, nowhere in my "thinking oriented" training was I taught about the struggles I would later face, given that prior to conducting this research project, I created an extensive connection with both the environment and the people I encountered in Second Life, who later guided this research project. The attempt to shift from the position of PhD student, who was simply interested in exploring a new environment to later, becoming a researcher, in which collecting information from a friends-participants, as opposed to the participant-friend perspective and later disseminating the information, was one of the most daunting tasks I had to face.

I constantly found myself, evaluating how I wanted to present the gathered information, ascertaining that I revealed enough in order to provide extensive knowledge within the research community, but at the same time took caution on what I revealed, given the relational position already created. I felt caught between multiple roles. As tensions arose, in the process of becoming a researcher, I was gravely concerned that I would overstep the ethical boundaries of revealing too much of their personal details, which they had previously shared outside the research context. As a PhD student and member of the community, I strived to maintain the relationship which had previously developed, prior to becoming a researcher. I could easily connect this experience to what Ellis (2007) wrote about as she reflected on her early days as student, becoming a researcher in the isolated fishing community of Fishneck. She wrote: "if my master status become researcher, rather than friend as researcher, would the close relationships I had formed be affected? I worried that if my role changed, the Fisher Folk might feel used and hurt…Who wants to spend time with someone who is out to use you for their own purpose? And how pleasant can it be to spend time with people who feel you are intruding into their lives" (p.7). Thus, through the process I often thought, if I had not known the participants of this study, if I did not have to deal with the tensions I experienced with the multiple roles I played, and if I had superior research skills, would the possible choices made during the presentation of the research report and the overall outcome differ? But, as I worked through the various stages of the research process, and broke certain rules, such as allowing the participants to become what I called "researchers" and I, in turn, the participant (in which they questioned my various ideas and practices) I realized that it was equally important to embrace these challenges as a

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learning experience which allowed me to critically reflect on my professional growth and identity.

I felt that it was important to shed light on this part of the experience, something which is significantly less spoken of in research but, in my experience, it was part of an interconnected process, allowing me to examine how my academic learning through the years influenced my overall research process. As I wrote about my experience, I had an opportunity to examine, the evolution of myself as a student, as a friend and as a researcher within Virtual Ability Island. Furthermore, by deciding to proceed in this manner, it allowed me to gain a greater understand of my capabilities, weaknesses and fears. It provided an opportunity to determine the type of researcher I want to be and the role I would like to play as an instructional designer.

Final Reflection

I entered into an environment which I had previously spent many hours in, as avatar Nia Cyannis. At that given time, I simply identified myself as a student and former special needs art educator. I spent many hours exploring different places throughout Second Life and while doing so, I appreciated the aesthetic qualities, the visual design and multi-sensoriness of the surrounding space. I thought about the user-generated content, as personal forms of creative expression, and considered how the environment afforded an opportunity for people to create their own meaning of a space. As I teleported from one location to the next, I examined each composition of space as a visual narrative, a story being told by the user who took time to build, and place the object in a space, which also brought people together.

Eventually, I found myself at Virtual Ability Island, and began exploring this unique space which I perceived as "different from any other space I previously explored in Second Life". Over time, my role transitioned, unexpectedly. I became a member of the Virtual Ability Island. I became a colleague and a contributing member of the community, as I partook and assisted at various organized events and activities. And through these opportunities, I also became a friend to the numerous Virtual Ability members I interacted with along the way. Furthermore, prior to this research, I had various opportunities to explore the environment with many diverse members from Virtual Ability Island. This occurred during the organized community field trips in which many took pleasure in expressing their likes and dislikes about the space. As I spent more time in the environment, I got to know the various members, on a personal level, as much as they were granted the opportunity to learn who was behind Nia Cyannis, the avatar, the person. They took the time to openly reveal personal details about their disability, explain how and why they came about joining the community, shared stories of their interests, their careers and families. Some took the time to invite me into their personal spaces, these "homely" spaces which they demonstrated great pride in designing. Others, decided to include me in their celebrations, birthdays, weddings and other celebratory events which are not unusual in Second Life.

As I continued spending more time at Virtual Ability Island, increasing my community involvement, I thought that this would be a great place to conduct research in, with hopes that the experience would provide insight on improving design practice, particular when designing for people with disabilities Furthermore, I was hoping that this experience would afford an opportunity to add knowledge to my instructional design

toolbox. After all, it was a rich space, made up of people with various disabilities who collaborated, to design a learning space for their specific needs.

"The more I thought about this journey, I significantly believed that I was adequately prepared to enter the world as a researcher." (Nia Cyannis, communication with Virtual Ability member).

