

A CASE STUDY OF THE INTERNATIONALIZATION OF A MIDWESTERN  
UNIVERSITY ENGLISH COMPOSITION COURSE OCCURRING  
IN A 3-D VIRTUAL ENVIRONMENT

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ABSTRACT

Internationalization, a gradual process that includes a number of strategies, has become a growing movement at American universities in an effort to create globally competent graduates who are prepared to be responsible world citizens. Many of these strategies are implemented by faculty members who internationalize their courses by providing opportunities to learn from people from other countries. Internationalization strategies can be combined with technologies such as 3-D virtual environments to create unique learning opportunities. The purpose of this study was to understand the nature of an international experience in an online 3-D virtual environment, to explore the possible development of global competence, and to describe the influence of the virtual environment and course design on the experience. The research question for this study was, “What is the nature of the interactions that will take place between American university students and international university students in a 3-D virtual environment?” The progressive research questions that were perceived to influence the nature of the

experience were, “What will the analysis of student documents, student interviews, and a pre- and post-survey suggest about the development of global competence for the American university students?” and, “How will the students experience the course design and the use of the 3-D virtual environment?” Analysis of the data sources suggested that the nature of the six interactions shared common patterns of task-focused activity, overcoming technological issues, and some indicators of cultural awareness. These findings add to the limited body of knowledge about the use of 3-D virtual environments as internationalization strategies for American universities.

## APPROVAL PAGE

The faculty members listed below have examined a dissertation titled, “A Case Study of the Internationalization of a Midwestern University English Composition Course Occurring in a 3-D Virtual Environment,” presented by Naomi Jayne Baldwin, candidate for the Doctor of Philosophy degree, and certify that in their opinion it is worthy of acceptance.

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## CHAPTER 1

### INTRODUCTION

#### **Background of the Study**

The internationalization of American higher education is a growing movement to help university graduates develop global competence skills in order to be aware of the world in which they live, to take an active role in it as responsible citizens, and to contribute to a globalized workforce (Altbach & Knight, 2007; Hudzik, 2011; International Association of Universities, 2012; de Wit, 2013). Hunter, White, and Godbey (2006) define global competence as, "...having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this gained knowledge to interact, communicate and work effectively outside one's environment" (p. 277). Universities have identified a need to create global competence in their graduates based on reports from organizations, research from scholars, and demands from the workforce (American Council on Education, 2008; Association of Public and Land-grant Universities, 2004; Green, Luu, & Burris, 2008). Other factors to consider for the effectiveness of internationalization are institutional commitment, curriculum development, and the contributions of faculty members (Deardorff, 2006; Stone, 2006).

#### *Personal Rationale*

My interest in international education began shortly after I graduated with my Bachelor's degree. During my undergraduate years, I had the desire to travel abroad and make friends from other countries. At that time, the idea of traveling abroad seemed

daunting. I had rarely been exposed to people from other countries, and I was not ready to venture outside my comfort zone.

My opportunity came when I was working as a web designer for a Midwestern university. The director of the International Studies Office asked me to create a website for one of the international programs. As part of the agreement, his department funded my trip to The Netherlands so that I could present a tutorial of the site to an international board of directors. For the first time, I flew outside of the United States and attended an international meeting in Maastricht, The Netherlands, where I presented the website to several international faculty members. While getting to know new people and exploring a fascinating city, I became interested in learning about projects in international education.

With my background in web design, I became interested in a project by a professor who used Internet technologies to introduce his American students to international partners. This association resulted in an internship during which I co-taught a class under his supervision. Through that experience, I saw the potential of using Internet technologies to make international opportunities more accessible to students who had limited access to people from other countries.

My work with international education continued when I transferred to a position in a university's international center. While working there for over six years, I gained a broader perspective on international education, I formed friendships with many people from different countries, I became a leader of a professional organization, and I traveled to several different countries. Finding ways to contribute to international education became even more important to me, and to prepare for that, I began a doctorate program.

After I completed the coursework for my doctorate, I started planning to live abroad because I wanted to expand my international experience. Now as I continue my research with internationalization, I live in South Korea as an instructor of English for university students. From my experiences, I have learned how important it is for a person to have opportunities to interact with people from different cultures. My international interactions and friendships have led to increased personal growth, stronger self-confidence, and better understanding of differences.

My own experience demonstrates the vital role that faculty members play in helping students find opportunities to reach out to other cultures. This study investigated one way that a faculty member at a Midwestern university internationalized his course using an online 3-D virtual environment. Instructors at other universities have used online technologies to facilitate online collaborative learning between their students and students in other countries (Belz, 2005; Burke, Chaney, & Kirsten, 2010; Jauregi & Bañados, 2008; Kan, 2011; Kemppainen, Kim-Goodwin, Mechling, Kanenatsu, & Kikuchi, 2012; Leask, 2004; Lu, Yang, Peng, & Chou, 2004; Rautenbach & Black-Hughes, 2012; Sanders, 2012; Vogt, 2006; Zhu, Gareis, O'Keefe-Bazzoni, & Rolland, 2005). Online technologies include 3-D virtual environments such as Second Life, which is used by people from all over the world. However, there is very little research describing an international experience as it relates to course design and a 3-D virtual environment. This study is unique because it examined the nature of the students' experiences and the influence of the course design and the technology on their experiences. By looking at the

project in the context of the course design and technology, there was a more complete understanding of internationalization strategies at the faculty level.

### **Problem Statement**

Internationalization is a comprehensive process with the goal of producing responsible world citizens with skills in global competence. Hunter et al. (2006) define global competence as, "...having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this gained knowledge to interact, communicate and work effectively outside one's environment" (p. 277). Global competence skills can be grouped into categories of knowledge, attitudes, and participation. Examples of knowledge skills might include geography, languages, world history, and current events. An attitude skill can be intercultural sensitivity, openness to differences, or flexibility with the unexpected. Participation skills involve activities with others from different countries or efforts to exchange perspectives and cultures (Hunter et al., 2006).

These skills are required for university graduates because our daily lives are inextricably connected to others in different countries, whether or not people are aware of it. Knight (2004) defines globalization as the movement of people, concepts, values, technology, and markets across borders, and she specifies that it is only part of the environment in which internationalization takes place. In a world that shares problems, it is imperative that global citizens have an awareness of how their choices impact others and how to communicate with others while respecting differences. To develop global competence skills, universities use internationalization strategies such as development of

exchange programs, recruitment of international faculty, staff, and students, curriculum development, and faculty involvement (Deardorff, 2006).

This is an important responsibility for American universities to undertake because American students fall short in global competence skills compared to students in other parts of the world. For example, according to the National Geographic-Roper survey (2006), a high proportion of American students lack basic skills in geography. In addition, American university students show relatively low participation in international activities such as study abroad programs and foreign language studies (Institute of International Education, 2013).

The low participation in international activities is not due to a lack of student interest. The American Council on Education (ACE) reported that half of the students they surveyed desired a study abroad experience (ACE, 2008). They also reported that students are interested in other opportunities besides studying abroad such as interacting with international students, taking courses on international issues, and learning foreign languages. However, they found that while many American university students hoped to participate in a study abroad experience (50%), very few (5%) actually studied abroad (ACE, 2008). In addition, Green et al. (2008) concluded that providing an international experience was a low priority for more than half of American universities. According to their survey, only 23% of their respondents had an institution-wide plan for internationalization, and it was possible for students to graduate without any exposure to international or global issues (Green et al., 2008). The Association of Public Land-grant Universities (APLU) (2004) cites low enrollment in study abroad programs and foreign

language programs as indicators that graduates in the United States are not receiving enough exposure to an international education. Even more recently, the International Association of Universities (IAU) remarked on the trend of higher education institutions internationalizing with motivations for prestige and higher rankings. This trend is in contrast to goals of providing quality education and increased diversity in research perspectives (IAU, 2012). In a criticism of many institutional strategies, de Wit (2013) claims that they inappropriately assess the success of efforts based on numbers rather than the quality of the outcomes. He notes that many internationalization efforts are concentrated on satisfying government and administrative stakeholders while leaving the development of programs, faculty, staff and students on the periphery (de Wit, 2013). American universities need to continue to create opportunities for students and develop strategies that will help enhance global competence skills in their graduates, faculty, and staff.

As described in the call to leadership report by the Association of Public Land-grant Universities, the consequences of a nation with citizens who lack global competence skills will be severe (APLU, 2004). The success of any nation depends on its abilities to work with others. There are a number of global issues that must be addressed collaboratively including economics, conservation of natural resources, limited energy supplies, preserving the environment, and protecting human rights. In addition, global competence skills can help decrease cultural gaps and create better understanding to promote peace (APLU, 2004). The International Association of Universities expands on the need for conscientious internationalization efforts that keep in mind the protection of

diversity, the engagement in regional and global issues, the upholding of ethical research and recruitment practices, and the mitigation of brain drain (IAU, 2012).

Faculty members can make an important contribution to developing global competence skills because they have regular interactions with students and can provide challenges to attitudes in addition to frequent exposure to international issues and people (Deardorff, 2006; Stone, 2006). The Institute of International Education (IIE) confirms that faculty involvement is an important yet overlooked component of internationalization (IIE, 2009). In another report from IAU, the importance of curriculum development and extra-curricular activities on campus is emphasized in order to keep non-mobile students included (IAU, 2012). Despite the acknowledgement of the importance of these components, many reports on internationalization do not consider faculty involvement (Deardorff, 2006; Leask, 2004). This omission results in an inaccurate representation of an institution's efforts to produce globally competent graduates. For this reason, the intent of this study was to provide an in-depth description of students' online international experiences during a project designed by a faculty member. The descriptions from this study can inform other research on the possibilities and considerations of using similar internationalization strategies.

### *Pilot Study*

While faculty involvement and curriculum development are important components of internationalization, sometimes course design issues become barriers to the introduction of international experiences. In a previous study, I examined the contents of blog posts from composition students who took part in an online international

collaboration. American Midwestern university students in an English composition class corresponded with university students in Sweden, and the American students used the correspondence as a resource for an assignment. Students whose international classmates seemed actively engaged in the project indicated that the experience was positive, and they reported learning about the student and his or her culture. However, for students who did not receive regular correspondence from their partner, the experience was not reported as beneficial, and in fact, it might have contributed to negative attitudes about their partners (Russell, Baldwin, & Jett, 2006).

I continued that study and collected additional data from another class in which students used a 3-D virtual environment to meet with an international partner. Their final project for the class was to write a paper about the experience. As part of that pilot study, I collected student attitudes about using the Second Life environment and about their international collaboration. Although attitudes toward using Second Life remained about the same before and after the exchange, I found differing attitudes about the interaction itself. Some students reported that the exchange with their international partners was positive while others were indifferent or strongly disliked the experience.

The observations I made about the attitudes of students toward international experiences are similar to the findings of other studies. As discussed in more detail in the next chapter, a study by Lu et al. (2004) reported that the experience had a negative impact on the attitudes of some of the American and Taiwanese students who collaborated online. Belz (2005) found that the questioning techniques of students affected relationship building between students from the United States and Germany and

discussed the risk that stereotypes might be reinforced or created. In a Spanish language course that used videoconferencing between Dutch students and students in Chile, researchers found that 40% of the Dutch students developed negative attitudes toward their Chilean partners because of low response and missed meetings (Jauregi & Bañados, 2008). These studies suggest the importance of thoughtful course design to avoid the development of negative attitudes and to provide a quality online international experience to students.

Other studies related to internationalization have focused on affective changes that students undergo after a study abroad experience (Anderson, Lawton, Rexeisen, & Hubbard, 2006; Dwyer, 2004; Kitsantas, 2004; Kitsantas & Meyers, 2001; Mahon & Cushner, 2002; Malewski & Phillion, 2009; Marx & Moss, 2011; Williams, 2006). Studies have assessed the development of intercultural sensitivity, which is an attitude skill related to global competence, but results from these studies vary. Dwyer (2004) found that the benefits of study abroad were in proportion to the duration of the participant's stay. Kitsantas and Meyers (2001) found that students who studied abroad in a short-term program returned with enhanced cross-cultural awareness. Another study by Anderson et al. found that a short-term, faculty-led study abroad program had a positive impact on students' cross-cultural sensitivity.

As a gradual process, outcomes may not become apparent immediately, and they are not equally developed for all participants. Kitsantas (2004) found that goal-setting behavior was a factor in predicting development of cross-cultural awareness for students who participated in an international summer program. Williams (2006) found that cross-

cultural communication skills for some study abroad students were not as strongly developed as students who had not studied abroad but who had exposure to cultural interactions at home. The studies discussed above and others suggest differing outcomes from study abroad experiences (Gemignani, 2009). In addition, there are other ways for students to experience culture besides studying abroad. For this reason, I wanted to examine the student interactions in an online 3-D virtual world for possible indicators of global competence.

In addition to the importance of a solid course design to facilitate international interactions, the use of 3-D virtual environments has not been thoroughly studied from the perspective of its use as an internationalization tool. However, other online technologies such as discussion boards, emails, chat programs, and videoconference software have been used to provide students with opportunities for international interaction (Belz, 2005; Kan, 2011; Kemppainen et al., 2012; Leask, 2004; Lu et al., 2004; Rautenbach & Black-Hughes, 2012; Sanders, 2012; Vogt, 2006; Zhu et al., 2005). It is not yet known how the student experience might be influenced by the course design or the technology. Due to the descriptive nature of this study, I chose to develop my research as a qualitative study. I used student documents, interviews, and pre- and post-surveys to help me answer my research questions about this experience.

### **Purpose of Study**

The purpose of this study was to understand the nature of an international experience in an online 3-D virtual environment and to investigate how the course design and technology might have influenced the experience. Second Life has been used by

educators, but research on using it as a tool for internationalization is limited. This study was designed to contribute to the body of knowledge about the use of 3-D virtual environments as a faculty-initiated internationalization strategy.

This constructivist case study examined the experience of the students, indicators of development of global competence, and how the course design and technology influenced the experiences. A case study is a strategy used to focus on and understand a unique situation and to provide a thorough description of its nature and context (Eisenhardt, 1987; Gall, Gall, & Borg, 2007). In the six cases of this study, the students brought different backgrounds, experiences, attitudes, and expectations to the project. To help describe the individual and unique realities of the students, I used a constructivist orientation. According to Patton (2002), the foundational questions of a constructivist orientation are, “How have the people in this setting constructed reality? What are their reported perceptions, ‘truths,’ explanations, beliefs, and world-views? What are the consequences of their constructions for their behaviors and for those with whom they interact?” (p. 96).

### **Research Questions**

The research question for this study was: What is the nature of the interactions that will take place between American university students and international university students in a 3-D virtual environment? The progressive research questions that were perceived to influence the nature of the experience were:

1. What will the analysis of student documents, student interviews, and a pre-and post-survey suggest about the development of global competence for the American university students?
2. How will the students experience the course design and the use of the 3-D virtual environment?

To answer these research questions, I collected documents, interviews, and survey data from freshman and sophomore students enrolled in an English composition course at a regional American Midwestern university. During the course, they were assigned to meet with university students in Sweden within the 3-D virtual environment, Second Life. After collecting data from the students, the sources were analyzed, and an Activity Theory model was used to explore conflicts that occurred as they worked toward interacting with their international partners. Similar courses in the future may be able to use the results of this study to enhance interactions. Additionally, this study adds insight to the limited body of knowledge about the use of 3-D virtual environments for internationalization and the potential in this field for other emerging technologies.

### **Theoretical Framework**

The previous research and theoretical foundations that I have used to inform my study fall into the following categories: Internationalization and global competence, online international interactions and 3-D virtual environments, and socio-cultural learning and Activity Theory.

### *Internationalization and Global Competence*

Internationalization is a term that is used to refer to the comprehensive process of preparing graduates of universities and colleges to live in a globalized society and to be aware of their relationship to others in the world (Hudzik, 2011; IAU, 2012; de Wit, 2013). Its outcomes have been referred to as global competence, intercultural competency, cross-cultural competency, and intercultural sensitivity (Deardorff, 2006; Deardorff & Hunter, 2006; Greenholz, 2000; Hunter et al., 2006; Olson & Kroeger, 2001). Hunter et al. (2006) presented a model of global competence based on the consideration of others' definitions and a study of experts in the field, and their model includes knowledge skills, attitude skills, and participation (Deardorff and Hunter, 2006; Hunter et al., 2006).

For the purposes of this study, I used global competence as defined by Hunter et al. (2006) to define a set of skills that develop as a result of an institution's internationalization efforts. This skill set has three main components: knowledge, attitude, and participation. An example of an attitude might be maintaining openness to others who are different. Knowledge skills could include learning languages, facts about others' cultures, geography, or historical events. Participation could be engaging in discussions with others from different cultures to share perspectives. In addition to the development of this set of skills, the researchers also stated that there must be a component of identification of one's own culture and a reflection of their currently held beliefs (Hunter et al., 2006).

One area of internationalization that can result in the development of global competence skills is participation in study abroad programs. Studies that measured outcomes of studying abroad report that it had an influence on global competence skills for American participants (Anderson et al., 2006; Kitsantas, 2004; Kitsantas & Meyers, 2001; Mahon & Cushner, 2002; Malewski & Phillion, 2009; Williams, 2006). However, studying abroad is only one strategy for internationalization and only a small percentage of university students participate in a study abroad program (IIE, 2013).

Even though only a small percentage of students in the United States study abroad, campuses have traditionally reported the movement of students as an indication of internationalization (Deardorff, 2006; Leask, 2004). Reports on the movement of students include outgoing students in exchange programs and incoming international students. While student exchange programs and international students are important to internationalization, reporting only numbers of students provides a limited image of a university's internationalization efforts. Experience of faculty, institutional commitment, and curriculum development are other factors that influence the effectiveness of internationalization (Deardorff, 2006; Stone, 2006).

The Institute of International Education (2009) emphasized the importance of the faculty role in internationalization but also stated that it is often overlooked. Faculty members impact students on a daily basis through teaching and mentorship. In addition, international experiences of faculty members are often reflected in their research and in establishing partnerships with international institutions. Finally, they become models for others to emulate by sharing their experiences with the community. Because instructors

can have such a deep influence on their students and institutions, it is important to continue to look at ways that faculty members are currently internationalizing their courses.

### *Online International Interactions and 3-D Virtual Environments*

Online technologies can empower faculty members to internationalize their courses. Tools that have been used to connect American students to different people and ideas include blogs, discussion boards, email messages, chat programs, and videoconference software. Easy access to online learning environments can help make a course available to students from different nations. Many universities in the United States already have the facilities in place to provide online international experiences, creating an accessible experience to students who do not study abroad. Live communication has been made even easier by messaging and videoconferencing software. Previous studies that investigated using online technologies for international collaboration have described the overall success of the projects and focused on specific aspects of the instructional design (Belz, 2005; Benbunan-Fich & Stoeber, 2003; Burke et al., 2010; Held, 2010; Kan, 2011; Leask, 2004; Lu et al., 2004; Rautenbach & Black-Hughes, 2012; Sanders, 2012; Vogt, 2006; Zhu et al., 2005). This study sought a deeper description of the nature of the student experiences, their development of global competence, and the influence of the course design and technology on the experience.

Of the different online technologies, this study focused on interactions in a 3-D virtual environment called Second Life. Created by Linden Labs, Second Life is a 3-D virtual environment that became available in 2003. The environment is referred to as a

“world” and the users are referred to as “residents” (Linden Labs, 2014). The residents create the world, which leaves flexibility in how the world is used, the nature of the interactions that take place among the residents, and the information that is exchanged in-world. Interaction in Second Life is in real-time, and voice conversations can be held with others in the environment by using microphones. After logging in to Second Life, a person navigates the virtual world using an avatar – a 3-D image that they can customize to represent themselves.

Because of its flexibility and the rich sensory environment, Second Life has attracted the attention of many educators and universities. Berge (2008) writes about the potential applications for virtual worlds such as Second Life in education and training. Attractive qualities include the ability to interact with others and the ability to tailor the world to the needs of students (Berge, 2008). Others confirm its strengths in helping students explore new concepts, offering a social learning environment, and enhancing the quality of the learning experience (Coffman & Klinger, 2007; Cooke-Plagwitz, 2008; Gil Ortega & Romans-Roca, 2010; Hsu, 2012; Jarmon, Traphagan, Mayrath, & Trivedi, 2009; Prude, 2013). However, there is limited research on its use as a tool for internationalizing the curriculum. It is not yet known how the relationship between course design and interactions with international students in Second Life influence the development of global competence of American students.

#### *Socio-Cultural Learning and Activity Theory*

Virtual worlds are especially suitable for socio-cultural learning. Second Life gives students access to people from all over the world, their languages, and their

cultures. Antonijevic (2008) found that Second Life creates a more natural communication environment because interactions can be characterized by non-verbal behavior that simulate and are interpreted as face-to-face non-verbal cues. Social learning takes place intentionally as students seek out others to learn new things. It also takes place unintentionally as their interactions with others shape their worldview. According to socio-cultural learning theory, experiences combined with social interactions enhance student learning outcomes compared to those with limited or no social interactions (Vygotsky, 1978). Socio-cultural learning theories propose that knowledge development is based on the unique cultural backgrounds that learners bring to the situation. Virtual environments such as Second Life are powerful tools for learning because they provide opportunities and interactions with others that would be impossible or impractical to do in real life.

Activity Theory is a system based on socio-cultural learning theories that can help researchers understand the complexities of human goal-seeking behavior (Bruner, 1990; Cole and Engeström, 1993; Russell & Schneiderheinze, 2005; Vygotsky, 1978; Wertsch, 1998). Jonassen (2000) supports using Activity Theory to understand learning environments because it provides a perspective of learning systems as ongoing processes and can help researchers understand interactions as learners encounter conflicts within the learning environment. The Activity Theory model is a frame that helps illustrate the goal-seeking activity of a learner as the interactions among six different nodes. Cole and Engeström (1993) define these nodes as the Subject, Object, Mediating Artifact, Outcome, Rules, Community, and Division of Labor. During the process of seeking a

goal, the learner encounters problems between different nodes, which they must resolve in order to continue. Using this model to view different conflicts and the way that they are resolved by the student can indicate the learning process that occurs and inform the design of future projects.

### **Overview of Methodology**

The goal of this research was to describe the nature of an international interaction in the 3-D virtual world, Second Life. I approached this study with a unique set of contexts including global competence, course design, and a 3-D virtual environment. My research questions, as mentioned above, were designed to investigate the nature of the experience for the students in the United States, their development of global competence, and their experience as it related to the course design and use of the 3-D virtual environment. I used a constructivist case study design to examine an English composition course that used Second Life to provide an opportunity for students to complete an assignment with international partners. The course took place during the Fall 2010 and Spring 2011 semesters at a mid-sized Midwestern university. A pre- and post-survey collected information about previous international experience and ideas related to global competence. Blog posts about the student interactions and the papers that the students wrote for the assignment were collected and analyzed for themes that would help describe their experiences. At the end of the course, the students were interviewed. Additional interviews with the professors who designed the project helped describe the course designs. Finally, I used Activity Theory as a model to illustrate the student's activity as

he or she encountered and resolved problems as they sought interactions with their international partners.

### **Summary**

Internationalization is an important undertaking for American universities because graduates need global competence skills to become responsible world citizens (ACE, 2008; APLU, 2004; IIE, 2008; Knight, 2004). However, sometimes the motivations for institutions to internationalize are misguided by pressure to earn profit or gain prestige (Green et al., 2008; IAU, 2012; de Wit, 2013). In addition, assessment of the outcomes of internationalization strategies often leave out faculty efforts and curriculum development (Deardorff, 2006; IIE, 2009; Leask, 2004). Online international interactions via text, voice, and video are just some of the examples of how faculty are bringing their students into contact with others from around the world (Kan, 2011; Kemppainen et al., 2012; Rautenbach & Black-Hughes, 2012; Sanders, 2012; Vogt, 2006). However, studies have shown that international activities must be carefully planned for optimal student benefit (Belz, 2005; Jauregi & Bañados, 2008; Lu et al., 2004; Russell et al., 2006; Zhu et al., 2005). Another online technology is Second Life, a 3-D virtual world, but there is a lack of information about the outcomes of its use as an internationalization tool. This qualitative study's goal was to investigate the nature of the experiences of students in the United States who used Second Life to interact with students in Sweden. A constructivist case study design was used to examine how the students experienced the interactions, indicators of their development of global competence, and how the technology and course design shaped the students' outcomes.

In this chapter, I presented the background of my research and explained its importance through the problem statement and an explanation of the purpose of my research. I also proposed my research questions, gave a theoretical framework from which I have approached my inquiry, and provided an overview of my methodology. In the next chapter, I have presented a review of the literature by discussing the work of other scholars and the results of previous research that I used to inform this study.

## CHAPTER 2

### LITERATURE REVIEW

The purpose of this study was to explore the experience of Midwestern university students during an online international interaction in the 3-D virtual environment, Second Life. This constructivist case study investigated the nature of the international experience for the students in the United States, their development of global competence, and how the experience was influenced by the technology and course design.

This inquiry provided a unique opportunity to see how 3-D virtual environments might enhance international education opportunities for university students. The theoretical framework for this study is based on three general areas: internationalization and global competence, online international interactions and 3-D virtual environments, and socio-cultural learning and Activity Theory. This study hopes to contribute to the gaps in the knowledge base related to faculty-led internationalization efforts and online international interactions that use 3-D virtual environments.

#### **Internationalization and Global Competence**

##### *Background and Terminology*

Internationalization is a process that helps university students develop skills in global competence. Policy-making, study abroad programs, international students, international faculty members, curriculum development, and faculty involvement are all parts of this process. The purpose of internationalization is to promote development opportunities for faculty and staff and to create graduates who can live and work

responsibly. There are many components of internationalization, and it is useful to explore what organizations and scholars are defining as internationalization efforts.

Hudzik (2011) uses the term, “comprehensive internationalization” to refer to an institution-wide infusion of practices. His definition begins by stating that comprehensive internationalization is, “...a commitment, confirmed through action, to infuse international and comparative perspectives throughout the teaching, research, and service missions of higher education” (p. 10). Comprehensive internationalization would mean bringing international education from the periphery of a university education to its core. With this approach, an international education would not be limited to a series of experiences or viewed as supplemental. Presenting other perspectives, considering cultural contexts, and self-examination of currently held beliefs and values would become second nature to both educators and students.

NAFSA: Association of International Educators (NAFSA), with members from over 150 countries, is a leading professional organization based in North America that promotes international education. For the past six years, NAFSA has awarded its Senator Paul Simon Award to highlight exemplary internationalization efforts (Steiner, 2013).

NAFSA defines internationalization as,

International linkages through connections with universities; study abroad by US students; teaching and working abroad, study by international students and scholars in the United States, faculty exchanges, curricular initiatives, co-curricular activities, international visitors foreign language training,

corporate/university partnerships, campus/community interaction, and international development projects. (NAFSA, 2009., 1<sup>st</sup> paragraph)

NAFSA consolidated criteria of internationalization from three different sources including its own, the American Council on Education, and from a model developed by Knight and de Wit (NAFSA, 2009). NAFSA's own nine criteria include: administrative support and infrastructure, community service and outreach, curriculum initiatives, faculty commitment, institutional commitment, research and faculty exchange, student learning and participation, support for education abroad, and support for international students and scholars. ACE's criteria include: commitment from the institution in the form of mission statements, a supportive campus culture, development of curriculum and co-curriculum, engagement with institutions in other countries, an environment conducive to internationalization strategies, availability of programs for study and internships abroad, and connections among activities. Finally, Knight and de Wit's criteria include availability of academic programs, the export of knowledge, availability of extracurricular activities, the nurturing of external relations, governance, HR development, operations, research and scholarly collaborative services, technical assistance, and transnational education (NAFSA, 2009).

Knight (2004) used a flexible definition of internationalization, "...at the national, sector, and institutional levels as the process of integrating an international, intercultural, or global dimension into the purpose, functions, or delivery of postsecondary education" (p. 1). Of the many strategies related to internationalization, the focus of this research was on faculty-led initiatives.

Globalization, the increasing interconnectedness among countries based on economic interdependency, is the primary force that guides the internationalization of higher education (Altbach & Knight, 2007). To keep pace with the requirements of globalization, people need skills and attitudes of cultural self-awareness, openness, and respect for differences (Deardorff & Hunter, 2006). Companies are demanding global competence from their employees, so universities feel increasing pressure to provide these skills (Deardorff, 2006; Deardorff & Hunter, 2006; Eggspuehler, 2005; Knight, 2004).

Internationalization is often confused with globalization, but these terms refer to different things. While globalization refers to economic trends as countries become more interdependent, internationalization, in the context of the education sector, is a movement through policy and practice to integrate international experiences and cultural learning into educational practices (Altbach & Knight, 2007). For the purposes of this study, I will use internationalization as it is treated in the context of higher education. Knight (2004) defines globalization as the movement of people, concepts, values, technology, and markets across borders and specifies that it is part of the environment in which internationalization takes place. Knight (2004) further illustrates this distinction, “Internationalization is changing the world of higher education, and globalization is changing the world of internationalization” (p. 5). This explanation further highlights the cyclical relationship of the two concepts.

Another term that may be confused with internationalization is multicultural education. Internationalization is related to, but distinct from multicultural education,

which has more influence in teacher education and calls attention to issues of social justice. Even though they are distinct concepts, internationalization and multicultural education have similar goals of bringing new ideas to students, developing openness, and nurturing the ability to work with different people (Olson, Evans, & Shoenberg, 2007). With pressures on teacher education programs to not only prepare teachers for culturally responsive teaching but also address issues of globalization, researchers have shown how the two areas are aligned (Mahon & Cushner, 2002; Malewski & Phillion, 2009; Malewski, Sharma, & Phillion, 2012; Marx & Moss, 2011; Schlein, 2009; 2010; 2014). A deeper discussion of how these two areas complement each other is discussed in a later sub-section of this literature review.

The outcomes of internationalization have been referred to as global competence, intercultural competency, cross-cultural competency, and intercultural sensitivity (Deardorff, 2006; Deardorff & Hunter, 2006; Greenholz, 2000; Hunter et al., 2006; Olson & Kroeger, 2001). A study by Hunter (2004) used existing concepts and input from experts in the field to define global competence, which he developed into a model. His model and definition explain three types of skill building - attitude, knowledge, and participation (Hunter et al., 2006). Skills in attitude are at the core of the model, with one of the most important attitudes being openness toward others' differences. Hunter states that the awareness and challenge of one's own culture is a crucial part of this type of skill (Hunter et al., 2006). Knowledge skills such as languages, geography, current events, and history are gradually acquired, as are participation skills, which involve having experiences with different cultures (Deardorff and Hunter, 2006; Hunter et al., 2006). I

have adopted their comprehensive explanation and definition of global competence for my own research purposes.

To summarize, for the purposes of this study, internationalization refers to various strategies used by universities that have the goal of developing global competence skills for graduates. In this study, I focused on a strategy led by a faculty member. Global competence refers to the desired outcome of collective internationalization efforts including skills in knowledge, attitudes, and participation, which is based on a model proposed by Hunter et al. (2006).

#### *Alignment of Multiculturalism and Internationalization*

Mahoney and Schamber (2004) emphasize that effective internationalization of the curriculum should include activities that require reflection and knowledge construction. In descriptions of multicultural education, Banks (2004) includes knowledge construction as one of the major components that must be present for development to occur. During knowledge construction, students would be able to understand, explore, and make their own decisions with different frames of reference and cultural relevancy. Banks's idea of knowledge construction for multiculturalism overlaps with the development of attitudes described by Deardorff (2006), Deardorff and Hunter (2006), and Hunter et al. (2006). This would include shifts in attitudes, the use of other cultural frames of reference, cultural self-awareness, and knowledge of culturally appropriate behavior (Deardorff & Hunter, 2006).

The teacher education field is one area that is bringing the concepts of internationalization and multicultural education into alignment. A large proportion of

people who enter the teaching profession in the United States are from a white middle-class culture, yet classroom diversity continues to grow (Mahon & Cushner, 2002; Marx & Moss, 2011; Sharma, Phillion, & Malewski, 2011). This means that many new teachers are being challenged to meet the needs of students with backgrounds very different from their own. In addition, many of these teachers have had very limited exposure to people of color and their cultures. They might never have challenged their beliefs and attitudes or examined social, historical, or political issues that have influenced the inequality and lack of opportunities for some groups of people. Similarly, new teachers have very little exposure to international experiences. For example, an analysis of teacher education programs in Virginia, Florida, and Minnesota found very little overall international-related content in the transcripts of graduates (Heyl & McCarthy, 2005). They found that among the three programs, 76% of the graduates had not taken any foreign language courses at the college level. In addition, a low percentage of the graduates had studied abroad: 1% in Virginia, 2.9% in Florida, and 6.5% in Minnesota had completed some kind of international study experience. Upon analysis of the graduates' coursework, 26% of the coursework in Virginia, 11% of the coursework in Florida, and 6.5% of the coursework in Minnesota was related to international content (Heyl & McCarthy, 2005). Yet research on the internationalization of teacher education programs has highlighted ways in which international experiences can address the preparation of pre-service teachers to deal with diverse student bodies in their home countries (Mahon & Cushner, 2002; Mahon, 2007; Malewski & Phillion, 2009; Phillion, Malewski, Sharma, & Wang, 2009; Schlein, 2009; 2010; 2014).

Pre-service teachers need both coursework and experience in the field to work with diverse groups of students and understand their unique needs. Standards for teacher education state the need for teachers to address diversity not only to meet the needs of domestic populations but also to help all students learn multicultural and global perspectives (Heyl & McCarthy, 2005). These needs exist in other countries that have high immigration rates and increasing diversity. International student teaching can offer this opportunity to expand the ethnocentric views of new teachers and help them bring a broader perspective to their students and classrooms. (Cushner & Mahon, 2002; Hosoya, Talib, & Arslan, 2012; Schlein, 2009; 2010; 2014).

Concerns have been raised about whether experiences teaching abroad might be applicable to domestic classrooms, but there are considerations that speak to this concern (Mahon, 2007; Mahon & Cushner, 2002). Even when pre-service teachers are placed in classrooms with diverse populations, they are still within the context of the majority culture in terms of how the school operates and their contact with other teachers (Marx & Moss, 2011). Therefore, they may not face challenges in attitudes that will help them develop the skills that they need, or worse yet, negative stereotypes may be reinforced (Marx & Moss, 2011). An overseas teaching experience has the advantage of removing the teacher from the majority context, and they are forced to re-examine their pre-existing beliefs and attitudes (Mahon, 2007; Mahon & Cushner, 2002; Marx & Moss, 2011; Sharma et al., 2011).

A study by Mahon & Cushner examined 50 pre-service teachers in programs offered through the Consortium of Overseas Student Teaching (COST). They found that

the students were empowered through increased self-efficacy – for the first time, they had to make decisions on their own and adjust to new surroundings. The development of empathy was also an important outcome for many students – they experienced the frustrations of feeling disconnected and learned the value in trying to understand others’ points of view. They also experienced shifts in perspectives on their own cultural beliefs by viewing their country and culture as others see it (Mahon & Cushner, 2002).

Sharma et al. (2011) found that an important part of overseas teaching experiences was the use of critical reflection. The development of multicultural competencies meant that pre-service teachers needed to learn to question their own beliefs, identify biased practices, and redefine their ideas of self and other (Sharma et al., 2011). Others also reported the use of reflection as important in the development of multicultural competencies (Anderson, 2003; Engle & Engle, 1999; Geminani, 2009; Lutterman-Aguilar & Gingerich, 2002; Mahon, 2007; Marx & Moss, 2011; Sharma et al., 2011; Tonkin & Quiroga, 2004; Walters, Green, Wang, & Walters, 2011).

Schlein (2014) further explores how overseas teaching experiences can influence issues of social justice. While some overseas teaching experiences are formal parts of teacher education programs, there are many other experiences, formal and informal, that can serve as important professional development opportunities for teachers (Schlein, 2014). Using narrative inquiry, Schlein (2014) stories how international experiences shaped the view of teachers and teaching for one experienced teacher. The teacher’s own struggle to learn languages helped her understand what some of her immigrant students were going through, and she viewed her experience with different languages and cultures

as a highly beneficial, if not a necessary, preparation as a responsible teacher. She also viewed herself as a multicultural model for her students by sharing her stories and using them as a way to develop rapport. In this way, she felt she established the appreciation of differences for her students while helping them find common cultural characteristics. Her own experiences helped her relate to some of the cultural transitions the students were going through, provided a way connect with parents, and established the importance she placed on creating a sense of community. The role of being a mediator of language and culture shaped her views of what it meant to be a socially just teacher (Schlein, 2014).

Other international experiences influence the teachers, their teaching, and their curriculum development. Teachers develop cultural sensitivity, appreciate the relevance of context, and are able to bridge the gaps in teacher-student relationships. In addition to gaining experience with different people, teachers are exposed to different cultures of schooling (Schlein, 2009; 2010; 2014). Schlein investigated the professional development of new teachers in Northeast Asia to see how they adapted to new curricula and cultures of schooling and whether the experiences were applicable to multicultural North American schools. The new teachers encountered different ideas about the roles of teachers and students, the relationships between teachers and students, the nature of teacher feedback, and ideas about standardized curricula versus creativity in teaching. Some of the results of these encounters were the development of intercultural teaching models, more critical examination of teaching methods and practices, and a deeper sense of interconnectedness between cross-cultural teaching and domestic multicultural teaching (Schlein, 2009). In another study, she examined how her own experience forced

her to reevaluate the cultural differences between herself and her students. The need to critically self-examine cultural biases and to explore multiple cultural vantage points was discussed (Schlein, 2010).

The above studies show how international experiences can have a huge impact on the participants and can have long-term and positive influences on teaching practices. In this way, the field of teacher education is bridging the gap between the needs for multiculturalism and internationalization. In the next sections, I shift focus to the history and development of internationalization in general, a discussion about its outcomes, and an examination of other international activities besides experiences abroad.

#### *History and Motivation of Internationalization*

Historically, internationalization for American universities began with study abroad programs (IIE, 2014). Study abroad and the movement of students between countries is a common component of internationalization listed by organizations such as NAFSA and ACE. Study abroad continues to grow today, and many students who participate describe it as one of their most valuable experiences (IIE, 2013; Tillman, 2011; Mahon & Cushner, 2002; Malewski & Phillion, 2009; Marx & Moss, 2011; Sharma et al., 2011).

The Open Doors report provides data from over 3,000 higher education institutions in the United States who offer study abroad programs (IIE, 2013). Today, many US higher education institutions have an entire department dedicated to making sure that these opportunities are available to their students – the Midwestern university in this study is only one example. Many institutions also have exchange agreements with

universities in different countries, and if that does not provide the opportunity that a student seeks, there are many private companies that specialize in study or work abroad programs. To illustrate the growing options for study abroad, in the State of Missouri alone, 4,938 students were enrolled in study abroad and exchange programs during the 2011-2012 academic year, a number that increases each year (IIE, 2013). In the case of the Midwestern University involved in this study, there were over 1,600 credit hours of international study courses generated, which include credit for study abroad. The institution offers study abroad options with 285 institutions from 60 different countries, and of those programs, 35 institutions are direct exchange programs or faculty-led programs (University of Central Missouri, 2012; 2014). Though today study abroad options are widely available, it was not always the case.

In the early period of American higher education, international education was perceived as extracurricular and was a symbol of prestige for families who sent their children to Europe to be educated. The main motivation at this time was social status and need. Wealthy American colonists in the 18<sup>th</sup> and 19<sup>th</sup> centuries sent their children to college in Europe before universities were established in the United States. However, even after American universities were established, attending a university in Europe was a sign of prestige and defined a “well-rounded” education (Brown, 1983, p. 66). Shortly after the turn of the 20<sup>th</sup> century, studying abroad became associated with other motivations.

The Institute of International Education was founded after World War I by a group of academics and politicians (IIE, 2014). In 1919, they started establishing

exchange programs for faculty members and graduate students, which occurred between American institutions and institutions in Europe. The idea behind the founding of the institution was to promote understanding and peace (IIE, 2014). Since then, IIE has been a strong advocate for study abroad and international education, managing hundreds of programs with both government and private sponsors (IIE, 2014).

Another pioneer in study abroad programs came after the founding of IIE. A young professor at the University of Delaware, Professor Raymond Kirkbrade, used his own experience during World War I to create a study abroad program for his undergraduate students. Professor Kirkbrade was one of 400 soldiers who were educated at the Army School Detachment at Grenoble, France in 1918. He realized that immersion is the best way to learn a language. After returning to the United States, Kirkbrade became a professor in the Department of Modern Languages at the University of Delaware and created the Delaware Foreign Study Plan. This program required students in the Modern Languages program to spend their junior year abroad to develop their language skills. The first group to participate in this program was in 1923 in Paris (Hill, 1998). It was a unique program because it involved undergraduate students, which expanded opportunities beyond the faculty and graduate student programs that IIE led. This program started a trend, and other universities started forming similar programs in Europe (Brown, 1983).

International education and study abroad programs experienced fluctuations due to historical events, but overall, efforts have grown. At first, programs were concentrated in Europe, but by the 1930s, IIE had established exchange programs in Latin America and

the Soviet Union (IIE, 2014). In 1939, due to World War II, study abroad and exchanges stopped, but they commenced with vigor shortly after with new programs and professional organizations.

In 1946, the Fulbright Act was the first government-sponsored program, and it was created to help American citizens learn about other nations and serve as cultural ambassadors. Still active today, the 1946 Fulbright Act was in response to a post-World War II initiative to create globally-educated leaders (Brown, 1983). Its overall mission was to improve understanding and trust among nations (Mikhailova, 2002). Introduced by Senator Fulbright, it was hoped that the program would facilitate the "...promotion of international good will through the exchange of students in the fields of education, culture, and science" (IIE, 2014). The Fulbright Program was initially funded by the sale of surplus war property, and it became the largest program coordinated by IIE.

Later in 1948, IIE founded the National Association of Foreign Student Advisors, later to be called NAFSA: Association of International Educators. At this time, students were not only studying abroad, but international students were also coming to the United States. NAFSA's purpose was to provide a professional network, to help campuses manage the flow of students, and to help establish international programs. Today, NAFSA is an important advocate for study abroad and international education. With over 10,000 members in international education from over 150 countries, it helps shape public policy and is the largest support network in North America (NAFSA, 2014a; Steiner, 2013).

In 1948, the Council on Student Travel, later known as the Council on International Educational Exchange, was developed to provide support to study abroad. The program converted large carrier ships left over from World War II into transatlantic vessels that carried students, teachers, and Fulbright participants from several different programs (Brown, 1983; Mikhailova, 2002). Onboard, the travelers received a 10-day orientation program including cultural awareness, language training, and lessons in being a good representative of the United States.