Disability Research and the Non-Disabled Researcher
"To do, or not to do: That is the concluding question".

One topic, which is often raised, by numerous disability advocates and researchers alike is whether disability research should be undertaken by non-disabled researchers (see, for instance, Oliver, 1992; Rioux & Bach, 1994; Shakespeare, 1996; Barnes & Mercer, 1997). This argument dates back to numerous political views and opinions brought fourth in similar discussions introduced by diverse groups, including African-Americans, Hispanics, Asian-Americans, Native Americans, and Feminists who emphasized that "unless the researcher partakes of their particular view, then she or he cannot understand it" (Devlieger, 2003, p. 103). Unfortunately, arguments as such, are unavoidable and in the context of disability studies, issues of positionality and power do at times appear in the forefront. Barnes, Bury and Shakespeare in the book *Disability and Society* have debated that disability discourse has extensively excluded people with disabilities –"excluded from academic and institutional research, political think tanks, charity and pressure groups, and marginalized within the political processes and the media structured that influence public and policy discussion…And overwhelmingly dominated by people who are not disabled" (as cited in Kitchin, 2000, p. 25). Further arguing that disability research is very often unidirectional, hence researcher-oriented and

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if conducted by a non-disabled researcher, lacking appropriate representation and interpretation of the disabled community. Canadian advocate Pat Worth also maintained that many researchers merely see the disability of the person, rather than the ability (Goodley, 2010) in turn, emphasizing this aspect in the research.

In Kitchin's (2000) study, thirty-five people from various disability groups were interviewed about numerous topics related to traditional research. Kitchin was seeking their opinions on "their experiences of research, their general opinions concerning research, whether research had served/was serving disabled people well, how research on disability should be conducted, who should conduct research on disability, and finally, what they would like to be researched" (p. 25). Resulting from this study, various respondents expressed their concerns for inclusive, action-based research (also called participatory research, collaborative inquiry or emancipatory research) considered as empowering since it is relevant to the participant. Furthermore, some respondents suggested that rather than simply being participants, people with disabilities could act as consultants hence, providing "feedback (empathetic) loops being inserted into the research process so that whole process remains monitored by the subjects of research who provide criticism at all stages" (Kitchin, 2000, p.38). Another possible role would be that of partners, as an alternative to merely providing advice, they would have a "degree of control over the research process which is not tokenistic" (Kitchin, 2000, p.38). One respondent also explained that this research-based partnership (between the disabled and non-disabled researcher) should evolve into an educational opportunity, in which the disabled researcher delivers disability awareness.

You can give the theory and you can give what you

have been taught but you cannot get inside the skin

and know exactly what it feels like…I think it

should be given by disabled people because they

have the insight. They know what it feels like and

the empathy is probably something that can't be

taught (Kitchin, 2000, p. 36).

Whereas, other respondents felt that some disabled researchers, who also claimed to be

"experts" within their field often misrepresented the community. Karen, a respondent

from Kitchin's (2000) study explained that "she could be equally misrepresented by a

disabled person, and that non-disabled researchers could undertake sound research as

long as approached in a 'positive' and appropriate manner" (p. 37). Unfortunately, what

remains unclear is the question: what is deemed as a positive and appropriate in

disability research? Some respondents maintained that understanding the lived experience

of a person with a disability is challenging, especially for a non-disabled researcher. Ken

explained: "You don't know how a disabled person's life works. You can only imagine

how it works. But you actually don't know" (Kitchin, 2000, p. 34).

Researcher, Michael Oliver, voiced his opinion on the matter, stating that

traditional research models tend to be "alienating, disempowers and disenfranchises

disabled research participants by placing their knowledge into the hands of the researcher

to interpret and make recommendations on their behalf; that researchers are compounding

oppression of disabled respondents through exploitation for academic gain" (Kitchin,

2000, p.26). He argues that researchers need to move their research agenda towards strategies that are emancipatory, aiming for positive societal change and empowering. However, to make matters more challenging, in *Doing Disability Research* (1997), Oliver critically reflects on his personal works through the years, to finally make a bold statement: "I came to the inescapable and painful conclusion that the person who had benefited most from my research on disabled people's lives was undoubtedly me". He later goes on to questions his actions: "What did we think we were doing: pursuing knowledge for the benefit of humankind? Informing policy or practice? Helping disabled people? Building networks? Developing our own careers? Having a freebie at someone else's expense? All of those thing probably and more; but also much less" (p. 15).

Alternatively, there is another claim in which disability studies have fully embraced the various contributions made by non-disabled researchers. Two examples of such can be found in Vehmas (2008) and Duckett (1998). In the first study, Nordic relational models were heavily influenced by non-disabled academics, instead of disabled activists. In Duckett's (1998) study that took place in Britain, non-disabled people were unreservedly accepted into a group of disabled people.

As I have clearly illustrated above, the dispute as to whether disability research ought to be performed by a non-disabled researcher remains extensively inconclusive within the research community. However, in drawing from the readings, I was convinced that it was equally important to attempt to answer this ongoing debate during the research journey. Nevertheless, with every justification in favour (as a non-disabled researcher), I found myself faced with numerous opposing forces, and came to the realization that it is truly a complex issue full of loopholes. Yet, like Beazley, Moore and Benzie (1998), I did

strongly believe that I provided the participants with as much control as possible and ascertained that their overall well being placed in the forefront. Also, acknowledging that it was equally important to remain flexible as a researcher and respect their contributions that would set the pace for research agenda and transform the researcher-participant relationship, time and time again Below I provide some insight into the various thoughts that emerged.

First, the qualitative methodology was deliberately selected with accessibility in mind, hence choosing a method very similar to participatory research; the participant(s) were encouraged to take snapshots of their virtual spaces and in a sense reflect on the meaning of the spaces and share both with the researcher. Particularly, it was important that the participant(s) voice(s) be represented in the research. Therefore, as opposed to the researcher paraphrasing the conversations with the participant(s), the reader is provided with portions of text that include direct quotes resulting from conversations that occurred between the researcher and the participant(s) in Virtual Ability Island and its subsequent islands. Furthermore, early on in the research, I sought ways to dissolve the power imbalance (even though I was fully aware that it could not be completely eliminated) between the researcher and participant (between the non disabled member and the disabled member). Examining Herzog's (2005) study on interview locations and social meanings, and Irvine's (2010) methodological suggestions on how to empower participants with disabilities, I considered how their recommendations could be applied in this research situation. One suggestion is to provide the participants with the freedom to determine the location for which an interview could occur. In turn, these choices are

suppose to eliminate any feel of discomfort and elicit a sense of familiarity during the interviewing (Herzog, 2005).

In the current study, I offered the participant(s) very similar opportunities. They selected virtual locations in which they were familiar with, to carry out the conversations. Some of these spaces were very neutral in nature, such as the Mentor Park, however, on numerous occasions I received invitations into very personal spaces such as "virtual homes" and "virtual office spaces". In turn, these very private spaces, which may only be entered by invitation and strongly attached to personal meaning/identity, a sense of comfort and familiarity, created a new shift in the researcher-participant relationship. Whereas the researcher entered the space as a "guest", the dynamics between the researcher and participant shifted, transforming the researcher into the interviewee.

Secondly, I also felt that using Tillman-Healy's method, known, as friendship as a research method would ultimately help to lessen the divide between the non-disabled researcher and the disabled participant, thus building on this interwoven relationship which is mostly built on trust, rapport, flexibility and benevolence while particularly forgetting any present differences, instead focusing on a shared common goal.

Finally, I ultimately believed that my background in special education, combined with an understanding of instructional design theory were two of the fundamental prerequisites that would help foster my goal in understanding design needs for people with disabilities in an online learning space. But, through the practice of reflexivity, I realized that although this research journey was extensively transformative, resulting in additional questions worthy of future examination, I still remain uncertain as to whether I

truly understand their needs. As professor, Len Barton (1996) once said, "intent is no guarantee of outcome" (p. 6).

Thus, the only recommendation I could offer to future researchers interested in undertaking a similar study is to keep a little notebook handy and critically reflect on one's position as a non-disabled researcher within the disabled community. Continue recording thoughts at various stages during the research, to possibly uncover hidden assumptions, values and beliefs. And if necessary, go back to these recordings, and keep on adding your thoughts, using a distinct color coding methods, to help identify any change. Finally, do not be afraid to ask yourself some of the harder questions, such as:

- I am a non-disabled researcher, should I be conducting research in a disabled community?

- Who is the research being conducted for? Who will it benefit?

- Does the community you are researching, foresee the benefits (if any) of the research, you are performing?

- How will I cope with the power imbalances which may be present during the research?

- What is my responsibility as a non-disabled researcher, conducting research in a disabled community?

- Is there a position by which I could be considered a moral ally?

- Can I truly understand a disabled person's experience in a virtual world (or other space)?

- Is the methodology empowering? Does the methodology provide an opportunity for the participant's voice to ring true?