The 1950s and 60s were a time of growth for study abroad and were marked by formal recognition by the United States government of the importance of international education. Factors such as the economic prosperity and favorable currency exchange helped make studying abroad more accessible and convenient for the average American student (Brown, 1983). The number of universities that developed partnerships and exchange agreements with non-US institutions grew (Brown, 1983). In the 1950s, approximately 10,000 American students were studying abroad each year and programs had expanded to Asia and Africa (IIE, 2014). The numbers of students studying abroad continued growing in the 1960s. Approximately 340,000 students had applied for passports and 20,000 American students were enrolled in international institutions (Brown, 1983). In 1965 the government officially recognized the importance of studying abroad with the International Education Act. Even though funding was not included as part of the act, it was an important step for international education (Brown, 1983).

Despite increases in opportunities to study abroad, the number of U. S. students studying abroad in the 1970s declined. To encourage more participation, universities

offered more options: students could go abroad earlier in their programs, they could be arranged for shorter periods of time, and there was a wider selection of available countries. Despite these efforts, participation in study abroad programs continued to decrease along with many foreign language programs (Brown, 1983).

By the late 1970s and early 1980s, national surveys showed that American students appeared to lack global competence skills. The National Council on Foreign Languages and International Studies reported that 20% of high school seniors could not locate France or China (Haglund, 1988). College-aged students in the United States ranked much lower than students in many other countries when examined on global knowledge and awareness (Woyach, 1989). More recently, the National Geographic-Roper 2002 global geographic literacy survey revealed that about 85% of 18-24 year-old Americans could not find Iraq, Afghanistan, or Israel on a world map, despite the fact that they were sites of heavy news coverage and United States involvement. The same survey revealed that about 11% could not even locate the United States and 29% could not identify the Pacific Ocean (National Geographic-Roper, 2002). The results from the 2006 survey do not indicate much improvement. Only 37% of the respondents could locate Iraq on a map, despite United States occupation since 2003, and only half could locate New York (National Geographic-Roper, 2006). Derek Bok (2006) criticizes higher education institutions in the United States for underpreparing graduates and cites studies that show American university students' underachievement on assessments of awareness of international affairs and global events. Curran, Iyengar, Brink Lund, and Salovaar-Moring (2009) connected types of news media coverage with the public's knowledge

about current international news in a cross-national comparison study. They found that American citizens were much less informed than people in the United Kingdom, Denmark, and Finland concerning international news. For questions related to international “hard” news (reports about politics, administration, and globally relevant science and technology), United States citizens answered only 40% of the questions correctly, compared to 59% for the British citizens, 62% for Finnish citizens, and 67% for Danish citizens (Curren et al., 2009). A report from ACE shows that even though high school students are increasingly interested in international affairs, there is still a general lack of knowledge about international leaders, geography, current issues, and history (Hayward & Siaya, 2001). A study by Zhao, Lin, and Hoge (2007) discussed several studies that assessed American students’ global education, all of which report consistently low achievement compared to other nations. Results from projects such as these and current events are motivating factors to help promote strategies for internationalization.

The current situation for study abroad programs and internationalization is under rapid development. Hunter (2005) discusses the importance of internationalization and both the private sector’s and the government’s role in it. He believes that current events are changing the perspective on global competence skills due to changes in the feeling of national security (Hunter, 2005). September 11, 2001 surprised many Americans by revealing extreme attitudes from other nations. Hunter (2005) states that this ignorance is an important reason for creating globally competent citizens, and the development of global competence should be in the mission statement of every educational institution in the United States.

Historically, the United States has been motivated to increase international education around times of threat. Initially, it was World Wars I and II that began efforts to encourage international education. In the late 1950s, the launch of Russia's Sputnik initiated more action to promote international, math, science, and technology education. The attention given to terrorist threats in the early part of this century spurred additional waves of interest. IIE continues to echo its ideas from the past. "Peace and prosperity in the 21st century depends on increasing the capacity of people to think and work on a global and intercultural basis. As technology opens borders, educational and professional exchange opens minds" (IIE, 2014).

IIE and other organizations continue to play a key role in internationalization efforts and continue to be advocates for international education and study abroad. NAFSA has been working toward a national international education policy, beginning with state resolutions on international education. Currently, 23 of the 50 states have international education resolutions passed, and several other states are actively pursuing resolutions (NAFSA, 2014b). In addition, 29 of the 50 states developed an International Week Proclamation (NAFSA, 2014b). NAFSA's advocacy efforts have also prompted Senate resolution 308, which designated 2006 as the Year of Study Abroad. This resolution was meant to call attention to the value that study abroad plays in developing American citizens and to encourage participation in study abroad (The Lincoln Commission, 2005). The Abraham Lincoln Study Abroad Fellowship Program was founded by NAFSA in 2006, and provides funding to thousands of study abroad participants. A more recent accomplishment of NAFSA is the Senator Paul Simon Study

Abroad Foundation Act (Steiner, 2013). Paul Simon conceptualized a federally funded program that would provide 500,000 stipends to help study abroad students pay for their experiences. He believed that providing opportunities for international education would create citizens who were, "...more understanding of the rest of the world" and would "...create a base of public opinion that would encourage responsible action" (Rubin, 2005). Another important goal of the new act is to promote diversity of students participating in study abroad activities, an issue discussed in further detail below.

#### *Study Abroad Outcomes and Limitations*

The National Association of Student Personnel Administrators (NASPA) wrote about the responsibilities of higher education and lists study abroad as an important component of creating challenging and motivating learning opportunities (NASPA, 1998). To demonstrate the impact of study abroad, Dwyer and Peters (2004) reported on a study conducted by the Institute for the International Education of Students, which surveyed study abroad alumni from nearly 50 years. The survey asked questions about personal development, academic commitment, intercultural development, and career development. Over 90% of the alumni reported that the experience increased their self-confidence and maturity and that it had a lasting impact on their worldview. At least 80% of all groups surveyed also reported that the experience increased their academic interest, influenced future academic decisions, and renewed their commitment to learning a foreign language. In all groups, nearly 90% reported that they understood their own culture better, that they sought out a more diverse group of friends, and that the experience continues to influence their interactions with other people. At least 70% of

those surveyed reported that their experience influenced their career path. Finally, the report stated that the longer the term that the student studied abroad, the greater they benefited (Dwyer and Peters, 2004).

Multinational corporations and the global economy create other motivations that shape internationalization (Deardorff, 2006; Deardorff & Hunter, 2006; Eggspuehler, 2005; Knight, 2004). As businesses expand, there is an increased demand for employees who know how to succeed in other cultures and countries (Eggspuehler, 2005). The success of US companies in other countries has a tremendous economic influence. Eggspuehler (2005) reported that Coca-Cola and McDonalds alone spent a combined \$2.4 billion dollars on marketing around the world. Americans rely on the income from doing business with other countries and on the products and services from other countries. This interdependence requires solid international relationships and intercultural understanding.

Corporations are recognizing the value in hiring employees who have an international education, and a study abroad experience on a resume is one way that they identify this characteristic. Dr. Cabrera emphasized the importance of having globally competent business leaders by stating, “Doing business is now the international business. Being able to operate in that environment is the key challenge now for graduates, not just those considering international careers, but also those planning to work in their home countries” (Cabrera, 2005, p. 15).

Study abroad is a very important component of internationalization, but it cannot be the only strategy if universities desire global competence skills for their graduates. In a longitudinal study, Dwyer (2004) concluded that year-long study abroad programs had a

longer-lasting and deeper impact on students compared to summer programs. If Dwyer's (2004) report is considered, students benefit from study abroad in proportion to the length of their sojourn. Medina-López-Portillo (2004) found significant differences in the Intercultural Development Inventory measures between students who studied in Mexico for seven weeks compared to students who studied in Mexico for sixteen weeks. The students in the short-term program benefited from exposure to differences and better self-awareness of their own culture, but they were unable to move beyond absolute definitions and over-simplified explanations. In contrast, the students in the longer-term program showed deeper levels of reflection and were able to use more relative terms of comparison and description (Medina-López-Portillo, 2004).

Data from the Open Doors report helps put study abroad participation in perspective. The Open Doors report is an annual report of data from colleges and universities throughout the United States. It reports numbers of international students who study at their institutions and domestic students who study abroad. The results of the report raise some concerns for study abroad programs including the preference for short-term programs, the low participation of students of color, and the lower participation of male students compared to female students. Yet students have increasingly preferred programs of shorter duration, from two to eight weeks long (IIE, 2013). Of over 283,000 students who studied abroad for credit in 2011-2012, nearly 180,000 were abroad for eight weeks or less (IIE, 2013). While short-term study abroad programs can still be an important experience, most practitioners in the study abroad field would prefer that students participate in longer-duration programs (Hulstrand, 2006). In addition to the

concern over the growing popularity of short-term programs, the participation of students of color in study abroad continues to be weak. Over 76% of the students who studied abroad in 2011-2012 were Caucasian, almost 8% Asian/Pacific Islander, 7.6% Hispanic, and 5.3% African American (IIE, 2013). The proportion of males studying abroad (35%) compared to females (65%) is also low. Considering the ethnicities and gender of study abroad participants is important not only because of the increasing education gap between white students and students of color, but also because race, class, and gender can influence study abroad experiences of students (Malewski & Phillion, 2009). Finally, only a small proportion of all university students study abroad – during the 2011-2012 academic year, 283,332 students were reported to have studied abroad for credit (IIE, 2013).

When considering those who study abroad, Gemingnani (2009) states that it is unreasonable to assume that a study abroad experience will automatically result in cultural learning, and this is also made clear in other work (Lutterman-Aguila & Gingerich, 2002; Sharma et al., 2011; Stephenson, 1999). Gemingnani's research highlights and discusses several methodological problems in study abroad research that have made it difficult to assess outcomes of study abroad programs. First of all, within the study abroad field, there is no agreement on what specific outcomes a study abroad experience should have. Even if there is an overall assumption that a study abroad experience should lead to cultural learning, there is no agreement on how this should be measured (Gemingnani, 2009). There are also studies that suggest that the outcomes of study abroad are heavily influenced by the individual goals that the students have before

the experience, which may or may not be related to increased intercultural understanding (Bond, Koont, & Stephenson, 2005; Kitsantas, 2004; Ingraham & Peterson, 2004).

Goldstein and Kim (2006) reported that groups of students who studied abroad show different personality characteristics and attitudes than those who did not. In addition, some studies suggested that students from the United States who participated in an experience abroad may be over-confident in their intercultural skills, which may lead to negative over-generalizations (Engle & Engle, 2004; Medina-López-Portillo, 2004; Stephenson, 1999). This over-confidence may stem from domestic experiences related to differences of race, religion, and ethnicity being taken for granted as deeper cultural experiences than they really are. Students who go abroad may experience differences in culture at a much different level than they did at home (Engle & Engle, 2004).

Stephenson (1999) reported that students from the United States found it much more difficult to stay open-minded about cultural differences than they originally thought, and value changes among the students were not always positive. With these as examples, Gemingnani (2009) asserts that many research efforts to assess outcomes of study abroad experiences fail to give insight on what the experiences mean for the students, their perceptions on culture, and their cultural learning.

Several researchers state that the key to designing effective study abroad programs is to incorporate principles of experiential learning and student reflection (Anderson, 2003; Engle & Engle, 1999; Gemingnani, 2009; Lutterman-Aguilar & Gingerich, 2002; Mahon, 2007; Sharma et al., 2011; Tonkin & Quiroga, 2004). Mahon (2007) addresses several concerns for creating and developing overseas student teaching

programs. Adequate programs need to occur for a substantial number of weeks and must be treated as a process: students need pre-departure orientation, home country supervision during the experience, and a debriefing upon return to make the most of the experience (Mahon, 2007). Anderson (2003) emphasizes the need to give students the tools to process their experiences early and regularly. A pre-departure orientation alone will not prevent the misinterpretation of cultural contexts or help reduce stereotypes. Students need interpretive support throughout the experience to challenge preconceptions and to process their experiences (Anderson, 2003). Engle and Engle (1999) incorporated weekly reflection meetings with their students, and Tonkin & Quiroga (2004) researched programs in which concurrent academic coursework complemented students' service learning experiences abroad. They found that the coursework was crucial in helping the students understand their cultural interactions (Tonkin & Quiroga, 2004). According to Sharma et al. (2011), critical reflection was necessary for pre-service teachers to be ready to teach in diverse schools, and combined with a well-structured study abroad program, developed multicultural competencies. The above examples illustrate the importance that reflection can play in an international experience. However, not all study abroad programs incorporate reflective activity (Gemingnani, 2009).

Jenkins and Skelly (2004) criticize many study abroad programs for being inadequate and over-commercialized. They believe many programs are not challenging enough to develop the international skills needed by American students. They further state that the United States itself has drawn people from all over the world and has created a global culture. Jenkins and Skelly point out that it is ironic that Americans have

not embraced the opportunity to learn from their own diversity while they remain in “splendid isolation” (2004, p. 8). Their recommendations are for study abroad programs with a more intentional approach that would challenge students to overcome their own political, economic, and cultural obstacles (Jenkins & Skelly, 2004). These are just some of the reasons why other international opportunities besides study abroad programs should be developed. These are useful criticisms so it is valuable to look into other efforts that help create global competence skills.

### *Expanding Internationalization*

Institutions often rely on reports of the movement of students to reflect internationalization (Deardorff, 2006; Leask, 2004). The movement of students includes students who study abroad and international students who come to the United States to study, but these figures provide an incomplete picture of an institution’s efforts to produce globally competent graduates. Besides the fact that only a small proportion of students study abroad, this number cannot reflect the quality of interaction among students or help assess global competence skills in students.

When considering students who come from other countries to study in the United States, there were 819,644 international students during the 2011-2012 academic year, comprising about 4% of the total US higher education enrollment (IIE, 2013). United States immigration regulations make acquiring student visas time consuming and complicated for international students. In addition, tuition has increased dramatically all over the country. For these reasons, international students are turning to other countries to continue their education. Universities in New Zealand, Australia, and the United

Kingdom are other attractive options for students who wish to attend universities in English-speaking countries. Although international students on American campuses are a good resource, they are only a small component of internationalization.

Reporting numbers of incoming and outgoing students is further criticized by de Wit (2013), who raises the issue of the erosion of ethics when institutions oversimplify internationalization goals as targets to be met. He warns institutions that viewing internationalization strategies as a collection of fragmented activities is a dated approach and can sometimes result in opposing views and conflicting goals (de Wit, 2013). To prevent negative consequences, he encourages a shift in the way internationalization is approached to ensure that the results focus on enhancing education and research (de Wit, 2013). Hudzik (2011) encourages a diverse use of approaches for “comprehensive internationalization”. He discusses the internationalization imperative as a holistic approach with a wide range of objectives involving people on and off-campus. He also points out the importance of seeing the interconnectedness of various strategies (Hudzik, 2011).

Other strategies besides offering study abroad programs and recruiting international students include efforts made by faculty members and curriculum development. Examples of a faculty member internationalizing a course might involve challenging students to reflect on cultural values, helping students explore other cultural values, including information about different cultures through readings, inviting guest speakers from different countries, or coordinating projects with international partners. Instructional methods and course designs that use online learning environments can also

play a role in internationalization. Internationalization of the curriculum might include offering degree programs, expanding course selections, or changing general education requirements. International students, study abroad programs, faculty involvement, and curriculum development represent just a few of the strategies for the internationalization of American universities. Hunter et al. (2006) confirm that there are many factors involved in the development of global competence skills, which is the desired outcome of internationalization.

#### *Outcomes of Internationalization*

Global competence skills are the desired outcome of internationalization efforts. This term shares some overlap with other terms such as intercultural competency, multicultural competence, cross-cultural competency, and intercultural sensitivity, but it is useful to see how it is distinguished from other terms by scholars.

Olson and Kroeger (2001) define global competence as having, "...enough substantive knowledge, perceptual understanding, and intercultural communication skills to effectively interact in our globally interdependent world," (p. 117). They further discussed a set of skills that would allow a person to successfully interact within an interdependent world. Some of these skills include language proficiency, geography, knowledge of world events, intercultural sensitivity, and perceptions. Hunter (2004) conducted a study to establish a common consensus on the term "global competence" for the sake of conversations among government, education, business, and other organizations that have an interest in international education. He considered existing definitions and information from experts to develop his comprehensive meaning of global

competence. Another study by Deardorff (2006) conducted a meta-analysis of publications on international education and collected surveys and interviews from international educators and administrators. She found that although general definitions of intercultural competence were preferred overall, she was able to identify several key aspects on which previous research and her participants agreed upon. Openness and understanding of others' worldviews received 100% consensus among the educators and administrators that participated in her study (Deardorff, 2006). Common values in institutional mission statements included "...awareness, valuing, and understanding of cultural differences; experiencing other cultures; and self-awareness of one's own culture" (Deardorff, 2006, p. 247). The importance of awareness of other cultures and attitudes of "openness, respect, curiosity, and discovery" (p. 74) are other overlapping ideas in Deardorff and Hunter's (2006) collaborative work. Lunn (2008) confirms these ideas as she writes about global perspectives and lists important skills including the awareness of the impact of global events, the ability to communicate across language divides, and respect for diversity.

With his 2004 study as a base, Hunter et al. (2006) presented a comprehensive model of global competence. Their model includes knowledge skill building such as geography and language skills, shifts in attitudes and the use of other cultural frames of reference, culture-specific information, cultural self-awareness, and knowledge of culturally appropriate behavior (Deardorff & Hunter, 2006; Hunter et al., 2006). Hunter et al. (2006) define global competence as, "...having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this gained

knowledge to interact, communicate, and work effectively outside one's environment" (p. 268). I have used global competence as defined by Hunter et al. (2006) for this study because it is a comprehensive definition that considers the work of many others. With an emphasis on cultural self-awareness and critical examination of one's own beliefs, skills required for global competence fall into the three categories of knowledge, attitudes, and participation (Deardorff & Hunter, 2006; Hunter et al., 2006).

Many studies interested in issues related to the development of global competence have used measures of intercultural sensitivity (Chen & Starosta, 2000; Davis & Finney, 2006). Examples of instruments are the intercultural sensitivity index (IDI), cross-cultural adaptability index (CCAI) and the intercultural sensitivity scale (ISS) (Chen & Starosta, 2000; Davis & Finney, 2006; Hammer, Bennett, & Wiseman, 2003). Intercultural sensitivity has been defined as the affective component of global competence (Bennett, 1998). Individuals who show intercultural sensitivity are empathic for those with cultural differences and are able to approach differences with an open mind and accepting nature, resulting in effective and appropriate behavior during cultural exchanges (Chen, 1997). Brummet, Wade, Ponterotto, Thombs, and Lewis (2007) found that students with a multicultural personality disposition, which included cultural empathy, were more likely to show psychosocial well-being.

One model that is based on the idea of cultural empathy and helps describe the way that others perceive different cultures is the Developmental Model of Intercultural Sensitivity (DMIS). The model was created with the idea that people develop intercultural competence skills as they have more experience with differences in culture,

and they progress from states of ethnocentrism toward states of ethnorelativism (Bennett, 1986; Hammer et al., 2003). The model describes six states of ethnocentrism and ethnorelativism. The first three are on the ethnocentrism side of the scale and include denial, defense, and minimization. People in the ethnocentrism states of the scale view others from the perspective of their own culture. Denial occurs when a person exists in isolation and has little or no knowledge of differences. If people different than themselves are known, they are often ignored or dehumanized. Defense describes a state when other cultures are known but one's own culture is thought of as the only acceptable one. This state often involves separation of groups based on culture and over-simplified stereotypes. An additional component of the defense state is reversal, which can happen when a person adopts a new culture while rejecting their original culture. Minimization, the last stage on the ethnocentric side of the scale, is a state in which a person relates to the other culture, but relies on the similarities with their own culture. In minimization, because similarities are expected, people in this state still tend to believe that their own culture is more correct (Bennett, 1986; Hammer et al., 2003). The last three states of the scale move toward ethnorelativism, in which people can experience their own culture in relation to others' cultures. These states include acceptance, adaptation, and integration. Acceptance is a state in which people see their own culture as one of many acceptable cultures. They still see themselves as different and separate, but equal as humans. Adaptation is a state that involves changes in behavior to match culturally appropriate behavior within different cultural contexts. Integration is a state in which a person

changes their sense of self as part of the movement in and out of cultural contexts (Bennett, 1986; Hammer et al., 2003).

The DMIS model uses the IDI, the Intercultural Development Index, as its instrument to measure the association of a person to these six states of ethnocentrism and ethnorelativism (Hammer et al., 2003). Paige, Jacobs-Cassuto, Yershova, and DeJaeghere (2003) confirmed the validation and reliability of the IDI and further developed the instrument by creating a composite IDI score. They tested a diverse group of high school students, foreign language instructors, and college students. Participants completed three different instruments: an IDI, a demographic questionnaire, and a social desirability scale. They found that the IDI was internally valid and that performance on social desirability had no effect on the results on the IDI. Finally, they were able to represent overall level of intercultural sensitivity with a composite score (Paige et al., 2003). Anderson et al. (2006) conducted a study that further supported the validity of this IDI composite score.

Studies have used the IDI and other instruments to see how study abroad experiences impact intercultural sensitivity. Anderson et al. (2006) questioned whether a short-term study abroad program could have an impact on the intercultural sensitivity of Midwestern American university students. They gave a pre-test and post-test Intercultural Development Inventory to 23 students who participated in a short-term, faculty-led study abroad program in the United Kingdom. Although there was a weak but significant increase in the IDI score, they concluded that such a program can affect the intercultural sensitivity of its participants, especially with regard to students viewing other cultures as superior to their own and to being flexible to cultural differences. Medina-López-Portillo

(2004) also found increased intercultural sensitivity in some of her short-term study abroad participants, but for the longer-term participants in a comparison group, there were greater gains on the IDI measure in addition to a larger proportion of students with higher scores.

Studies have also used other measures to show outcomes of study abroad. Kitsantas and Meyers (2001) assessed the cross-cultural adaptability of American students who participated in a study abroad program compared to a group who stayed at the home university. Both groups were from a Southeastern American institution and were enrolled in graduate-level psychology courses. They found that while the two groups performed similarly on the pre-course assessment, the study abroad group scored higher on the post-course assessment (Kitsantas & Meyers, 2001). Williams (2006) compared a study abroad group of American students to a group of American students who stayed at the home campus and found that the study abroad group displayed generally higher levels of intercultural communications skills. However, they found that a better predictor of intercultural communications skills was exposure to different cultures, whether it occurred abroad or on the student's home campus (Williams, 2006).

Studies measuring outcomes of study abroad have found changes in intercultural sensitivity of American study abroad participants (Anderson et al., 2006; Kitsantas, 2004; Kitsantas & Meyers, 2001; Medina-López-Portillo, 2004; Williams, 2006). However, a developing area of internationalizing the curriculum is the use of online communication technologies (Belz, 2005; Benbunan-Fich & Stoeber, 2003; Kan, 2011; Kemppainen et al., 2012; Leask, 2004; Lu et al., 2004; Rautenbach & Black-Hughes, 2012; Sanders,

2012; Vogt, 2006; Zhu et al., 2005). Online international interactions are of a different nature than face-to-face interactions, and the development of global competence after these experiences needs further exploration. This raises the question of how an online international interaction in Second Life might also contribute to the development of global competence. After discussing some criticisms of internationalization in this chapter, more information about projects that use online technologies for international interactions will be discussed.

### *Criticisms of Internationalization*

Higher education institutions have an important task ahead as internationalization efforts grow, but it is important to note some of the criticisms of internationalization so that those involved can avoid problems. Professional organizations such as NAFSA: Association of International Educators, IAU: International Association of Universities, ACE: The American Council on Education, and APLU: American Public and Land-grant Universities provide professional development to educators and have been researching and reporting on the importance of internationalization. They offer some advice to university administration and leaders (Green, 2002; Hudzik, 2011; IAU, 2012; Knight, 2003; NASULGC, 2007).

In an effort to raise awareness, the IAU alerts institutions to some potential adverse consequences of poor internationalization management. They point out that many administrators see internationalization as an opportunity to increase prestige and rankings of their institutions. When driven by these forces, collaboration can be displaced by competition. Narrow definitions of internationalization may lead to decreased diversity of

efforts as limited resources are concentrated in fewer areas. They also point out the importance of preventing brain drain – institutions need practices that will ensure that developing countries can retain their talent. In addition, ethical practices may be overshadowed by the need to meet ambitious recruitment targets. The prevalence of English may also diminish the importance of studying other languages. To prevent these problems, the IAU calls upon institutions to conduct their internationalization in a context of academic freedom and social responsibility while keeping academic goals and research at the core of its institutional efforts (IAU, 2012).

Another warning for those involved with internationalization is that globalization has concentrated wealth and power with those who already possess it. Internationalization of higher education institutions is in danger of repeating this error as the flow of initiatives tends to originate from Westernized countries and as education continues to be seen as a good that can be exported (Altbach & Knight, 2007). Because commercial agendas can sometimes motivate internationalization efforts, these countries are in a position to move things forward in ways that favor their institutions and nations. Another criticism of internationalization is that it can be applied with ethnocentric motivations to spread a particular culture's value system to other areas of the world (Deardorff & Hunter, 2006). Finally, higher education institutions are in danger of creating a wider education gap for students of color if they continue to ignore their low participation rate. (Altbach & Knight, 2007; Olson et al., 2007).

The process of internationalization is not a straight path, and the strategies are many and complex. However, the pressure of globalization makes internationalization

inevitable. While there have been many developments over the past century, new opportunities and efforts arise. The goal of internationalization is to develop global competence in university graduates. In addition to pursuing this goal, educators and administrators need to monitor the process to be sure that gaps in access and skills are not increased. This applies domestically for American populations of color and internationally in developing nations.

To conclude this section, this study added to the literature on internationalization and global competence by examining student experiences resulting from a faculty member's international project. Faculty-initiated projects receive less attention in reports about the internationalization of campuses than other activities such as study abroad (IIE, 2013; IIE, 2009). In addition, the interactions took place using a 3-D virtual environment, and this is a new context for internationalization. The next sections discuss the background of online international interactions and 3-D virtual environments.

### **Online International Interactions and 3-D Virtual Environments**

This study focused on a faculty-led internationalization initiative that involved online interactions between American students and students in Sweden. Faculty experiences and curriculum development are important strategies for internationalization. Curriculum development can include full degree programs or special courses offered by an institution. It can also include integration of international concepts at the course level. Faculty members can use simple strategies to internationalize their courses by combining information about other countries with the course material or by using online

technologies such as 3-D virtual environments, discussion boards, chat, and videoconference to connect students from different countries.

### *Online International Interactions*

There are many advantages to using online technologies to enhance opportunities for international interactions. Many universities in the United States already have the facilities in place to carry out online international interactions, providing easy access to online learning environments. The widespread availability of technology such as messaging and videoconferencing software has made communication even easier. In addition, 3-D virtual environments draw attention because of the rich social presence and the immersive visual environment. While recognition of these kinds of projects reflects positively on internationalization strategies that use online technology, very little has been reported about the impact on global competence skills of students who participated.

Leask (2004) lists a number of activities that demonstrate how online technologies can be used as part of an institution's internationalization strategies. These activities include having an international guest lecturer present online, using international resources such as newspapers and online media for different perspectives, creating discussion groups, and coordinating collaborative projects with international partners (Leask, 2004).

The American Council on Education has recognized several institutions for developing innovative courses that encouraged internationalization using online technologies (ACE, 2003). Examples of these are virtual seminars via videoconference, online programs with collaborative projects, and language learners who meet online to practice the target language with a native speaker (ACE, 2003).

One use of videoconferencing technology helped students learn about healthcare around the world (Sanders, 2012). Students were given a project to learn about what healthcare is like in other countries. They used email addresses of volunteers in other countries to ask questions and collect information, which was shared during class discussions. The researcher advocates the use of technology not only to give the students other perspectives, but also to have a deeper understanding of learner needs and curriculum development (Sanders, 2012).

In a report of three different projects, South African and American social work students used videoconferencing and email to discuss issues related to their fields. The American students reported enhanced awareness of different national issues such as AIDS and rural poverty to which they had not been previously exposed. This awareness made manifest the issues others face and encouraged discussions of social norms and human rights (Rautenbach & Black-Hughes, 2012).

Kemppainen et al. (2012) set up videoconferencing group presentations and discussion sessions between nursing students in the United States and Japan. The students shared experiences and compared different types of remedies and points of view on treatments. The American students learned more about the role of nurses in Japan and gained a more global perspective on nursing. It was also a good experience for the students in rural Japan since they would not normally have opportunities to consider views from other countries (Kemppainen et al., 2012).

One concern for online international interactions is the possible negative impact it might have on the attitudes of the participants. In an earlier study, American students who

interacted via a blog with students in Sweden reported both positive and negative attitudes about the interactions depending on how responsive their international partner had been (Russell et al., 2006). In another study by Lu et al. (2004), results from student surveys suggested that the experience had a negative impact on attitudes for 17 of the 66 Taiwanese students and 4 of the 38 American students in their courses. The study suggested that students need a primary and reliable source of information to help develop their knowledge and ideas of people from different nations. A qualitative analysis by Belz (2005) found that the questioning techniques of students were important for positive impression formation of their partners during collaborative online projects involving students from the United States and Germany. Lack of face-to-face interactions or simulations of face-to-face interactions may have played a role in forming negative impressions and lack of disclosure in the student interactions.

In a videoconferencing project, Jauregi and Bañados (2008) found that it was important for both parties to be equally engaged in the exchange. While teaching a Spanish language course, they had Dutch students partner with students in Chile. After the interaction, they found that 40% of the Dutch students reported negative perceptions of their Chilean partners because they failed to join the videoconference on time or canceled at the last minute. Another project that involved art teachers in the United States and students in China found that it was essential for students to self-examine their assumptions about expectations of what others should think, feel, or behave in order to avoid miscommunications (Kan, 2011). These examples reinforce the importance of

designing the course to ensure that the students have the most positive experience possible.

Belz (2005) also emphasized that international interactions alone will not develop global competence. If interactions are not carefully guided, misunderstandings can arise and the projects can become counter-productive. There is a risk that students may not be able to collaborate effectively to reach their communication goals and that stereotypes might be reinforced or new ones might be created (Belz, 2005). In an effort to determine how negative or positive experiences develop, Vogt (2006) conducted a qualitative analysis to determine whether attitudes of students could be measured from email messages sent during an online international collaboration. Email interactions among Japanese university students, German secondary students, and American Midwestern university students were analyzed, but email analysis alone was not enough to fully understand the attitudes of the students (Vogt, 2006).

Other studies that investigated the effects of using online technologies in international settings focus on overall quality of the interaction or challenges to the course design. For example, instructors in two intercultural communications courses used online technologies to complete collaborative assignments between students at the City University of New York in the United States and students at UNITEC, New Zealand. Two projects were developed for an intercultural communications course for two academic terms. The goals of the professors were to help students exchange ideas using online collaboration, to provide an environment of socio-cultural interaction, to give students a chance to imitate modern business communication, and to evaluate the learning

process as it was mediated by the technology (Zhu et al., 2005). After analyzing the evaluations of the students, the instructors recommended that future courses should start initial discussions with synchronous chats so that the students get to know each other. After that, deeper topic discussions should occur through structured, asynchronous methods (email or discussion group). Both projects resulted in positive experiences overall. The students reported that they enjoyed working with others in another part of the world and thought that the use of online technologies was important for the development of their career skills. The instructors recommended for future projects that the groups be kept as small as possible, that the grading strategies should be similar for the courses, and that timing issues be made clear during the planning of the courses (Zhu et al., 2005).

Lu et al. (2004) discussed similar course design issues. A high school teacher in the United States and a high school teacher in Taiwan used online technologies to introduce their students to international collaboration. The instructors wrote collaborative projects that could be completed by the students via an online discussion board. Both quantitative and qualitative measures were taken in the form of pre- and post-surveys, interviews, and discussion data collected from the students. Results showed that American students demonstrated significantly more improvement in global competence than their Taiwanese counterparts as indicated from interviews, student papers, and a pre- and post-survey. It was also found that students with prior travel experience had significant gains in intercultural competence compared to those with no travel experience, regardless of their nationality. However, they discuss some limitations of their project to guide future interactions. To prevent the development of negative stereotypes, their study

suggested that students need a direct source of information to help develop their knowledge and ideas of people from different nations before engaging in online interactions. The Taiwanese students were limited in the contribution that they could make because of language barriers, suggesting the importance of language proficiency. In addition, the instructors designed their own instrument, and they stated that cultural interpretation might have affected the way the students answered the surveys (Lu et al., 2004).

Kan (2011) included detailed planning and substantial teaching strategies as necessary processes for successful online international interactions. In an online videoconference class between graduate students in the United States and China, she experienced many challenges that others might consider. First, students need to be encouraged to identify their own culture through questioning and criticism so that they can fully appreciate the perspectives of their international classmates. Instructors and students also need to consider the effects that the time difference may have on the different groups – one group may be getting started in the early morning while the other group is exhausted after a long day and ready to go to dinner (Kan, 2011).

One project that experienced success developed a highly structured activity that was completed over Skype videoconferencing software. High school students in Chicago and students at an international high school in Beijing met over Skype to solve physics problems together. Before focusing on the task, however, students were given a set of questions to help them interview their partners about their cultures and lives so that they could get to know each other. The teacher reported that his students showed increased

curiosity and motivation, and that their attitudes toward physics changed when they saw it with a global perspective (Held, 2010).

A project by Walters et al. (2011) explored the use of digital storytelling to assess the development of intercultural competence. Digital storytelling combines the art of storytelling with modern technology. The result is a combination of text, voice, music, images, and video, which captures an experience. After 13 middle and high school teachers participated in a 5-week program in China, the researchers analyzed daily journals of the participants and used a three-level framework for evaluating level of reflection by Bradley to evaluate their digital stories (Walters et al., 2011). They found that the digital stories of the educators were better sources of assessing the impact on the participants' intercultural competence because they provided more insight into the individuals' changes. In contrast, the journals resembled reports of daily tasks and sites visited (Walters et al., 2011). This study highlights the role that technology may have in not only providing opportunities to interact with others but also providing ways of interacting with and reflecting on international experiences that couldn't be done otherwise.

As the above studies show, other online technologies have been used for international collaboration. In the next section, I discuss what 3-D virtual environments are, how educators are using them, and what makes them particularly attractive as educational tools. There are many unique applications of 3-D virtual environments, but investigations about international experiences can benefit from further discussion.

### *Online 3-D Virtual Environments*

Online 3-D virtual environments provide a rich, multisensory experience using 3-D graphics, audio, and real-time social interactions. These environments are providing learning opportunities and interactions outside of what is possible in real life. An example of an online 3-D virtual environment is Second Life, which is accessible through the Internet using a personal computer. Interactions take place in real-time, and people can communicate by using the keyboard or a microphone. The environment, referred to as the “world” is created by its users, referred to as “residents” (Linden Labs, 2014). An avatar, a 3-D digital persona, is used to navigate the virtual world by walking, running, flying, teleporting, or swimming. Residents interact with the world through their avatars by touching, examining, and building. Interactions with each other can take place through chatting, talking, animations, or sharing objects, links, and locations. Examples of places to explore include shopping malls, dance clubs, museums, beach resorts, libraries, theaters, and classrooms. Therefore, there is a great deal of flexibility in how the world can be used and the nature of the interactions. Because of its flexibility and the rich visual and auditory environment, Second Life and other 3-D virtual environments have attracted the attention of many educators and researchers. Many have reported on its potential as an educational tool (Klopfer, Osterweil, Groff, & Haas, 2009; Salmon, 2009; Twining, 2009). Klopfer et al. (2009) advocate the use of simulated environments along with guided facilitation to provide learners with opportunities that they cannot experience in the classroom. Berge (2008) promotes the use of Second Life because of its potential for role-playing, simulation, and peer interaction. Coffman and Klinger (2007) describe the

potential of Second Life as a valuable learning tool that can help motivate students to explore new concepts. Others encourage the use of Second Life for foreign language instruction because of its immersive, lifelike 3-D environment and the impact of social presence on the learners (Canto, Jauregi, & van den Bergh, 2013; Cooke-Plagwitz, 2008; Peterson, 2010; Wang, Calandra, Hibbard, McDowell Lefaiver, 2012). An additional benefit is that it is inexpensive to implement relative to the potential learning opportunities it offers (Salmon, 2009).

Educators who use Second Life discuss its value in terms of its suitability for constructivist learning. Constructivist theories treat the concept of knowledge as something that grows and changes as a product of experience, interaction with others, and collaboration. In constructivist theories, learners construct knowledge based on their experiences and reflection. (Bruner, 1990; Cole, 1986; Piaget, 2001; Vygotsky, 1978; Wertsch, 1984; Wertsch, 1985; Wertsch, 1986). Second Life can provide an ideal combination of the conditions for the application of constructivist learning theories because users experience multiple sensory stimuli in addition to real-time synchronous interactions with people from all over the world. Learners have unique opportunities to experience activities that would be impossible to do in a traditional classroom. With these limitations removed, the learning environment takes on a sense of freedom and playfulness and encourages learners to challenge themselves (Twining, 2009).

Pedagogic approaches that have developed out of constructivist theories include experiential learning, simulations, problem-based learning, and situational learning. These approaches have the concept of play in common, play being the point at which a

learner uses his or her imagination and previous experience to interact with the world (Vygotsky, 1978). These approaches emphasize the value of role-playing to engage the student in the thinking process, the importance of having the influence of peers, and the need for the instructor as a facilitator. The combination of play and the presence of a social community makes online 3-D virtual worlds both an intrapersonal and interpersonal experience.

Another unique strength of using 3-D virtual worlds for education is that the environment can simulate real-world situations and give students experience with complex problem solving before they must attempt it in life. Specific applications of this include learning languages, collaborating on a communications course project, teaching Asian religions, aiding scientific inquiry, giving news broadcasts, practicing guided tours, preparing pre-service teachers, and preparing study abroad participants. (Canto et al., 2013; Foss, 2009; Gil Ortega & Romans-Roca, 2010; Gregory & Masters, 2012; Hickey, Ingram-Goble, & Jameson, 2009; Hsu, 2012; Jarmon, et al. 2009; Mahon, Bryant, Brown, & Kim, 2010; Muir, Allen, Rayner, & Cleland, 2013; Nelson & Erlandson, 2008; Peterson, 2010; Prude 2013; Wang et al., 2012).

A popular application of Second Life is language learning. According to one study by Canto et al. (2013), a significant difference in oral communication growth was found between experimental and control groups of Spanish language learners based on oral pre- and post-tests. They also found that there was some indication of better awareness of cultural contrasts. Another study by Wang et al. (2012) found significant improvements between pre- and post-tests of Chinese students learning English. Peterson

(2010) reported that his students found using Second Life enjoyable and that the students felt more involved in the communication because of the use of avatars.

Second Life's potential for collaborative communication projects is shown in a project led by Jarmon et al. (2009). They designed a graduate course based on experiential learning, which required the students to apply principles of communication to a collaborative project. The communication students met with architecture students in Second Life to build virtual houses. The houses were models of a real housing project in Austin, Texas, and they were used to give virtual tours of the homes. The goals of the course were to complete the virtual housing models and to give the students the opportunity to work with others to complete the project. The students successfully completed the project together and had a ribbon-cutting ceremony to present their model in Second Life. The instructors found very positive feedback from the students about the experience because it allowed them to create something real that could be used after the end of the course (Jarmon et al., 2009).

Prude (2013) used Second Life and a course management program to teach an online course in Asian religions. The advantages of using Second Life for such a course included animations that allowed the students to experience movements that they wouldn't be able to do in a classroom. In addition, the instructor noticed that students who were quiet on the course discussion boards were more outgoing and forthcoming during discussions in Second Life, and she attributed this to the ability to interact more anonymously through the avatar. Drawbacks included the user-created environment that allowed people to represent ideas that were inaccurate or culturally inappropriate.

Although some of the sites that the instructor used for Second Life had stereotypical or inaccurate representations of the religions, she used these as teaching moments to talk about correct symbolization and cultural appropriateness.

To help students develop scientific inquiry skills, Nelson and Erlandson (2008) used a 3-D virtual environment similar to Second Life called River City. Middle school students used a 3-D virtual environment to role-play as scientists who had to discover what was causing illness in an imaginary town. The course was designed around a problem-based learning strategy as students were given clues in the form of interactions with the virtual world and the residents in the world. Students collaborated in-world with other students to find the cause of the illnesses while strengthening their research methods, hypothesis testing, and collaboration skills (Nelson & Erlandson, 2008). A similar virtual environment called Quest Atlantis, described by Hickey et al. (2009) is based on situational learning. Middle school students learned ecology by exploring the Quest Atlantis environment and by interacting with the objects in the world as they collected information and built understanding of ecological concepts (Hickey et al., 2009).

There are other projects that take advantage of the ability to perform role-plays in Second Life. Foss (2009) described the LiVE project (Learning in Virtual Environments), which uses Second Life to teach university students about broadcasting and television. Students used role playing and simulations to practice the content that they learned before going into the field. The simulations reduce risks that are found in real life such as insurance liability, the cost of equipment, and the coordination of travel time. While field

work in this class was still necessary, students found the virtual environment useful for its flexibility and creativity when they planned their projects (Foss, 2009). Another class for tourism majors used Second Life to have students practice giving guided tours in virtual Paris (Hsu, 2012). The students role-played as tour operators and gave positive feedback about the experience. The virtual site gave them practice that would have been impossible or prohibitively expensive in a real location. They also had the opportunity to learn how their classmates conducted tours and developed their interpersonal communication skills in discussion of the role-play sessions (Hsu, 2012). Role-play in Second Life has also helped pre-service teachers learn to deal with classroom management issues and special needs students (Gregory & Masters, 2012; Mahon et al., 2010; Muir et al., 2013). In addition to role-play, virtual field trips, simulations, and scavenger hunts provided Spanish language learners pre-departure support for a year abroad in Spain (Gil Ortega & Romans-Roca, 2010). These studies are just a few examples of how Second Life can provide opportunities that are not possible or that risk negative consequences when practiced in the real world.

Finally, Second Life has also been examined in the context of its ability to provide content attractive to different learning styles. According to some researchers, people process information using different senses and tend to have a preference for learning through visual, auditory, kinesthetic, or a combination of these senses (Fleming, 2009; Gardner, 2006). Along with the rich multi-sensory stimuli, Second Life provides the opportunity to use a variety of communication methods that complement different learning styles because of the way that residents can hear, see, and manipulate the world

with their avatars. Conversations can take place using a microphone, and auditory learners can take advantage of sound files, live lectures, real-time discussions, and live music concerts. Visual learners can interact with images, video, slideshows, multiple viewing perspectives, and objects. For those who would rather not listen to information, note cards that they can read can be collected in-world. In addition, Second Life is a 3-D environment with rich visual detail such as interactive images, maps, and models. Kinesthetic learners can walk, run, drive, swim, or fly through the world and explore by manipulating objects and interacting with models.