- Does the way I present the research finding, send a message of oppression or domination?

Some of these questions may actually elicit a sense of discomfort or make you feel vulnerable. Record these feelings as well. Over time, you may come to realize an overall change in attitude, a shift in your beliefs that may actually influence the way you choose to approach and present your disability related research.

Virtual Ability, the Fourth Space?

Urban sociologist Ray Oldenburg, coined the term the "*Third Space*" to illustrate a place other than the home (which he considered as the first space) and the workplace environment (which he considered as the second place). According to him, the concept of the third space is characterized as a neutral environment which can be equally considered as an informal, open space of gathering similar to what he described as a coffee shop, pub, post office or agora -places he considered to be the heart of a community's social vitality (Oldenburg, 1999). The third space, as he saw it was a meaningful environment, "having a significant personal effect in delighting and sustaining individuals and an overall societal benefit in creating better relationships between people" (Crick, 2011, p. 2). The third space plays a significant role in both the lives of the individual, but at the same time the overall community.

In Virtual Ability, the distinct features of the third space, appear within the virtual environment, over and over again. However, Virtual Ability has also created a fourth

space. A space that extends beyond the key features of a third space, where members of the community have created an opportunity to have a well-balanced environment to live, work, play, learn, interact and thrive, with very little limitations and all occurring in the same virtual space. Below, I provide an overview of some of the distinct features found in Virtual Ability and how they link back to Oldenburg's theory, the foundation for the creation of a fourth space.

The third space helps unify neighborhoods and can bring different people together in one space, as did Virtual Ability. In conjunction, with the technology and the various design practices, Virtual Ability has unified people from around the world - young and old. In addition, it has provided people with an opportunity to demonstrate their interests in disability related topics. It has helped people with disabilities and non-disabilities alike localize to one space and place. And, it has become a place for people with the same interests, to come together in one environment and learn from each other.

Another descriptive feature of the third space, is that it acts as an accessible entry point, for visitors and newcomers alike who are seeking to gain access to information and quickly become acquainted with the functionality of the space. Virtual Ability, has also fulfilled this function with the creation of the Orientation Pathway, the first point of entry which provides people with "life skills" training necessary to navigate the virtual environment. Furthermore, plenty of mentors throughout the island provide timely assistance and always direct people towards the appropriate information.

The third place helps care for the neighboured or members of the community. According to Oldenburg's(1999) description, he considers these people as social observers in these places. Also known as public characters, "they seem to know

everybody in the neighbourhood; they keep an eye on the local kids and what they are up to; they do favours for the locals; and keep regulars up-to-date on all variety of local matter" (p. 270). In Virtual Ability, a number of members play this role, but Gentle has maintained the role of trust-leader (equivalent to the description of social observer provided by Oldenburg). Along with the assistance of her trust-mentors [names omitted] she informs people of daily events, activities and occurrences at Virtual Ability Island. She knows what is going on, and seems to know every member by name. On multiple occasions, during our interactions she would stop and help out a resident. If I had a question, she would guide me towards the appropriate person or share learning material.

The third place gives the gift of friendships and serves as an important place for people with disabilities. Similar to Virtual Ability, the space has provided opportunities for thriving relationships and experiences that would otherwise not be possible for some people. It has served as an unbiased space in which members can benefit from the company of each other without having any particular attachments or obligations. Simply enjoyment.

Thus, in returning to the original idea of the fourth place, although during the research none of the members of Virtual Ability ever spoke of Oldenburg's theory of a third space, I felt that many key characteristics were represented in the virtual space, but in addition extended beyond Oldenburg's descriptions, to create what I entitle as Virtual Ability, the fourth space. Specifically, the fourth space can be drawn from the various features situated in Oldenburg's description of the third space, however in conjunction with the merger of the technology, the various design practices implemented in the virtual space, in addition to how the members of the community treat the space –not only as a

space of escape, or a space of sociality, but a unified environment in which members from the disability community and beyond can become thriving, responsible, contributing members, in one single place with multiple uses, for work, to play, to learn, to interact and live.

Methodological Challenges

During the course of this research in Virtual Ability Island, numerous issues and topics emerged which is not uncommon, as for qualitative research, is both complex and emergent. Particularly, it was quite challenging to predetermine the direction of the research. Even though I began with a number of guiding questions, I was pushed into multiple directions, in which I was required to reconsider, adjust and at times modify my data collection method. Furthermore, what I thought would bear a resemblance to an auto ethnographic study, emerged as a conglomeration of multiple qualitative research methods. [Nonetheless, as a researcher, I realized that traveling down the path of uncertainty, is not necessarily a bad thing, as it provided an opportunity to open my eyes to new experiences and a new understanding of the virtual world and the people with disabilities who "live in it".] Adding to the complexity, I was required to determine the best possible means to explore new technological grounds, and reflect on numerous methodological considerations and online research challenges which every online researcher cannot simply avoid.