An example of a location in Second Life that has been designed for different learning styles is Genome Island (2014). It was created by Dr. Norval Kneton while he worked for Texas Wesleyan University. The island is used to support university-level genetics classes. Among other things, you can find a giant cell that you can walk into and explore as interactive cell components float around you. Virtual laboratories where you can manipulate variables to observe cause and effect are located throughout the island. Simulations such as animal breeding designed to demonstrate principles of genetics are impractical or impossible to do in real life student laboratories but can be done in Second Life. In addition to these special modes of communication and interaction, creators can embed video, slideshows, links to websites, sound files, and images within the environment (Genome Island, 2014).

Virtual environments such as Second Life can be powerful tools for learning because they provide learning opportunities and interactions with others from around the world that could not exist elsewhere. The types of interactions and the learning

environment in virtual worlds make them especially suitable for methods that use a socio-cultural learning theoretical background.

However, because of the rich environment, instructors sometimes struggle with effective implementation of virtual environments into their current instructional designs. Hui and Russell (2008) found that good intentions for using technology for social collaboration can sometimes have unexpected negative results if care is not taken during the development of the instructional design and the monitoring of the interactions to promote shared understanding. To help other instructors avoid course design issues, some researchers are developing models that will help others in the design of their classes in virtual worlds (de Freitas & Neumann, 2009; Gul, Gu, & Williams, 2008; Jarmon et al., 2009).

The advantages of using online technologies for internationalization have been recognized by instructors who have used online technologies such as virtual classrooms, discussion boards, email, videoconference, and chat programs to facilitate online collaborative learning in international settings (Belz, 2005; Held, 2010; Kemppainen et al., 2012; Leask, 2004; Lu et al., 2004; Sanders, 2012; Rautenbach & Black-Hughes, 2012; Vogt, 2006; Zhu et al., 2005). While these examples demonstrate that educators are exploring the potential to use technology for internationalization in their classrooms, the field can benefit by additional research on international interactions in Second Life. This study adds to the body of literature by investigating how the Second Life technology was used to give students an international experience. It investigated the experiences of the

students within a unique context by examining the relationship between the course design, Second Life, and the international experiences of the students.

The above review of the literature shows how educators have used Second Life and other 3-D virtual environments to enhance the learning experiences of their students, to provide opportunities to practice applying knowledge in a risk-free environment, and to provide opportunities not otherwise available. The last section of this chapter will discuss socio-cultural learning and Activity Theory, which was used in this study as a lens to investigate the nature of the student experiences.

### **Socio-Cultural Learning and Activity Theory**

Socio-cultural learning is based on constructivist theories that emphasize the concept of knowledge as a product of experience, social interaction, and collaboration. A central component of these ideas is that humans learn through experience and that knowledge is constructed according to unique perceptions of experience and environment (Bruner, 1990; Cole, 1986; Piaget, 2001; Vygotsky, 1978; Wertsch, 1984; Wertsch, 1985; Wertsch, 1986). Socio-cultural learning developed out of the works of Piaget (2001) and Vygotsky (1978) in response to traditional approaches to education that relied on lecture-based teaching methods and that treated knowledge as absolute and additive. Traditional methods separated the individual from the environment, treated knowledge as a transmission of information, and placed the teacher in the role of an authority figure and students in the role of passive learners. Socio-cultural learning became very influential in the 70s and 80s, and it was advanced in the field of education by other scholars and scientists such as Wertsch (1984, 1985, 1986), Bruner (1990), and Bereiter (2000).

Fundamentals of socio-cultural learning include active engagement in the learning process, meaning making of the experience, cooperation with others, and learning in authentic contexts (Jonassen, Peck, & Wilson, 1999; Roschelle, Pea, Hoadley, Gordin, & Means, 2000). Other characteristics that define this approach include the definition of knowledge, the interpretation of truth, the importance of learning from others, and the subsequent change of instructor and student roles.

Regarding the way that socio-cultural learning approaches the ideas of knowledge and truth, knowledge is considered dynamic and truth is based on multiple perspectives (Wertsch, 1985). According to these ideas, there are a number of versions of the truth, limited only by the uniqueness of each individual. Individuals interpret events based on their experiences, cultural backgrounds, and unique personalities. As children, people learn from their elders and other children who shape the cultural assumptions and values that are used to interact with and evaluate experiences (Cole, 1986). This multidimensional characteristic of the learner plays a crucial role in the learning of others as they collaborate and share worldviews using each other as primary sources of information.

The importance of learning from others is key to socio-cultural learning. During the development of his theory, Vygotsky (1978) connected two very important principles of learning: speech and activity. He wrote that while these concepts were studied as independent factors of learning, when used together, they were the most powerful force for learning (Vygotsky, 1978). The assumption of multiple truths requires that each

individual is valued for their difference and unique worldview and that they can share these things with others as they contribute to activities together.

Socio-cultural learning requires a shift in the responsibilities of the instructor and learner. Instructor roles change to accommodate the new learner profile, and they become a facilitator who helps the student reach understanding (Russell, 2008; Russell, 2009). As individuals learn from others through experiences and interaction, the nature of knowledge moves away from the concept of something that is transmitted and toward a concept of something that evolves and is constructed by the students. Learners become internally self-motivated as they develop confidence in their own ability to discover, understand, and solve problems (Wertsch, 1984). With this internal motivation, the learner takes on the responsibility for his or her own learning. Rather than passive recipients of information, learners take on an active role in developing understanding on their own. An example of how the instructor's role fits into this process is related to the concept of the zone of proximal development, initially developed by Vygotsky (1978). This concept states that learners should be given tasks that are just at the threshold of challenging their achievement. Wertsch (1984) explains the idea of the zone of proximal development further. Knowing what the student is capable of doing on their own, they should be challenged with a problem that they could not do on their own but could do with a little bit of help from a facilitator or classmates (Wertsch, 1984). Boyer, Maher, and Kirkman (2006) view online learning environments as an opportunity to move beyond the transmission of information toward deeper reflection and meaning making. They emphasize that especially in online learning situations, the change in the instructor

and student roles is vital to a quality learning experience. These characteristics are emphasized by de Freitas and Neumann (2009) in their discussion of successful instructional design models in virtual environments. The instructor role becomes more like a choreographer of learning experiences, which should empower the learner and promote learning by sharing with others in the learning environment (de Freitas & Neumann, 2009).

Virtual environments support constructivist, socio-cultural learning because they allow students to learn from each other, explore, discover, interpret, and reflect as part of the learning process. However, in order to avoid obstacles that could impede the learning process, there are some things to consider when designing a project. Some considerations for designing socio-cultural online learning projects are discussed below.

Jarmon et al. (2009) discussed training and technical support as an essential component of learning in a virtual environment. Training for the use of the virtual environments can be built into the experiences in-world to gradually develop the student's comfort level. This idea is based on Vygotsky's (1978) zone of proximal development, in which easier tasks are assigned first, and then gradually more challenging tasks are assigned to build on the student's progress. Jarmon et al. (2009) also recommended that the instruction should be project-based with an emphasis on experiential learning. A variety of approaches should be used so that students have a chance to learn using ways they are comfortable with in addition to new strategies that will help them develop different skills. For example, various tasks can be assigned,

including some research-based, some that require thought as an individual, and others that require role-play and collaboration (Connolly & Russell, 2008).

Another piece of advice from several other studies is that students need to feel a sense of community. These studies suggest that courses using technology for socio-cultural learning must be developed very carefully in order to optimize the level of interaction among the students and effective processing of the course information (Barab, MaKinster, & Scheckler, 2003; Biesenbach-Lucas, 2004; Bober & Dennen, 2001; Sorensen & Takle, 2001).

Sorensen and Takle (2001) analyzed student dialogue from online interactions over several semesters. They optimized the design of their collaborative projects to best promote knowledge building, and they found that providing meta-awareness to the students about what they posted on discussion boards helped students discuss topics more deeply. However, this format of discussion came at the expense of more chat-like social discussions including spontaneity and high interactivity, which are essential in providing a sense of relationship to others in the group (Sorensen & Takle, 2001).

In another project, Bober and Dennen (2001) used the concept of shared understanding to evaluate the potential for online communication technologies to promote knowledge building and community formation. They questioned the lack of social feedback similar to what one would experience in a face-to-face interaction (Bober & Dennen, 2001). However, Antonijevic (2008) found that Second Life interactions have a form of non-verbal behavior that is interpreted similarly to face-to-face non-verbal cues, creating a stronger communicative environment.

### *Assessing Student Outcomes and Activity Theory*

Socio-cultural learning requires different research approaches to describe student outcomes. Traditional methods of instruction treat knowledge as additive and assess learning using quantitative instruments. However, this is not an appropriate assessment style for socio-cultural learning outcomes. Hickey et al. (2009) suggested that an assessment should evaluate whether what was learned has some usefulness or importance to the learner. Educators have used qualitative methods to better understand student outcomes from classes based on socio-cultural learning theories (Boyer et al., 2006; Barab et al., 2003).

Boyer et al. (2006) used qualitative analysis of an online class to look for transformative learning experiences for students. Transformative learning is defined as experiences that result in a change of belief or perspective, continuing discourse to negotiate meaning for a new perspective, or taking action on a newly formed idea (Boyer et al., 2006). Students used self-direction and collaboration to learn about the roles of technology in schools. Part of the motivation for this study was a doubt about whether online courses could result in in-depth learning and critical reflection, which are characteristics of transformative learning. Boyer et al. (2006) found that their online course model resulted in transformative learning at different levels for many of their students. They identified the key factors in the course design that contributed to transformative learning as self-direction, peer interactions, and the role of the instructor as a facilitator (Boyer et al., 2006).

Barab et al. (2003) used a qualitative study to analyze the dynamics of a virtual community. They wanted to find out what patterns characterized successful virtual communities, which they called a community of practice. Their communities of practice were groups of pre-service math and science teachers who used a website to share, discuss, and develop inquiry-based lessons. They believed that online virtual communities should only be used as supplements to face-to-face meetings, and the patterns that they found were used to make suggestions about the development of future social learning communities.

Other researchers have used Activity Theory to understand and improve instructional design, training systems, and services in educational settings (Guldberg 2010; Russell, 2005; Spendlove, Howes, & Wake, 2010; Villeneuve & Shulha, 2012). Activity Theory is a system that stems from socio-cultural learning theories and is used for understanding the complexities of human goal-seeking behavior (Bruner, 1990; Cole & Engeström, 1993; Russell, & Scheniderheinze, 2005; Vygotsky, 1978; Wertsch, 1998). It is based on the idea of human activity, the actions that people do as they attempt to interact with an object in order to reach a certain goal. Actions can be internal or external, meaning that mental activities can also be considered an action. The object can be tangible or intangible, and the person often will use some kind of tool to interact with the object, which is known as mediating. The tool can enhance the interaction, but it can also restrict the attainment of the goal based on its own limitations. Activity Theory is not a measurement tool, but it is a framework that can be used to understand and describe a

person's actions within a particular situation as it is influenced by a social and culturally-influenced context (Kuutti, 1995).

Jonassen (2000) supports using Activity Theory to understand learning environments because it provides a perspective for looking at learning systems as an ongoing process and can help evaluate interactions between the learner and challenges that arise within the learning environment. The model for Activity Theory in learning environments maps out a subject's progress as interactions among six different nodes. Cole and Engeström (1993) define these nodes as the Subject, Object, Mediating Artifact, Outcome, Rules, Community, and Division of Labor. These are areas in which conflict may occur and influence the goal-seeking behavior of the learner. As they mediate those conflicts, they undergo a change as they work to reach their goal (Cole & Engeström 1993).

Bannon and Bødker (1991) use an ordinary example to illustrate the Activity Theory framework. A carpenter uses construction tools to build houses and a teacher uses books and language to teach a subject to her class, but the process of reaching those goals are much more complex than the people and those items. There are ways of doing the work that are passed down by tradition and other practitioners, there are other carpenters and teachers, and there are many components that go into getting the work done: the tools they use, the way the tasks are divided up among others, language, norms, and belief systems. These components are called artifacts, and they not only shape the way a person acts, but they are also shaped by the person, a notion referred to as mediation. Activity

Theory looks at the mediation of artifacts and takes it in context to describe actions of individuals or organizations (Bannon & Bødker, 1991).

Activity Theory has been used to understand and improve instructional design and services in educational systems. One study by Villeneuve & Shulha (2012) used Activity Theory to understand the nature of school-based occupational therapy from the perspectives of the recipients of the service, the service providers, and the administrators. The study helped to improve programming for students with disabilities. Spendlove et al. (2010) used Activity Theory to analyze mentor and trainee dialogues in a teacher training program. They used their study to improve and strengthen the partnerships for the sake of new teachers' professional preparation (Spendlove et al., 2010). Guldberg (2010) helped define conditions of productive learning by using Activity Theory to analyze an online professional development group of care-givers and practitioners in the field of autism. They found that the group first established a community through questioning, sharing, and constructing common understandings. They were then able to challenge each other and establish new values and understandings, shaped by different perspectives (Guldberg, 2010).

Russell (2005) used Activity Theory to conduct a case study of urban 5<sup>th</sup> grade teachers as they attempted to use an online problem-based learning environment in their classroom. To help understand how teachers implement new learning environments, the model was used to examine the teachers' work activities and the problems that occurred during the implementation of a new project. She described the work activity of the teacher in terms of conflicts among the nodes in the Activity Theory model, which are

called turning points. At each turning point, the researcher explained whether or not the conflict was resolved, and if so, what happened to resolve it. The results can be applied to the understanding of how teachers go about designing learning environments. As a tool to understand complex instructional design, it provided an ideal model for me to use to describe student experiences as they seek the goal of interacting with an international partner and completing an assignment.

### **Summary**

In this chapter, I have established the theoretical foundation that I used to inform my study. My framework includes work on the process of internationalization and the development of global competence, online international interactions and 3-D virtual environments, and socio-cultural learning and Activity Theory. The relationships among these concepts provide a unique perspective for this study. Virtual environments such as Second Life offer an opportunity to apply socio-cultural theories to a learning environment. In addition, they offer situations that would not otherwise be possible, such as interactions with people from other countries. The technology in these types of environments can give learners the means to explore different ideas and meet different people, and the interactions in this study are an example of faculty-led internationalization initiatives. The findings from this study provided a better understanding of how Second Life might be used for internationalization, the development of global competence for participating students, and how the course design and technology contributed to the experience.

## CHAPTER 3

### METHODOLOGY

As a qualitative investigation, the goal of this constructivist case study was to describe the nature of an international interaction between American students and their international partners. Case studies are a research strategy that focuses on a unique situation in order to understand and provide a rich, in-depth description of its nature and context (Eisenhardt, 1987; Gall et al., 2007). A constructivist perspective provided a framework from which I could explore the student projects as created experiences. This perspective considers how the students constructed reality, how their beliefs impacted their perceptions, and what consequences resulted from their behaviors based on their constructed reality (Patton, 2002).

I used student documents, student interviews, and a pre- and post-survey to help me describe the nature of the experience and to collect indicators of development of global competence. In addition, I used a model developed from Activity Theory to examine the nature of the experiences and the relationships among various student activities as they sought to meet with their partners and complete their assignments. Activity Theory is used to understand complex activities of people as they work toward a goal, and it is a system based on socio-cultural learning theories (Bruner, 1990; Cole and Engeström, 1993; Vygotsky, 1978; Wertsch, 1998). In my Activity Theory model, shown in Figure 3.1, the desired goal is an interaction with an international partner that will lead to the completion of the course assignment.

## **Review of Problem Statement and Purpose**

Internationalization is a popular movement in higher education. As a gradual process, it involves complete institutional involvement including administrative support, development of study abroad programs, recruitment of international faculty, staff, and students, curriculum development, and faculty involvement (Deardorff, 2006).

Internationalization efforts seek to build global competence skills of university graduates. According to Hunter et al. (2006), global competence is characterized by open mindedness, cultural sensitivity, understanding of different norms and expectations, knowledge of world events, geography, and languages. People with global competence use these skills to successfully work outside of familiar environments. Reports on internationalization, such as the Open Doors report, focus on students who participate in study abroad and international students who study in the United States (IIE, 2013). However, the ways that faculty members internationalize their courses are often overlooked.

While faculty involvement may play a significant role in global competence skills of students, course design issues may impede some internationalization efforts. For example, attitudes of American students were influenced by components of the course design when they used blogs to interact with international partners (Russell et al., 2006). Lu et al. (2004) reported negative experiences for some American students who collaborated online with international peers because the course design did not consider language proficiency issues. Belz (2005) found that the questioning techniques and lack of face-to-face communication may have affected relationship building between students

from the United States and Germany and discussed the idea that stereotypes might be reinforced due to ineffective communication (Belz, 2005). Zhu et al. (2005) found challenges of miscommunication between American and New Zealand students but resolved them with the careful design of assignments. Studies such as these offer thoughtful advice for those who hope to create similar projects.

Some of the technologies that have been explored for online international interactions include virtual classrooms, discussion boards, email, and chat programs (Belz, 2005; Burke et al., 2010; Kan, 2011; Kemppainen et al., 2012; Leask, 2004; Lu et al., 2004; Rautenbach & Black-Hughes, 2012; Sanders, 2012; Vogt, 2006; Zhu et al., 2005). Virtual environments are a way to offer unique opportunities, but there is limited information about their use as an internationalization tool. Educators have been using Second Life to create socio-cultural learning opportunities for their students, and it provides content and interactions that are not available elsewhere. However, there is limited information related to its specific use as a means of internationalizing the curriculum.

The purpose of this study was to examine student experiences of an international interaction in an online 3-D virtual environment at a Midwestern university. I investigated the experience of the students in terms of their development of global competence, the course design, and the use of a virtual environment. The goal of this research was to benefit others by contributing to the body of knowledge about the use of a 3-D virtual environment as an internationalization strategy.

## **Research Questions**

The research question for this study asked: What is the nature of the interactions that will take place between American university students and international university students in a 3-D virtual environment? The progressive research questions that are perceived to influence the nature of the experience were:

1. What will the analysis of student documents, student interviews, and a pre- and post-survey suggest about the development of global competence for the American university students?
2. How will the students experience the course design and the use of the 3-D virtual environment?

## **Rationale for Qualitative Research**

This research used a constructivist case study approach by doing an in-depth analysis of student documents and interviews to understand what occurred during the experience of a group of students who participated in an online international interaction. A case study can provide a description that is useful when a researcher seeks to understand a unique situation over which they have little control (Patton, 2002). Eisenhardt (1987) describes a case study as, "...a research strategy which focuses on understanding the dynamics present within a single setting." Gall et al. (2007) support case studies as useful for understanding the unique contexts of individual cases and to provide insight that can be used to generate additional hypotheses to guide future research. A case study was chosen for this investigation because it is a unique setting, and the interactions can be described in-depth to enhance our understanding.

I selected a constructivist perspective for this case study in order to do a thorough exploration of the student experiences. A constructivist perspective can help describe a situation more completely by identifying multiple realities as each student experiences the interaction differently (Maxwell, 2005). As explained earlier, internationalization is a long-term commitment and must use multiple strategies. Therefore, the outcome of internationalization, global competence, is gradual and cumulative. To fully describe the experience of the students and their development of global competence, it is necessary to consider the way they construct reality - what they are already bringing with them and the attitudes and values they hold that might influence their behavior and interpretations. By using this approach, I hoped to better illustrate the unique interpretations and reactions of the students as they brought in different world views, experiences, and expectations to the project.

In an earlier study, negative attitudes were reported when students did not receive regular correspondence from their international partners, but only a survey instrument was used, and I wanted to look more closely at the experiences to see what was happening (Russell et al., 2006). Bowen (2005) describes the biggest strength of qualitative research as its ability to create understanding of real-life phenomena and experiences. Quantitative studies can leave out important details about an experience. Another advantage of conducting a qualitative study is that it preserves the human aspect of this project. Greene (1997) writes that, “The more continuous and authentic personal encounters can be, the less likely it will be for categorizing and distancing to take place.

People are less likely to be treated instrumentally, to be made ‘other’ by those around” (p. 511).

Because I wished to study a particular class and explore what occurred when the students used a 3-D virtual environment to interact with others, I did not feel that a quantitative approach would be an appropriate way to answer my research questions. Instruments exist to quantify the intercultural sensitivity of individuals, which is a component of global competence. However, looking at only the intercultural sensitivity before and after the experience would not give a full understanding of what happened during the interactions. As Cone and Foster (2006) explain, an instrument must be chosen wisely, fit the population, and must be able to measure what is to be studied. Because I was interested in describing what happened during the experience, I chose to develop my research as a qualitative study.

In addition to these reasons, a case study is a way to add insight about international interactions in 3-D virtual environments. Gall et al. (2007) talk about using case studies to generate more questions and to guide future research. The body of knowledge about international interactions in Second Life can benefit from continued investigation and discussion. This qualitative study attempted to give a fuller picture of the experiences of these students, which could not be described as in-depth with a quantitative study.

### **Participants**

The professor of this class had been integrating various learning technologies within his courses and had become proficient in the use of Second Life before he taught

the composition classes in this study. His awareness of the learning styles of undergraduate university students in composition informed the design of his course materials and the implementation of the technology to offer this unique online interaction component to his students. The professor had agreed to collaborate with another professor in Sweden who taught a similar-sized, face-to-face undergraduate course at a mid-sized university located in the southern part of Sweden.