In Taylor (1999), who studies embodiment in online multi-user spaces, she explores a range of issues which may emerge while conducting research in a virtual world, suggesting that the researcher be conscious of various date collection strategies to

help cope with issues related to plural existence, anonymity and disclosure, verifiability and reliability, multimodal gathering techniques and exploring digital materiality.

She emphasizes the importance of these issues, which also came about during my research journey in Virtual Ability Island; however some of these issues were explored merely at the surface, yet do have the potential for future research.

Beginning with plural existence, in which she explains: "the moment you enter a virtual environment you immediately have at least two bodies: a corporeal and a digital one. While some users maintain a consistency within a single avatar or character, many do not" (Taylor, 1999, p. 9). I can vaguely comment on plurality issues in Virtual Ability Island, as it was not a topic which was discussed with the participants during the research journey, however given that I am a member of Virtual Ability Island, I have observed that other members of this community maintain the same avatar identity and name on an ongoing basis. The only hypothesis I can draw from this is that a consistent identity is important, especially for an avatar who is a mentor or volunteer of Virtual Ability Island. Other members often visually familiarize themselves or identify avatar mentors and volunteers of Virtual Ability Island with their personal names. Hence, a consistent identity enhances easy identifiably. Secondly, some Virtual Ability Island members choose to use wheelchairs or guide dogs within the virtual space, elements they use offline but also bring in the online world. Unfortunately here again no in-depth exploration of this topic took place during the research. However, some people with disabilities commented on various occasions that they would like Linden Lab, developers of Second Life, to include a disabled avatar within the main sign up selection page. Thus, what may be implied here is that the separation of two bodies, the corporeal and the

digital which Taylor (1999) discusses, may not apply to some people with disabilities in the virtual world, who may regard both the corporeal and digital as one. This also extends into the research conducted by Williams, Kennedy and Moore (2011) who studied the practices, prevalence and identity formation of role players within the virtual game of EverQuest. In their study they note that identity-play may be a crucial component for some but not all people (p. 176).

Anonymity and disclosure, as Taylor (1999) points out are two other issues which need to be closely examined from both the researcher and participant perspective. She raises the issue by provoking the following though: "it is only by knowing your participants off-line that you know the truth of them online" (p. 7). She also explains the importance of researcher disclosure, providing the participants with access to information regarding the researcher's offline self. Coping with issues of anonymity and disclosure in the current research was fairly straightforward. First, from the researcher's standpoint, the community of Virtual Ability Island had an opportunity to learn about my offline identity, as I frequented Virtual Ability Island on an ongoing basis prior to conducting research within the environment. Some members were curious to know who was behind avatar Nia Cyannis, and I attempted to answer every possible question, especially since my online profile clearly indicated that I was a PhD student and researcher. When it was time to contact the participants for the study, I emailed them with my coordinates (in case additional information was required). As for the selection of participants, I picked those who were fairly transparent both offline and online. However, with that being said, I also provided them with the option, to determine whether they wanted to remain anonymous once the findings were presented.

Another issue raised by Taylor (1999) is verifiability and reliability. She explains that many researchers (including myself) have at some point struggled with the question: "are my online interviewees telling me the truth about even the most basic facts of their offline life?" (p. 7). Given the distance of the interviewer and the interviewee, the lack of face-to-face presence, and the presence of the technology which creates a physical barrier, all these factors seems to create a very interesting notion that an interviewee will provide information in a far from truthful manner. Inline with my view, Taylor's (1999) responds to this question by clearly indicating that this problem is not only limited to an online environment, but could equally present itself as an offline problem as well. "Both mediums will elicit varying responses (as both will conceal)" (p. 8). We cannot assume that more traditional methods of gathering information are reliable. However, with that being said, I believe that the question of verifiability and reliability will remain an ongoing debate. As long as a researcher is both aware and reflects on this issue when conducting online research, I strongly feel this is the first step necessary to partake in due diligence.

Multimodal gathering techniques is essentially important when working with participants who have various disabilities, as this is the best means to facilitate access to research. Taylor (1999) explains, the researcher should "be receptive early on to the medium any particular respondent will be most comfortable with and use methods that will facilitate replies, but thoughtful ones" (p. 9).

In the current research, text chat, voice chat or email communication was used to facilitate the interaction between the researcher and the participants. Full participation was made possible since the participants were already set up within the Second Life

environment with the necessary assistive technology tools to facilitate communication with the researcher. Along the lines of multimodal gathering techniques, it is essentially important to remember that some people with disabilities in online virtual worlds require assistive technology to communicate. The assistive technology may have an impact on the display time from which the participant inputs the text to the time the text appears on the researcher's screen, a topic which was brought to my attention by a number of Virtual Ability members. Thus, it is significantly important to take caution when asking questions or chatting with a participant who is using assistive technology, as it is possible to mistakenly misinterpret the time delay during communication. "Work on learning the conventions and norms of the worlds and software entails" (Taylor, 1999, p. 10).

Finally, as I mentioned early on in my research journey, I explored the research environment for an extensive period of time prior to conducting research in Virtual Ability Island. Furthermore, I took the necessary steps to understand community beliefs, values, language, navigation and terminology and although I could state with confidence that I have surpassed the fairly steep learning curve attached to Second Life, I am still learning! Therefore, to anyone interested in undertaking a similar research journey, I would suggest that it is imperative to learn about the functionality of one's avatar within the environment. Numerous tutorials, videos and books provide introductory courses on how to communicate and control one's avatar. Training paths, such as the one located at Virtual Ability Island can hone one's skills tremendously. And exploring some of the ethical issues attached to conducting research in an online virtual world is equally important. Although some of these ethical issues will create a myriad of questions with no answers, simply reflecting on these complex issues is an essential ingredient in

creating an ethical and responsible online researcher. As Taylor (1999) concludes, "being willing to fully inhabit the spaces we are researching, and adapt ourselves to the new methodological challenges they present, is likely the best(and possibly the only) way we will begin to make sense of life in these fluid landscapes" (p. 11).

Recommendations for Future Teaching Practices in Instructional Design.

Through the years in the Educational Technology program, I received sound training in instructional design practice and acquired a strong theoretical foundation built on the understanding that good design is based on efficiency and effectiveness. Furthermore, the program has equipped me with a level of confidence to enter any environment(corporate or non) and determining the most feasible data collecting techniques to perform a needs assessment, how to write thorough learning objectives, and finally, design and deliver training material in a timely and cost efficient manner.

However, as I progressed through the program, I realized that the systematic thinking which was bestowed upon me, did not completely fit into my definition of an instructional designer, which was and still is aligned with Gibbons et al. (2008) description of the instructional design as a helping profession who focuses on human needs. Thus, as I was trying to come to terms with my instructional design identity, (which, I felt at times clashed with the courses I was taking) I often asked myself, what I would have liked to learn in addition to the strong theoretical foundation that was provided. Keeping in mind that my personal interest lies in special needs education and disabilities -below are some ideas and topics that could be explored during instructional design teaching.

- Examine methods for conducting needs assessment with people from various disability groups.

- What strategies can be implemented to gain a better understanding of the learner? Exploring empathy, emotions and communication skills.

- How can imagination and role playing be advantageous to the instructional designer? How can these techniques be implemented in implemented in the analysis and design phase?

- Examine questions related to the personalization of learning spaces in addition, its benefits and disadvantages.

- Explore topics related to usability and user experience and how it connects to instructional design practice.

- Have students explore the idea that design could go beyond content and have them reflect on the feel and look of the design.

- Have students explore the various e-learning tools, and determine if they are accessible or adaptable.

- Examine the meaning of being an ethical instructional designer and raise questions that explore issues such as: professionalism, dealing with diversity, handling conflicts of interest, intellectual property, and ownership.

Finally,

- Teach future instructional designers about the numerous benefits of becoming reflective practitioners and explore the various techniques which could be used for reflective practice.

Moving Forward

As I was preparing to log off from Virtual Ability Island, I was compelled to know what some of the future plans were for this online community; however in so many ways, I felt that I already had the answer. There is an old Ethiopian proverb that states: "when spider webs unite, they can tie up a lion." The members of Virtual Ability Island have without a doubt tied up the lion.

> The Virtual Ability community will continue to pursue its mission, in Second Life and expanding to other virtual world settings. There will be more public events. (There will be more group-specific events as well.) There will be more relationships with researchers and research projects. We continue to believe in the efficacy of virtual worlds as social and potentially therapeutic environments for people with a wide variety of disabling and chronic health conditions. (Gentle Heron, personal communication, 2013).