The English composition course that I used for this case study was offered in a primarily online, synchronous format. The course was designed with face-to-face meetings at the beginning and subsequent online sessions in Second Life. It was chosen because it provided a real example of how 3-D virtual worlds could be used to internationalize general education courses. The course was a good fit for a case study because courses at this particular Midwestern university typically have small class sizes. In addition, the group of students who took part in the international interaction within Second Life was a small number of individuals. The course in Sweden was taught face-to-face with some interactions in Second Life, and it used English as the language of instruction.

Students in this study were undergraduates at a Midwestern university and were enrolled in a required English composition course that fulfilled a general education requirement in their degree programs. The students self-identified their nationality as American, and the six students in this study were referred to as “American students” and “students in the United States”. None of the six students had lived outside of the United States. They were traditional students aged 18 to 22 years old in their freshman or

sophomore year, and they were from various majors. Students taking the class in Sweden had a wider range of ages than the students at the Midwestern university, including several non-traditional students with full time jobs and families.

The American students and the students in Sweden had different roles. The professor in the United States gave the American students a selection of topics to choose from, and their assignments were to write two different papers related to topics that they had researched in Second Life. Examples of the choices of topics included: education, entertainment, religion, or a real-life international location in the Second Life world. After using Second Life for a few weeks on their own, the students in the United States were matched with their partners in Sweden by the professors. The American students were supposed to schedule time with their international partners outside of class so that they could teach them how to use Second Life and explore the world together while collecting information for their papers. The professor in Sweden had two main goals for his students in this project. The students in the United States had started using Second Life before the term in Sweden began, so the Swedish students were supposed to use them as a resource to learn to navigate the environment. The Swedish students were working on a presentation project, and a second task was to work with the American students to get feedback on their projects.

In Second Life, the students created an avatar, or an online representation of themselves. To protect identity, avatar names were collected during this study, but the avatar names were not connected to the students' real names in the final data set. In addition, pseudonyms were used when reporting the findings so that the professor could

not identify individuals. The pseudonyms were created by assigning a name, which retained the identification of male or female, based on what was indicated in the survey.

### **Procedures**

The course in the United States was scheduled twice a week for a total of sixteen weeks over the Fall 2010 and Spring 2011 semesters. Courses in Sweden were on a block system, so the students in Sweden attended courses Monday through Friday, two hours each day, for approximately five weeks. The interactions took place during the overlapping time periods of the two terms, and this was when the data sources were collected from the students.

At the beginning of the course, the professor in the United States told his students that a graduate student would be asking about their experience in the course. There were three separate periods of data collection from the students – a pre-survey, a post-survey, and an interview. In addition, student blogs and papers were collected after the course was complete.

The pre-survey was the first piece of data collected, and it was given to the students at the Midwestern university at the beginning of the course. It collected demographic information, comfort level with technology, previous international experience, and information related to global competence. Next, a post-test was given to the students to collect attitudes about the experience and information related to global competence. Finally, interviews with each of the students via Skype voice calls (Skype, 2014) were scheduled during the last week of classes. A semi-structured interview format

was used to encourage the students to speak more freely and to elaborate on their experiences (Patton, 2002).

While working on the assignment, students were required to keep a regular blog. After the class, the blog posts that the students had written were collected along with their papers. Blog documents and student papers were imported into QSR's NVivo 10 software and analyzed for themes using a generic coding scheme as described by Miles and Huberman (1994) (QSR, 2012).

In addition to the data collected from the students, the professors were interviewed at the beginning of the course to ask about the course design and goals. The professor interview provided information about the curriculum design, the professor's expectations of the use of Second Life, and the professor's goals for the interactions with international students in Second Life. Both professors at the university in the United States and the university in Sweden were interviewed.

#### *Pre-Survey and Post-Survey*

The purpose of the surveys was to collect information and provide another data source that I could triangulate with the student documents. The responses provided information such as the student backgrounds, their interest and previous exposure to international activities, and their intercultural sensitivity attitudes, which I used to more fully describe their experiences.

Before data collection, the professor approved the surveys that were given to the students. The pre-survey was available for the students during the beginning of the Fall 2010 and Spring 2011 semesters. The professor announced the availability of the surveys,

and students completed them on a voluntary basis before a deadline. Students used their avatar names on the surveys so that responses could be matched to the other pieces of data while maintaining confidentiality. Before entering the surveys, the student read the informed consent document and agreed to participate by electronically submitting their agreement. Surveys were available only once and were not accessible after the student had submitted them.

The pre-survey collected demographic information, comfort level with technology, previous international experience, and information related to global competence. The demographic section of the survey collected information about their age, sex, college level, and nationality. Next, the students were asked to report their comfort level with technology by answering a series of questions using a 4-item Likert scale and yes/no responses. Examples of a question related to comfort level with technology was, “How comfortable are you using email?” “Have you ever logged into a 3-D virtual environment such as Second Life?” and “How comfortable are you with using Second Life?” Students were then asked about previous international experience using a 4-item Likert scale and yes/no responses. Examples of the questions about their experience were, “Have you ever studied abroad or participated in a work abroad program?” “Have you studied a language other than English” and “Do you maintain personal contacts (friends or family members who you regularly interact with) who are non-US citizens?” Finally, students were asked questions related to global competence using a 4-item Likert scale and yes/no responses. My survey questions related to global competence contained a few sections, which were designed based on the model by Hunter

et al. (2006). One section asked them to report about their interest in global awareness using a 4-item Likert scale. An example question was, "I keep up with world events and what is happening around the world." They were also asked to report on different international activities that interested them. Another section asked them to report their attitude about a university's role in international education using a 4-item Likert scale. Examples of questions included, "Experiences of American students at university can be improved by having international students and professors on campus," and "Undergraduates should have a study abroad experience at some point during their academic career." The last section of the global competence section was developed based on the descriptions of the skills in the Developmental Model of Intercultural Sensitivity (Bennett, 1993). Intercultural sensitivity is part of the attitude component in the global competence model from Hunter et al. (2006). Students were asked to answer the questions using a 4-item Likert scale. Examples of questions were, "There isn't really such a thing as culture shock," "Some values are universal to all humans," "People who live in Sweden tend to be more sophisticated than Americans," and "Technology is making the world homogenous."

The post-survey was available at the end of the Fall 2010 and Spring 2011 semesters, and it collected student attitudes about using Second Life and information related to global competence. Questions about their attitude on using Second Life were 4-item Likert scales and yes/no questions. Examples of the questions were, "My experience with Second Life was positive overall," "The orientation to Second Life prepared me for the activities required for my class," and "I will continue to log in to Second Life even

after the class is finished.” Questions in the global competence section of the post-test were the same as the pre-test questions.

Although Likert scales were used to collect information from the students, the intent of the surveys was not to quantitatively measure the student responses. The survey data helped provide more information with which I could describe the experiences and attitudes of the students as they related to international activities, the course design, and Second Life.

#### *Student Blog Posts and Papers*

Students were required to post regularly to a blog associated with the course. The blogs were to contain regular posts about progress they were making with assignments. Some entries were formatted similar to a journal entry, describing what they had explored in Second Life or describing a meeting with their classmates or international partner. Some posts contained portions of their assignments for feedback from the professor. The student papers were uploaded to an online site called Buzzword, which is a program used for online collaborative editing. The students wrote about their findings based on exploring a chosen topic in Second Life, and the professor encouraged the students to use information from their international partners in their papers. After the class, the blog posts were saved and papers were collected and imported into NVivo 10 software for analysis (QSR, 2012).

#### *Student Interviews*

To gain a fuller understanding of the student experiences, I conducted one-on-one interviews with each student (see Appendix A for the interview protocol). Although the

students had the option to meet in Second Life, all the students in this study chose to do the interview with a voice call. The interviews were voluntary, and students signed up for times when they would be free to receive a call. An additional purpose of the interviews was to triangulate the data by comparing the results to findings from the surveys, blogs, and papers.

While speaking with the students, I used a semi-structured interview in order to create a conversational feel to the interviews. I used Skype Internet calling software (Skype, 2014) to call the students at a number and time that they provided. The calls were recorded with Call Recorder for Skype (Ecomm Network, 2014), so that the conversations could be transcribed and analyzed at a later time. Semi-structured interviews allow flexibility while also providing enough structure to steer the conversation toward topics that would help me answer my research questions (Patton, 2002). Interview questions were formatted using indirect questioning to help prevent bias during the interview process. After talking about the course overall, I asked them to describe their interactions with their international partners, the personalities of their partners, their perception of their partners, what activities they engaged in when they met in Second Life, their roles and their partner's roles, other ways they interacted besides Second Life, and if they intended to keep in touch with their partner after the class was over.

### *Field Notes*

Eisenhardt (1987) encourages the use of field notes to keep track of the overlap among data sources during data collection. After each interview, I wrote a summary of

my interaction with the students, which included my overall impressions and anything that I perceived might help add to the description of their experiences. As I collected and analyzed data, I wrote notes about my analysis process. This not only provided a preview of the data analysis, but also assisted with my development of interpretive codes and themes. My field notes also served as a point of reference to reinforce my study's trustworthiness.

### **Coding**

Looking at themes in a set of data is a pattern-based coding process that involves chunking sets of data and assigning a code based on multiple occurrences and similar interpretations. Miles and Huberman (1994) described a process that researchers can use to select data when they code. They suggested starting with a research question and a theoretical framework to create a list of pre-determined themes that might be found in the data. Then, the researcher should balance this pre-determined list with an open coding process to allow new themes to emerge that the researcher might not have anticipated. Miles and Huberman (1994) define codes as, "...tags or labels for assigning units of meaning to the descriptive or inferential information compiled during a study" (p. 56). They describe codes as descriptive, interpretive, or pattern-based and state that a collection of the codes is a code list. To be consistent with this language, I referred to my list of codes for a group of data as a code list, and the term "theme" was used to describe a chunk of recurring, conceptually-related information to which codes had been assigned.

Overall, my initial coding process was inductive. Keeping in mind my main research question about the nature of the experience, I approached the data with an intent

to answer the question of, “What’s happening here?” As I read through the documents, I noted descriptive codes that were relevant to my research questions and theoretical framework. Relevant descriptive codes included information that was related to the model of global competence described by Hunter et al. (2006) – evidence of knowledge skills such as geography, language, or historical events, evidence of attitude skills such as openness toward difference or flexibility, and participation skills, such as active pursuit of an international activity. Other relevant descriptive codes included evidence of the use of Second Life and the experience of the course design. I was also interested in information related to the kind of activity the students showed throughout the experience. As I progressed with coding, I developed interpretive codes, which I then further grouped into themes.

My interpretative process can be described in the following way. A student described the experience with her international partner. At first, she told me that she thought it might be troublesome because she thought there might be language barriers, which I interpreted as an initial expectation. Later she told me that she had thought negatively about having to do the interaction, but that she had learned something, which I interpreted and coded as showing initial expectations. Another statement in her blog post reported the English level of her partner as very good, and she said that she was surprised. I interpreted this statement as showing surprise. I grouped these interpretive codes under a theme of changing ideas because they related to preconceived notions that she entered the project with but then revised later. Other themes that emerged from the data are displayed in Table 3.1.

### *Trustworthiness*

To avoid imposing a code list onto my sets of data, I remained open during the coding process. The same open coding process was used for all of the student documents - the blog posts, interviews, and papers. Trustworthiness of a study, as described by Patton (2002) requires credibility. One way I have provided credibility is by triangulating my data - using multiple data sources and comparing them. A more detailed discussion of trustworthiness is discussed at the end of this chapter.

Table 3.1.

#### *Emergent Themes in Blogs, Papers, and Interviews*

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Type of Activity (Themes)
Avatar Identity
Changing Ideas
Completing Assignments
Evaluating
Interacting with Partner
Interacting with Others

---

## **Analysis**

Before analysis, I examined all of my pieces of data and used the student avatar names to match the pieces. Each data source was collected at different times, and each piece was voluntary for the students. I wanted to focus on the experiences of students who had complete data sets including a pre- and post-survey, an interview, a set of blog posts, and at least one paper. After looking through my data sources, I found six complete sets of data.

Analysis of pre-survey and post-survey responses helped provide a description of the students' backgrounds and served as another data source with which to compare the student documents. The pre-survey responses gave me an idea of what previous experiences with technology and international activities the student started with. The surveys also gave me an idea of their attitudes about international education, openness to difference, the course design, and Second Life.

In terms of the blog posts, papers, and interviews, I used an inductive process and open coding to find descriptive codes that I grouped into interpretive codes. Then I developed larger groups of themes from my interpretive codes. NVivo 10 software was used to develop my code list. To summarize the activity for each experience, I used an Activity Theory model to show the various challenges the students faced and their mediating behavior.

### *Analysis of Survey Data*

The pre- and post-surveys collected information from the students using Likert scales, but the intent of the surveys was to provide additional information to help describe

the student experiences and to serve as an additional data source to compare with the findings in the student documents. Therefore, descriptive information for each student was collected that included demographic information, comfort level with technology, previous international experience, attitudes about international experience, and attitudes about the class. The questions related to demographic information, comfort level with technology, interest in global awareness, and previous international experience helped provide a picture of the students' background and experience. The information from these sections was used to describe each student at the beginning of the case study report. Questions related to global competence were divided into sections. The sections included interest in global awareness, attitude about a university's role in international education, and intercultural sensitivity. The items in the interest in global awareness section of the survey were yes/no responses, so a percentage was used to represent the proportion of activities in which the student showed interest. Responses in the other sections were collected using a Likert scale, and a summary score for these sections was calculated for each student. The questions related to intercultural sensitivity were based on the Developmental Model of Intercultural Sensitivity, and level of student agreement for each item was shown as a number on a 4-point scale (Bennett, 1986; Hammer et al., 2003). The post-survey asked an additional set of questions about the students' attitude about using Second Life for the course, and the student responses were described with a summary score for each student.

### *Analysis of Student Documents and Interviews*

The interview transcripts, blog posts, and student papers were imported into NVivo 10 software for analysis (QSR, 2012). To answer my research questions, I used a generic coding strategy as described by Miles and Huberman (1994) to identify, describe, and create a code list related to student activity that I found within the blog posts, interviews, and papers. I then used an Activity Theory model as a lens to view the student experiences as they encountered and resolved conflicts during the project. The types of activity and frequency were summarized for each student, and their turning points for conflicts were described.

### *Activity Theory Model*

After analysis of the data sources and describing the experience of the students, I used an Activity Theory model, based on previous work by Russell (2005) to help organize the activity of the students during the experience. The Activity Theory model provided a visual summary of the experience for each student and helped tell the story of the interaction. The model provided a way to view the student activity as interactions among six different aspects, or nodes. These nodes are illustrated in Figure 3.1 below and include Rules (the course design), Subject (the student and his/her beliefs and background), Mediating Artifact/Tools (the technology), Object (their experience with their partner), Division of Labor (the distribution of tasks, scheduling, and responses from international partner), and Community (the classmates, their international partner, the professor and others in Second Life).

After coding for student activity, I examined the themes that emerged and how they represented components of the Activity Theory model. For example, statements evaluating the course and the assignment related to the course design - Rules in the Activity Theory model. Statements that were related to helping and scheduling when interacting with the international partner represented Division of Labor in the Activity Theory model. Activity among these components eventually results in conflict, which must be resolved in order for the outcome to be reached. When conflicts occurred, the student's response to the tension was identified as a turning point. Using a similar analysis method as Russell (2005), the turning points were described for each student.

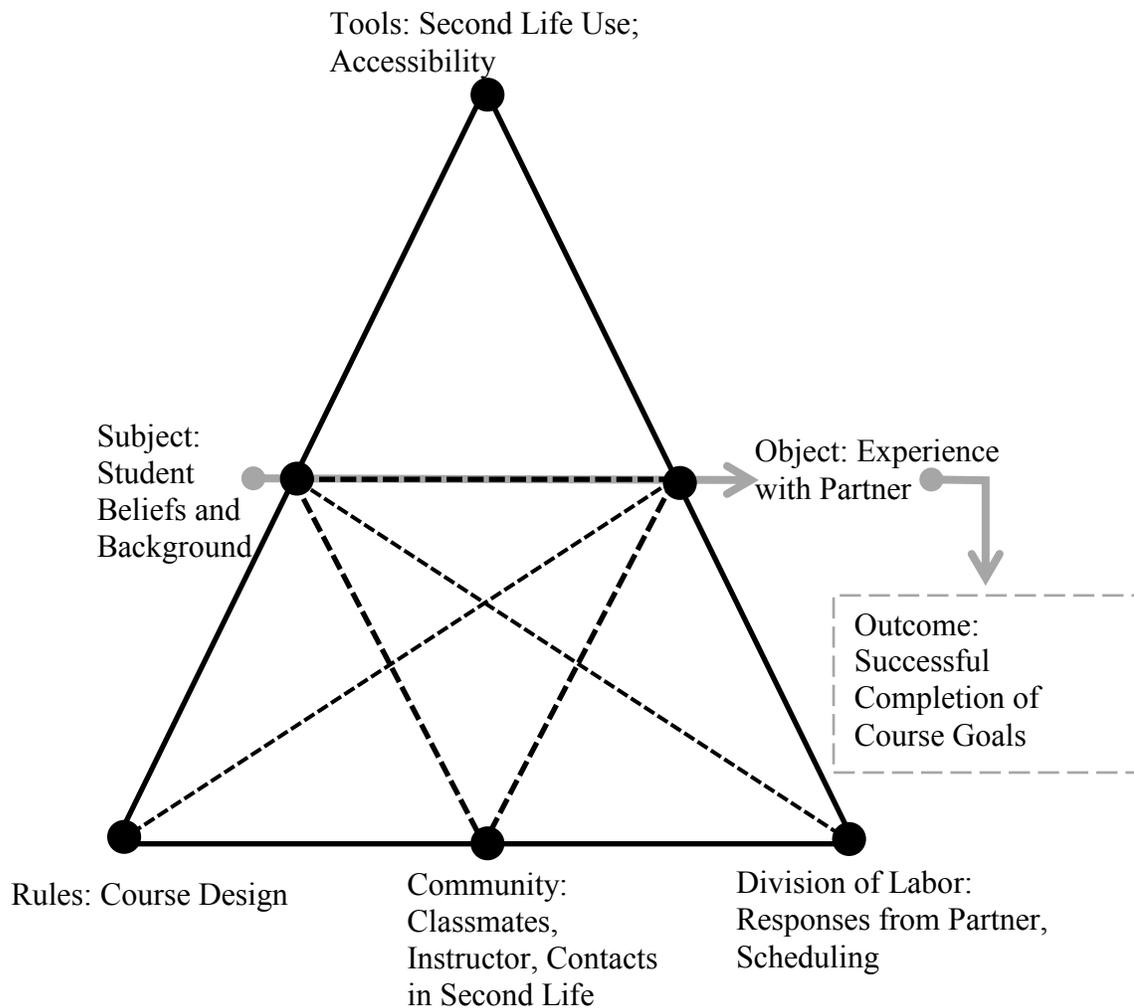


Figure 3.1. Activity Theory Model. The grey line shows the subject seeking the goal. The black dots represent nodes, between which conflict may occur as the subject moves toward the goal.

### *Cross-Case Analysis*

A cross-case analysis was done to explore the similarities among the six cases. According to Miles and Huberman (1994) a cross-case analysis can enhance generalizability and, within a qualitative study, its relevance and applicability to other similar situations. Yin (2009) adds that cross-case analysis can strengthen findings and

allow some generalizations to be made. In this study, a cross-case analysis was done to see what general themes the cases shared and to see what common areas of conflict occurred in the Activity Theory models of the six cases. Patton (2002) recommends writing up individual cases first, followed by a search for patterns and themes that cut across the cases. Yin (2009) suggests treating each case as an independent study, then aggregating findings in a table to show whether different groups of cases show similarities. In this study, after each of the cases was analyzed and reported, a matrix showing common themes across the cases was generated (see Table 4.20). An additional matrix of the conflicts that occurred within the Activity Theory model was displayed to show common areas of tension (see Table 4.21).

#### *Trustworthiness – Validity and Reliability*

The terms “validity” and “reliability” in the context of a qualitative study have been perennial issues because of their association with objectivity - the elimination of subjectivity. As discussed by Auerbach and Silverstein (2003), subjectivity and interpretation are not only inherent but desirable in qualitative research projects, and they therefore call into question the use of these terms. They further explore a healthy skeptical attitude toward concepts thought to capture objectivity and refer to them as “...pursuing the unreachable ideal” (p. 80). On the other hand, appropriate standards for evaluating qualitative research need to be in place. To satisfy this need, a number of different terms and approaches are available. Auerbach and Silverstein (2003) refer to “justifiability” in which a researcher uses subjectivity to interpret and analyze data without imposing his biases on the experience of the participants. Lincoln and Guba use

the term “trustworthiness” to include concepts of credibility, transferability, dependability, and confirmability (as cited in Patton, 2002). “Rigor” is another term that Patton (2002) points out as synonymous with trustworthiness. Patton (2002) refers broadly to quality and credibility of research.

One way of ensuring credibility is to triangulate data by comparing multiple data sources (Miles & Huberman, 1994; Patton, 2002). Patton (2002) describes the triangulation of data sources with specific mention of comparing different types of sources, comparing data from public statements versus private statements, and checking for consistency of what was said over time. As this applies to my study, data of different types - surveys, blog posts, final papers, and interviews - were compared. The professor had access to blog posts and papers but not to the surveys and interviews, so students had different audiences for the sources. In addition, the data were collected from the students throughout the course so that responses could be compared from the beginning to the end.

Miles and Huberman (1994) and Patton (2002) also encourage checking for researcher effects. Researcher effects can be of two main types. The first type is related to the expectations and assumptions that the researcher brings to the study. The second is the reaction caused by the researcher. To address biases, according to Patton (2002), it is important to acknowledge that they may occur and to put forth an effort to set aside previously held beliefs that may influence the interpretation of the results. My own acknowledged biases stem from my position as an educator who has lived abroad for several years and as someone who has worked in international education for over 10 years. I have benefited from many different international experiences, and I believe that

there should be a variety of opportunities for students, both abroad and at home. I also see a distinct value in using Internet technologies to bring people together because they can help overcome the problems of cost, distance, and affective barriers. As a challenge to my beliefs about the benefits of international experiences, I must also acknowledge the possibility of faulty practices in this field. Educators can make assumptions about the outcomes of international experiences and fail to pay attention to the importance of planning and design. There are other motivations that might influence the creation of international projects such as demands of publication and recognition.

The open coding process is one way I have attempted to safeguard against imposing my positive impression of international education on the data. While coding and developing themes, I remained open to new discoveries, and I reviewed my coding structure multiple times to look for alternative ways that it could be interpreted. I also checked interpretations against field notes to ensure that my observations in each source were consistent. The coding process involved repeated questioning of my assignment of interpretive codes and the groups of themes. To reduce reaction to researcher presence, I relied on sources that were created outside of the purpose of this study – the surveys and interviews were requested and voluntary, but the papers and blogs were documents that were already part of the class work. According to Miles and Huberman (1994), it is important to be as unobtrusive as possible, so I attempted to design the surveys and interviews that were easy to complete and as comfortable as possible. Finally, the cases were cross-analyzed to find overlapping themes among the students. According to Eisenhardt (1987), this is an important process in order to prevent researcher bias.

## **Limitations**

There are a few limitations of this study that future research might be able to expand. First, as a researcher, it was my responsibility to prevent my personal bias from entering the analysis of my data. Although I believe that experiences among people from different countries have the potential to encourage mutual understanding, I recognize the fact that the development of global competence is a long-term and gradual process. As discussed in the above section, subjectivity is inherent in research, but strategies such as triangulation and checking for research bias were used to promote trustworthiness.

Next, it is hoped that the survey instrument can be improved to better collect student attitudes and to provide a more robust description of intercultural sensitivity. The questions related to intercultural sensitivity on my survey were based on a model that used a more comprehensive instrument to measure intercultural sensitivity. The survey questions were used for comparison with other findings in the student documents in an effort to more fully describe the student experiences. They were not considered an exclusive instrument to measure intercultural sensitivity.

Another limitation of this study was that it focused on the experiences of the American students. At the time that I designed this study, I wanted to focus on the experience of the Midwestern American students, and I saw collection of data from the students in Sweden as a second step that might be considered based on the findings from this initial study. Future research might make an effort to collect information from both sides of the interaction for a more complete view of the nature of the exchanges and the

influences of technology and course design. Other ideas for possible future research are discussed more fully in the conclusions and discussion chapter.

Finally, because these six case studies were unique situations, my findings cannot be used to describe other students who participate in international interactions in Second Life, although cross-case analysis was done to check for generalizability within this study. A case study analysis gave an in-depth description of what happened with these six students, but additional data collected from larger groups of students would help generalize the findings to other populations. Generalizable information on student attitudes about internationalization, cultural self-awareness, and openness to difference could be helpful in establishing larger curriculum needs for universities. It is intended that the findings from this research be used as a starting point to add to the body of knowledge about online international interactions, to draw attention to this particular type of interaction, and to generate further hypotheses and research.

### **Ethical Considerations**

I submitted Institutional Review Board paperwork to the University of Missouri-Kansas City and the university that hosted the course examined in this study. Approval was also received from the professor in Sweden whose class interacted with the American students. The survey that I used posed minimal risk to the students, and participation was voluntary. All responses were collected through an online form, so handwriting could not be used as a way to identify the students. The student's avatar name was stored in a database that held the survey data, and the professor did not have access to the data that was connected with the avatar names. The professor of the course approved all survey

questions and interview questions, and he also supervised the collection of blog entries and final papers from the students. The data collected from the papers and blogs were of low-risk to the students because they had already been turned in to the professor as part of their course work.

### **Summary**

This study was designed as a constructivist case study in an effort to give a detailed description of student experiences during an online international interaction occurring in Second Life. The results of this study help fill a void in the body of knowledge about internationalization efforts at the faculty level and the quality of international interactions in 3-D virtual environments. This chapter discussed the qualitative design of the study, the selection of participants, the procedures of data collection, and details about each of the data sources. An overview of the coding and analysis process was provided. Greater detail about the specific interpretive codes and themes that emerged from each data set have been given in the next chapter. Limitations of the study that may inform future research designs were discussed, which included strategies designed to add to generalizability. In the next chapter, I have presented an overview of what was found in the data sets followed by a report of the findings for each student.

## CHAPTER 4

### FINDINGS

This qualitative study examined the nature of American-to-Swedish student interactions within the context of using Second Life as a tool to internationalize a class. Due to the descriptive nature of the interaction, I used a case study design with a constructivist perspective to examine three areas – a description of the American student experience, indicators of global competence, and the experience of the course design and technology. Six cases were collected and analyzed over two semesters from the same professor using the same course design.

Students in the composition course were assigned an international partner from a course in Sweden. Through the duration of the course, the students were to arrange meeting times with their partners in Second Life, and the American students were encouraged to integrate the results of these interactions into their papers. The goal of the American professor for these interactions was to give students a chance to gain perspectives on their research topics and to make a connection with someone outside of their culture. In addition, the American students were to help the students in Sweden become familiar with navigating the Second Life environment. This was because many of the students in Sweden were first-time users of the virtual world, whereas the students in America had already been using Second Life for several weeks. Finally, the American students were to be available as a resource for a peer-review of the Swedish students' English presentations, a requirement of their course.

Data were collected using five sources – a pre-survey before the interaction at the beginning of the course, the student’s course blog after the course, an interview with the student after the course, their papers after the course, and a post-survey following the interaction. The pre-survey collected demographic information, comfort level with technology, interest in global awareness, and attitudes on intercultural sensitivity. A second source was a blog that the students used during the course. The students used the blogs to post information related to their assignments and details about activities within Second Life. Activities posted in the blogs included those by themselves, with their international partners, with their classmates, and with others in Second Life. At the end of the course, the students completed a post-survey to collect information about their experience during the course and follow-up attitudes about using Second Life, interest in global awareness and intercultural sensitivity. Student papers were also collected. The papers that the students had written about topics that they researched within Second Life were collected. Finally, semi-structured interviews were scheduled with students to hear their descriptions of the course and interactions with their international partners. The data sources were available from students who volunteered, resulting in 6 complete sets for the two semesters of data collection. Although interviews with a total of twelve students took place, they were missing one or more of the other pieces of data: surveys, blogs, or papers. The ages of the students were between 18 and 22 years old. Three were females and three were males. All six of the students reported that they were Americans who had never lived abroad. The three female students reported their ethnicity as

White/Caucasian, one male student reported his ethnicity as White/Caucasian, and two males reported their ethnicity as Black/African-American.

The amount of time students spent on each data source varied. The surveys each took approximately 10 minutes to complete. Interviews were held over Skype voice calls and took approximately 10–15 minutes to complete (Skype, 2014). The blogs were kept throughout the course and varied between 480 words and 2073 words, with the average of the six blogs being 989 words each. The length of the papers ranged from 888 words to 3596 words, and the average length of the student papers was 1601 words.

As shown in Table 4.1 below, the sources were imported into NVivo 10 software for coding of student activity (QSR, 2012). An Activity Theory model (shown as Figure 4.1 below) was used to contextualize the patterns in the activities and to identify conflicts that occurred during the pursuit of the course goals.

As previously stated, Activity Theory examines the activity of a subject as interactions occur among different nodes, which affect the achievement of the subject's goals (Bruner, 1990; Cole and Engeström, 1993; Russell, 2005; Russell & Schneiderheinze, 2005; Vygotsky, 1978; Wertsch, 1998). As the subject seeks his or her goal, interference occurs. An example of interference within the context of this analysis is that a student (subject) may seek to interact with their international partner (object), but there may be a problem with the functionality of Second Life (tool) that prevents them from meeting. In this example, the interference is a conflict between the subject and tool. Another example is that their partner's busy schedule may cause a delay in responding to emails and arranging a meeting time (division of labor), which would be a conflict

between the object and the division of labor. The model helps focus on the pattern of activity resulting from the interference, referred to as a turning point (see Figure 4.1 below).

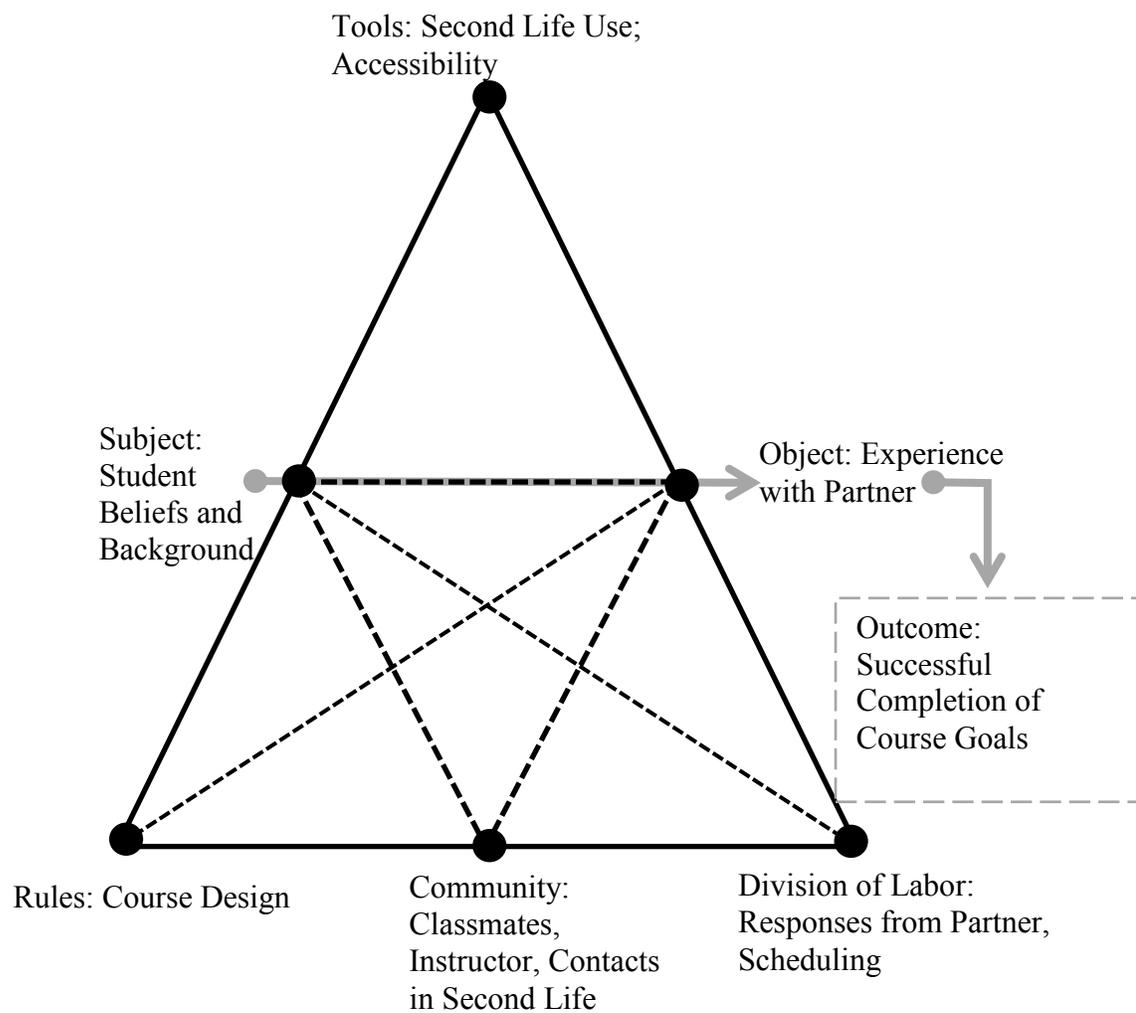


Figure 4.1. Activity Theory Model. The grey line shows the subject seeking the goal. The black dots represent nodes, between which conflict may occur as the subject moves toward the goal.

The pre-survey and post-survey data was additionally analyzed to describe student attitudes and background information. The pre-survey collected information about the students' demographics, comfort levels with technology, and prior international experience during the beginning of the course. It also collected attitude information about interest in global awareness, the role of a university in international education, and intercultural sensitivity. Demographic information, comfort level with technology, and previous international experience were described for each student based on their survey responses. A summary percentage was calculated to represent the students' interest in global awareness (shown in Figure 4.2 below), and another calculation was done to summarize the students' attitudes about the university's role in international education (shown in Figure 4.3 below). Finally, the responses to the intercultural sensitivity scale were charted based on what stage of sensitivity the questions related to - denial, defense, minimization, acceptance, and integration, and the students' agreeability to each stage (shown in Figures 4.5, 4.7, 4.9, 4.11, 4.13, and 4.15). The post-survey at the end of the class collected the same information with some additional questions on the students' attitudes about using Second Life. The responses related to attitude about Second Life were calculated into a summary score for each student (shown in Figure 4.4). Post-survey responses for the interest inventory for global awareness, attitude about the university's role in international education, and attitude about intercultural sensitivity were analyzed using the same methods as those on the pre-survey.

Data sources were compared to strengthen the validity. As stated in the above methodologies section, though the survey responses were analyzed for descriptive

information, these findings were checked against the information in the student’s blog and interview to be sure the student experiences were investigated as fully as possible. A rich description of the experiences required a construction of information from multiple sources, and the survey data alone could not represent an adequate picture of the experiences.

Table 4.1.

*Types of Activities per Participant*

Type of Activity (Themes)	Alison	Britta	Donald	Kyle	Mary	Todd
Avatar Identity	0	0	0	2	1	0
Changing Ideas	3	6	1	2	3	0
Completing Assignments	8	9	7	8	9	6
Evaluating	41	47	24	26	40	12
Interacting with International Partner	9	49	3	14	29	3
Interacting with Others	14	10	17	8	11	6

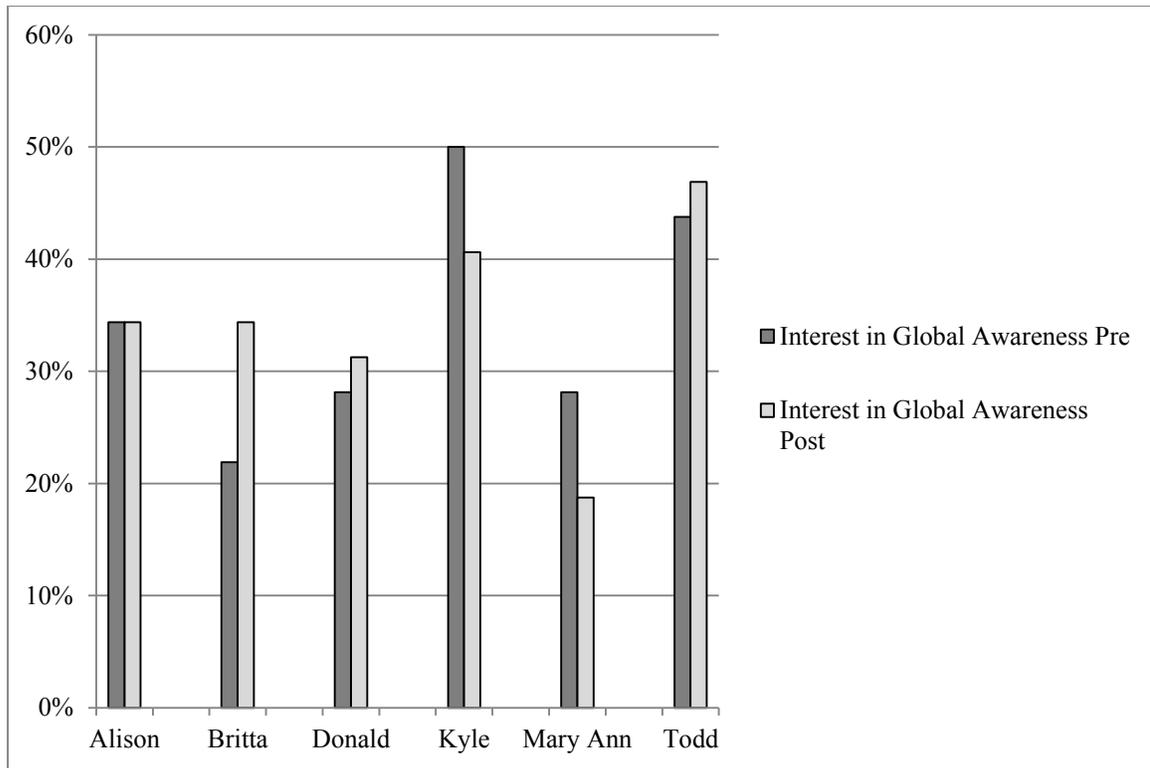


Figure 4.2. Interest in Global Awareness - Pre- and Post-Survey Responses.

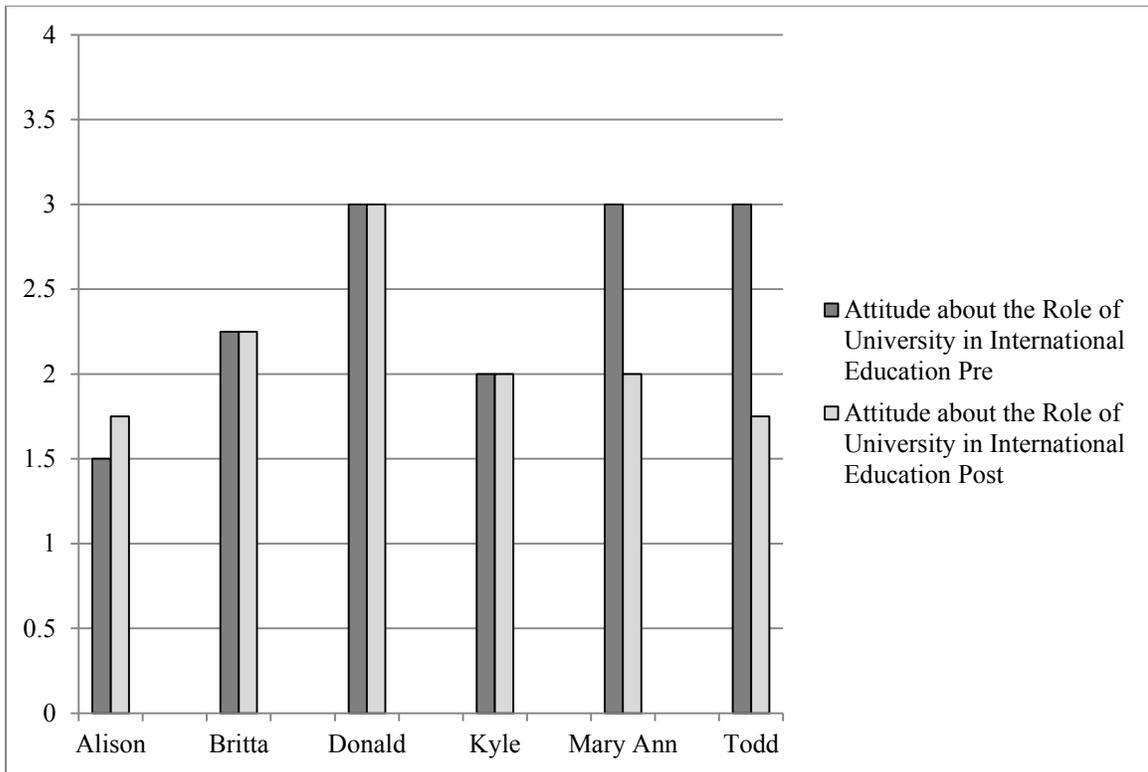


Figure 4.3. Attitude about University’s Role in International Education – Pre-and Post-Survey Responses. (Summary of Likert Scale, 1=Strongly Disagree, 2=Somewhat Disagree, 3=Somewhat Agree, 4=Strongly Agree.)