Looking Back, To Summarize

I want to understand the world from your point of view. I want to know what you know in the way you know it. I want to understand the meaning of your experience, to walk in your shoes, to feel things as you see them, to explain things as you explain them. Will you become my teacher and help me understand?
– James P. Spradley

First, as I look back on this research journey, (which was officially designed to include Gentle and her friend) I was astonished to see how the power of the community emerged once again. The best way to summarize this is through the words of one Virtual Ability Island resident who comically reminded me "we are a helpful bag of nuts :)".

During this gradual process of development, an unexpected, unexplainable phenomenon occurred. Various residents from Virtual Ability Island, who although were never contacted for this study felt compelled to contribute in various ways to this research project and help me achieve a well-rounded learning experience which altered in many ways, my notion of designing for people with disabilities. Therefore, many shared their stories of being disabled and locating a grounding place at Virtual Ability Island. Some chatted about their experience and meaning of being in a space that provided the freedom, flexibility and fun to "live and be" without a disability -in a virtual world. Others took the time to demonstrate the benefits the space afforded, such as being able to express themselves in multiple ways, accessing information with greater ease and participating in activities that would otherwise not be possible in their offline world. A few residents allowed me to explore their virtual personal spaces/places, that I would otherwise not have access to without their permission, not to mention the excessive number of snapshots they captured to show their definition of comfort, safety, and identity. Finally, most if not all the residents I encountered offered some guidance, resources or simply moral support "checking in to see if you are ok."

Thus, I am compelled to think of how the technology possibly provided an opportunity for some residents with disabilities to freely express their "voices" in a less constraining environment that would otherwise not be made possible in a face-to-face

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research experience. Furthermore, after I re-examined some of my journal entries, I came to recognize that within this virtual space, my role as "the researcher" was far from stable or consistent.

On numerous occasions I was required to shift my position as "the researcher" and simply become vulnerable – deal with the emotions that emerged. I was not prepared for this. The residents provoked questions which placed "the researcher" in the "participant" position role. Thus, I had to demonstrate a vulnerability, which I would otherwise be too fearful to demonstrate in a face-to-face research experience.

Professionally this challenged my boundaries beyond, what I would normally do as a qualitative researcher. Journaling through my experience often left me frightened and confused, as I often asked myself "what could happen next?" However, deciding to proceed in this manner allowed me to accept the idea that "it is okay to shed my role as an "expert", as I expressed in my research journal on various occasions. Sometimes this is a necessary part of the process, to see elements that are so deeply embedded and experience exciting new research opportunities that slowly unfold. Thus, this is something I will consider in my instructional design practice. Furthermore, it helped me became aware of my hidden biases and pre-conceived assumptions that I unknowingly and shamefully developed about people with disabilities in Second Life.

Of course, as I reviewed the first few pages of my journal, my entries demonstrated that the research experience I encountered was far less smooth; descriptions that do not necessarily match the simple transitional steps one would like to experience when doing research. I found myself dwelling in the complexities of my thoughts and

like Scout from To Kill a Mocking Bird (1960), I could only think of the words spoken to

her by her father Atticus as she sat idle on the front porch:

> *"You never really understand a person until you*
>
> *consider things from his point of view-until you*
>
> *climb into his skin and walk around in it." (Lee, p.*
>
> *34).*

I thought,

> *"this alone is the hardest thing to do as an instructional*
> *designer and requires a level of sensitivity that is not always*
> *possible to achieve."*
> *–Extract from personal research journal.*

Thus, as I look back on this research experience and prepare to move forward, I

think of how I approached instructional design and technology integration for people with

disabilities in the past. More often than not, I have used principles and practices from

human-centered design. I have emphasized the importance of user interaction and

functionality and closely examined and questioned their physical, cognitive and social

needs, to later create a design outcome which **I thought was most fitting for their**

needs. Now, through my interactions with the various residents from Virtual Ability

Island, I have come to realize that over the course of the years, my practice stemmed out

of sympathy for people with disabilities and was lacking the full physical and emotional

immersion to shift from a sympathetic designer to one that is empathetic as defined by

Suri (2003) as "our intuitive ability to identify with other people's thoughts and feelings –

their motivations, emotional and mental models, values, priorities, preferences and inner

conflicts" (p.59). Therefore as I see it, being an instructional designer is not simply about analyzing, implementing and evaluation, I like to believe, it goes beyond this…

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APPENDIX A

INVITATION TO PARTICIPATE

Hello Second Life Resident:

You are invited to participate in my research study which will examine your affective experience in Second Life. I am interested in understanding how you feel in the virtual space. Previous studies have already illustrated that emotions and learning are interconnected; however limited research has been conducted with the collaboration of participants who have various disabilities in Second Life. On this virtual journey that we will undertake together, I am hoping to gain valuable information that will help improve my instructional design practice, mainly designing online learning material for the disabled community. With your input, I will self-reflect and re-examine how instructional designers may need to step away from the traditional practices of instructional design to consider designing with a whole person perspective in mind.

This study will be conducted by Antonia Tzemopoulos, PhD Candidate**, Department of Education (Educational Technology)** from Concordia University, Montreal, Quebec, Canada for the purpose of completing her dissertation.

You will be asked to have a conversation (text based) and provide a number of snapshots using the camera feature in Second Life:

The conversation will focus around the following questions:
- Describe this space to me. Show me what you see using the snapshot feature.
- Why do you come to this specific space?
- What makes you return to this space?
- How long do you spend in this space? What makes you stay here for [time]?
- How does this designed space make you feel? Explain.

Additionally, if you would like to show me other spaces in Second Life which you enjoy exploring, you may simply teleport my avatar to these islands and/or send snapshots of these places.

The researcher will be collecting data from December 20th to January 20st, 2013, 3 times a week. The amount of time dedicated to each session will be left up to you, as you will be guiding this "virtual field trip.

If you have questions about this project, you may contact me at [email address omitted] or the my university supervisor, Dr Vivek Venkatesh at [email address omitted].

If you are interested in participant send me an email indicating that you have read the invitation and would be interested in participating. I will send you a consent form.

Please keep a copy of this notecard for future reference.

<div align="center">Thank you</div>

APPENDIX B

CONSENT TO PARTICIPATE IN

"Only if you were in my shoes, you'd see it the way I do!" Reflecting on Professional Identity and Improving Design Practice: An Autoethnographic Phenomenological Study of Second Life Residents with Disabilities.

I understand that I have been asked to participate in a research project being conducted by ANTONIA TZEMOPOULOS of the Department of Education of Concordia University, Montreal Quebec, [email address omitted]
under the supervision of Dr. Vivek Venkatesh, Department of Education of Concordia University, [email address omitted].

A. PURPOSE

I have been informed that the purpose of this study will be to gain my understanding of how I feel in the virtual space. Previous studies have already illustrated that emotions and learning are interconnected; however limited research has been conducted with the collaboration of participants who have various disabilities in Second Life. My input will help the researcher reflect on how to improve online learning conditions for people with disabilities, taking a whole person approach.

B. PROCEDURES

I understand that this study will be conducted on December 20, 2012 to January 20, 2013, 3 times a week. The amount of time dedicated to each session will be left up to my discretion.

I understand that I will be asked to have a conversation (text based) with the researcher and provide the researcher with screenshots using the camera tool.
The conversation will focus around the following questions:
- Describe this space to me. Show me what you see using the snapshot feature.
- Why do you come to this specific space?
- How long do you spend in this space? What makes you stay here for [time]?
- How does this designed space make you feel? Explain.

I understand that all conversations will be copied and pasted in a word processing program and saved on an encrypted USB key, for future analysis.

I understand that all screenshots will be saved on an encrypted USB key.

I understand that data collected will be used in the researcher's dissertation and the researcher will inform me of additional uses in the future.

I understand that the data will be stored for 5 years and later physically destroyed.

C. RISKS AND BENEFITS

I understand that the nature of the study has no potential risks.

D. CONDITIONS OF PARTICIPATIONS

I understand that I am free to withdraw my consent and discontinue my participation at any time by teleporting to another location or disconnecting from Second Life.

I understand that if I choose to withdraw my consent and discontinue my participation I will need to notify the researcher in writing via email or text-chat.

I understand that if for any technical reasons I get disconnected from Second Life and do want to continue participating, I need to send an IM to the researcher indicating that I want to continue in the project.

I understand that I will be asked whether I want my real name, avatar name or pseudonym. used in the write up of the dissertation.

I understand that I have to be a least 18 years of age or older to participate in this study.

I confirm that I am at least 18 years of age or older to participate in this study.

I understand that the data collected (snapshots and text based messages) for this study will be published in a dissertation.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

AVATAR NAME OR REAL NAME:_____

DATE:_____

If you have questions about this project, you may contact the Principal Investigator, Antonia Tzemopoulos at [email address omitted].

If you have any questions about your rights as a participant in this study or any other related concerns please contact the Concordia University Office of Research at 514-848-2424 (x. 4888) or via email at ~~oor@alcor.concordia.ca~~. REB File #_____

Please print a copy of this consent form for your records.

<div align="center">Thank You</div>