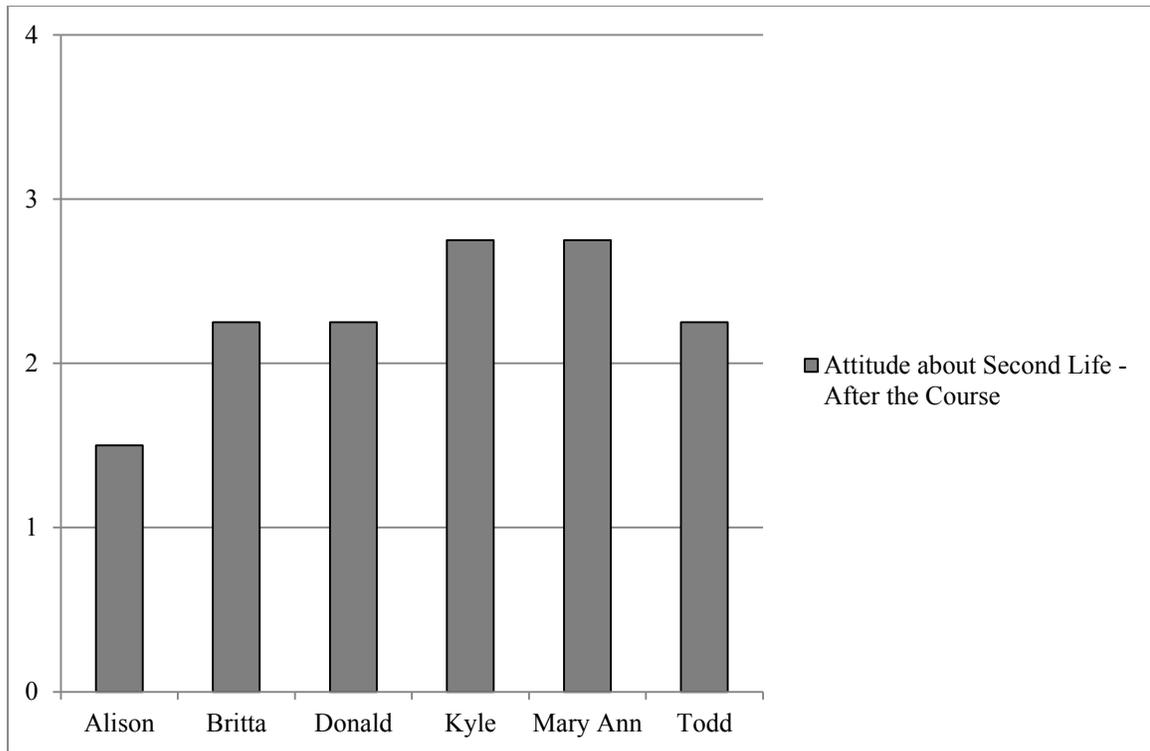


Figure 4.4. Attitude about Second Life – Post-Survey Responses. (Summary of Likert Scale, 1=Strongly Disagree, 2=Somewhat Disagree, 3=Somewhat Agree, 4=Strongly Agree.)

## Case Study Analysis – “Alison”

### *Before the Interaction*

Alison (a pseudonym) was a 19-year-old white American female majoring in management. She took the English Composition course in the Spring 2011 semester. She reported that she owned a computer and had high-speed Internet access in her home. Her pre-survey responses indicated that she was very comfortable using Internet technologies such as email, search engines, social networking sites like Facebook, and course management sites like Blackboard. She was fairly comfortable using technologies such as online databases for research and informal searches on Wikipedia. However, she reported feeling fairly uncomfortable using discussion groups and Second Life. She had never used Second Life before she started the class, and she reported that she preferred traditional, face-to-face classes with no technology to online classes with a lot of technology.

Alison’s previous international experience included traveling outside the United States – twice each to Canada, Mexico, and the Dominican Republic, but she had never studied abroad. She also indicated that she had family and friends who lived outside the United States and that she had online discussions with people from other countries prior to the class. Although she had studied another language besides English, she did not feel comfortable speaking anything other than English.

In terms of her interest in global awareness, Alison felt that her knowledge of geography was very strong, and that she was somewhat strong at keeping up with current events. Her interest in pursuing international activities was limited to taking vacations in

other countries. The number calculated for the interest in global awareness before the course was 34% (as shown in Table 4.2 below). This representation was consistent with information from her interview when asked about her interests in learning about other countries and cultures – she felt it was only important if someone was directly affected by the information. On the other hand, she reported feeling interested in meeting people from other countries and cultures because she might be able to learn something new.

Alison's attitude about the university's role in international education also suggested limited interest and low involvement. Although she did not think international content in courses was a waste of time, she agreed that it was useful, but not necessary. She did not feel that study abroad or international courses should be part of a university education, and she disagreed that it was the university's responsibility to be sure its graduates had an international education. Her attitude score for her pre-survey responses for this section was 1.5, with 1 being the strongest disagreement about university involvement and 4 being the most agreeable to university involvement (shown in Table 4.2 below.) This attitude was supported during her interview when she told me learning about others' countries and cultures should be up to the individual. Alison's quotes related to international education are further expanded below.

Her pre-survey responses to attitudes about intercultural sensitivity showed agreement in stages of minimization and acceptance – suggesting an ethnocentric stage with potential progression into ethnorelativism. Assumptions in the minimization stage are that there are universal values so cultural differences do not matter in the big picture. The acceptance stage relates to a mindset that acknowledges difference and equality

(Hammer et al., 2003). A chart of Alison's responses to questions for each stage is shown below (Figure 4.5). An ethnocentric attitude was also suggested by Alison's surprise that her Swedish partner wanted to learn English.

#### *After the Interaction*

Alison's attitude toward using Second Life was calculated as 1.5 (as shown in Table 4.2 below), with 1 being the strongest disagreement to its use and 4 being the most agreeable to its use. This attitude score is consistent with her perceived attitude in her comfort with technology during the pre-survey and her reports in the interview. Other issues were reported as barriers to using Second Life in her post-survey and interview – specifically, she experienced computer crashes, difficulty installing and running Second Life, problems with Internet connectivity, and Second Life reloading.

Post-survey responses for interest in global awareness and attitudes about the university's role in international education remained similar to pre-survey results. Interest in global awareness stayed at 34%, and attitude about the university's role in international education was 1.75 (as shown in Table 4.2 below). However, her post-survey response indicated a decrease in interest in meeting people from different countries (shown in Table 4.2 above). On the pre-survey, when asked how interested she was in meeting people from a different culture, Alison indicated that she was "Interested. I might be able to learn something new." On a Likert scale, with 1 being "Not at all interested" and 5 being "Very Interested," Alison's pre-survey response would be a 4. However, after the interaction, on the post-survey, she answered "Not at all interested," a response that would correspond to a 1 on the Likert scale. In addition, she reported that her interest in

traveling abroad was not increased by the experience, and she was not interested in continuing to learn more about her partner’s country and culture. Post-survey responses to attitudes about intercultural sensitivity showed agreement in minimization stage, but slightly more agreement to statements related to stages in ethnorelativism (as shown in Figure 4.5 below).

Table 4.2.

*Summary of Alison’s Pre- and Post-Survey Attitudes*

	Pre	Post
Interest in global awareness (100%)	34%	34%
Interest in meeting international people (1=not at all; 5=very interested)	4	1
Attitude about university’s role in international education (1=strongly disagree; 4=strongly agree)	1.5	1.75
Attitude about Second Life (1=strongly disagree; 4=strongly agree)	n/a	1.5

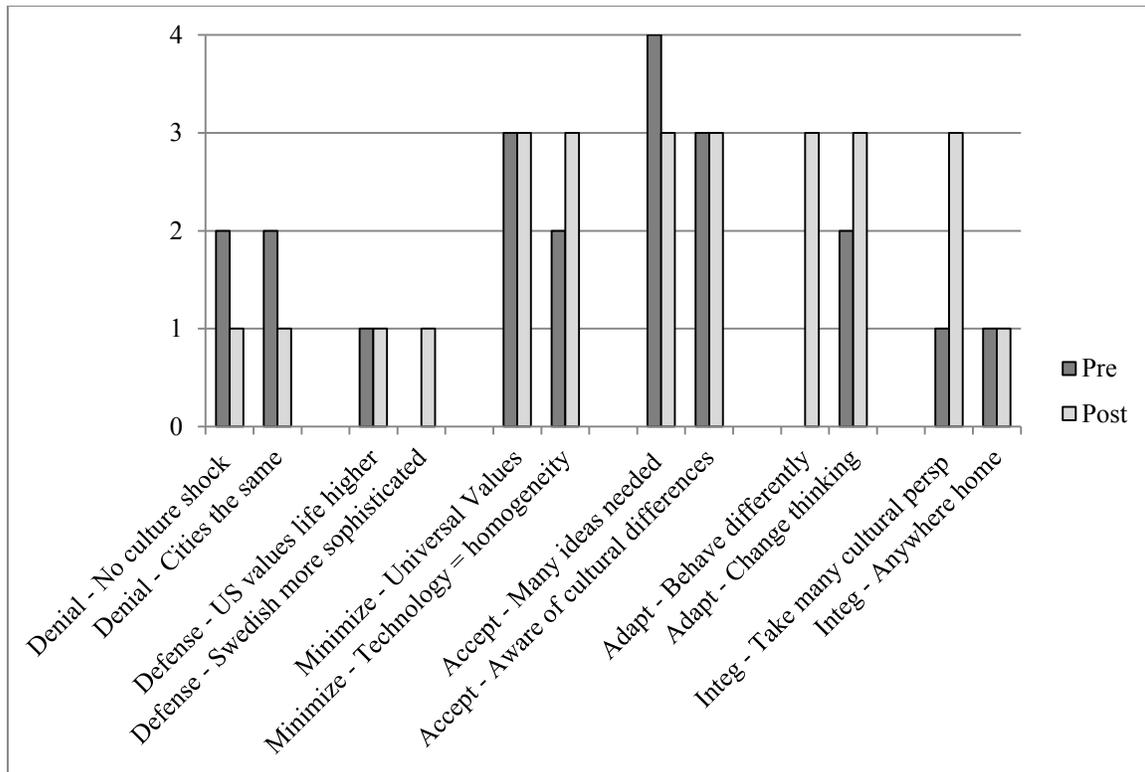


Figure 4.5. Chart of Alison's Attitude toward Cultural Difference (Intercultural Sensitivity). (Summary of Likert Scale, 1=Strongly Disagree, 2=Somewhat Disagree, 3=Somewhat Agree, 4=Strongly Agree. Agreeability indicates stronger representation of a particular stage.)

Table 4.3 below summarizes the kind of activity found in Alison's blogs, papers, and interview. The largest amount of activity was grouped under the theme of evaluating (41) – making statements about the assignment (5), the course (5), other technology (2), her partner (3), Second Life (22), and the value of global competence (4). Although Alison only met her partner once, there were 9 statements related to the theme of interacting with her international partner, coded as exchanging language (3), helping (2), and scheduling (4). There were also several statements grouped under the theme of

interacting with others (14) including collaborating (2), exploring (8), and inquiry (4).

There were a couple of statements related to the theme of changing ideas (3), which were coded as showing surprise (2) and trying new things (1).

Based on the pre-survey responses and verification with the information from the interview, Alison felt uneasy about the assignment and Second Life. These attitudes were present not only toward using Second Life and the assignment, but also toward the role of university in international education. In the interview, I followed-up on her survey responses related to her view of global awareness and the university's role in international education. When asked about the importance of international education, she told me,

I'd say it's somewhat important, if you... want to live there or you want to know what's going on...as long as you know what's going on...like, big news, I think it's ok. I don't see the importance of knowing a lot of everything about each country, cause there's a lot of countries. I don't really see the point in knowing a lot of information about them. (Alison, personal communication, April 27, 2011)

When I asked her about whether an international education is something that should be part of a university education, she said, "No...because we pay for college. So if we don't want to do it, we shouldn't have to" (Alison, personal communication, April 27, 2011).

Alison's comments evaluating Second Life, the course, and the assignment were distinct because of the attitude she showed in different data sources. Alison made it clear through the post-survey comments and the interview that she did not like the platform for the purposes of an English composition course or the assignment with her international

partner. She told me how she felt about using Second Life in her interview, “I just don’t see a comp II class as really effective in Second Life” (Alison, personal communication, April 27, 2011). She mentioned the inconvenience of the assignment with her partner, “I thought it was kinda dumb because he expected us to find time out of our different time[s]...where, [I would] have to talk to her, but I had to talk to her while I was at work” (Alison, personal communication, April 27, 2011). She also said,

... we emailed a lot trying to find a time ‘cause every time I said a time, she couldn’t do it, so we emailed a lot but we only met in Second Life once...it was so hard for me and her to even find a time because she was seven hours different from us...I never had time... and she was busy too. We finally found a time, but it was, like, midnight for her, so I felt bad about that. (Alison, personal communication, April 27, 2011)

Other comments show a general lack of positive attitude, “I thought it was weird,” and “I didn’t really see it as an assignment because it was so hard for me and her to even find a time” (Alison, personal communication, April 27, 2011). Her evaluation of the course can be described with information from her interview, “I’m not very technical with computers, so it was kinda difficult at times” (Alison, personal communication, April 27, 2011). She also told me, “I’m a very visual learner with the teacher in front of me...not being able to talk to the teacher face-to-face, I didn’t really like that” (Alison, personal communication, April 27, 2011). Despite her claim that she wasn’t very technical, she did not have any problems with the other forms of technology such as the

blogs or uploading her paper, “The blogs I didn’t mind at all...they were easy to use” (Alison, personal communication, April 27, 2011).

Her evaluation of Second Life showed a positive attitude in her blogs and papers that contrasted with the comments in her interview. According to her blog, “In Second Life I am able to see research and explore with my own eyes to see how things really work...I like learning about science and health...instead of listening to the teacher talk about it in the traditional way,” and “So having the opportunity to learn things when I do not go to class at the university is pretty cool.” Alison’s paper indicated a similar evaluation of Second Life, “With Second Life, it has been a lot easier for me to understand the concept of...science.” These comments suggested favorable experiences that do not fit the attitude presented in her interview. This difference could be explained based on the audiences for each of the sources. Her professor was grading her blog and papers, but her professor did not see the surveys and interview, where she revealed more dislike of the course format, the assignment, and Second Life. This finding is discussed further in the next chapter.

When asked about the quality of the interaction when she and her partner met, she told me of the difficulty that her partner had in using the Second Life environment – “Um, she didn’t know how to use much of the stuff so we barely talked, so we had to [type] chat” (Alison, personal communication, April 27, 2011). She explained that her partner seemed to feel bad that she didn’t know how to use the tools in Second Life, “We were talking about how she didn’t know what she was doing and she felt bad” (Alison, personal communication, April 27, 2011). In terms of exchanging language, Alison

reported that she thought her partner spoke English well, and that she would occasionally ask her partner to repeat things when she didn't understand, "Sometimes it was hard to understand what she was saying...I just asked her to repeat what she was saying and then I got it" (Alison, personal communication, April 27, 2011). In her post-survey response, Alison reported talking about religion, the topic of one of her papers, although there is no reference to her partner in her paper and there is no reference in her blog about places related to religion that they explored together.

The statements in the blogs and papers suggest that Alison's interactions with others included exploring Second Life with a classmate and inquiry of people in Second Life. For example, after showing her classmate a science exhibition, Alison wrote on her blog, "I was excited to show what I'd learned and what they did there for their research. It was an awesome journey to show the spiders, the predators..." On her blog, she has eight separate instances of meeting in-world with the same classmate, and they visited sites such as a genetics laboratory, an amusement park, a beach, the virtual English Rose Theatre, an art gallery, clothes shops, and two different dance clubs. She mentions inquiry activity with others in both her blog and paper, which included a conversation with a woman about Catholicism in a virtual Catholic church and an interview with a scientist in a virtual genetics laboratory.

I interpreted surprise for two things in Alison's documents. One was related to her partner – in her interview, she seemed surprised that people in Sweden would want to learn English. When I asked her if she learned anything from the experience, she said, "I don't know how to say this...just how Swedish people can learn English...they still, they

want to learn our stuff, our English, and how like, we live. That was pretty cool” (Alison, personal communication, April 27, 2011). Her comment suggested that this could have been a starting point for developing some cultural awareness in terms of how others view the English language. Despite the problems with scheduling and the conflict with Second Life, Alison gave me an overall evaluation of meeting with her partner, “I thought it was pretty cool talking to someone from Sweden. Didn’t even know who she was. I thought that was pretty cool” (Alison, personal communication, April 27, 2011).

The other item that I interpreted as surprise was not due to her interaction with her partner, but of her interaction with others in Second Life. While exploring her paper topic of religion she wrote on her blog, “There is one thing I never thought I would ever come across in Second Life and that would be a Catholic church.” She asked a woman that she met in-world about Catholicism, which led to her wanting to try new things. She reported on her blog, “After speaking with the lady, she made me want to explore Second Life for other religions that are present in the world.”

Table 4.3.

*Alison's Blog, Papers, and Interview Activity*

Type of Activity (Themes and Interpretive Codes)	Occurrences
Changing Ideas	3
Showing Surprise	2
Trying New Things	1
Completing Assignments	8
Completing Papers	1
Posting an Outline	2
Posting a Thesis Statement, Topic, or Introduction	5
Evaluating	41
Assignment	5
Course	5
Other Technology	2
Partner	3
Second Life	22
Value of Global Competence	4

Table 4.3 Continued

Type of Activity (Themes and Interpretive Codes)	Occurrences
Interacting with International Partner	9
Exchanging Language	3
Helping	2
Scheduling	4
Interacting with Others	14
Collaborating	2
Exploring	8
Inquiry	4

In Alison’s Activity Theory model, there were four turning points identified that impacted her pursuit of the course goal (as summarized in Table 4.4). First, Alison held beliefs about the use of Second Life and felt uncomfortable with the technology – a conflict between the subject and the tool. She also reported low interest in global awareness, which was perceived to influence her attitude about the assignment – a conflict between the subject and the rules. In addition, she reported that her partner had difficulties using Second Life, a conflict between the tool and the object. Despite these attitudes, she resolved the conflicts and continued seeking the interaction with her partner. She reported an estimated 10 attempts to schedule meetings in her interview. The

fourth conflict was due to scheduling difficulties. This was a conflict between the division of labor and the object. Although she repeatedly tried to contact her partner to arrange additional meetings in Second Life, except for their first meeting, they were unable to find a time that worked for both of them. In Figure 4.6 below, broken arrow lines between the nodes indicate a conflict that limited, but did not stop, the interaction with the object.

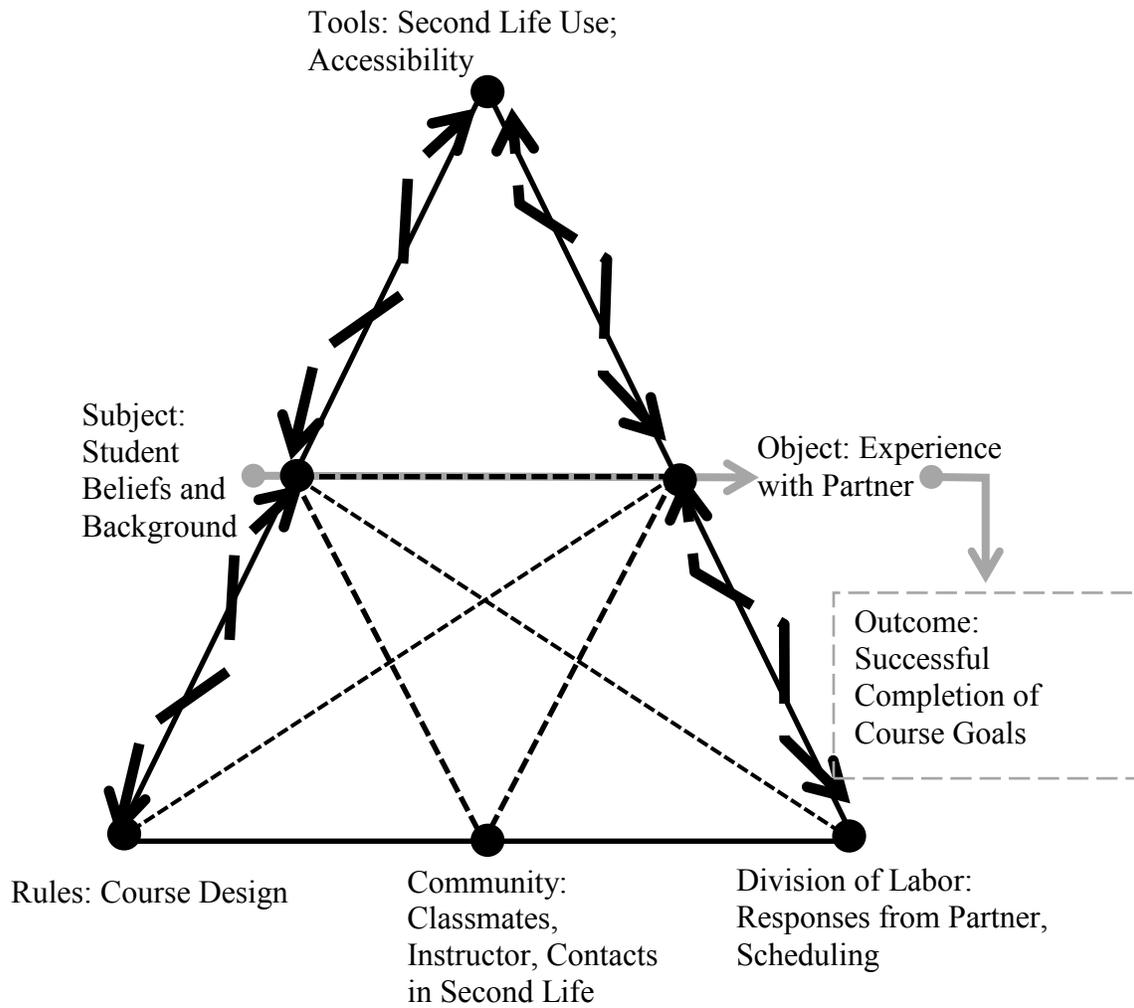


Figure 4.6. Activity Theory Model for Alison.

Table 4.4.

*Turning Points for Alison*

Turning Point	Conflict	Indicator	Resolution
1	Subject vs. Tool	Alison reported feeling uncomfortable using Second Life. She did not like it for a composition class.	Alison used Second Life to explore topics for her papers and writes about them in her blog.
2	Subject vs. Rules	Alison did not like the assignment because she felt it was inconvenient.	Alison made attempts to contact her partner despite her attitude toward the assignment.

Table 4.4. Continued.

Turning Point	Conflict	Indicator	Resolution
3	Object vs. Tool	Alison's partner experienced problems with the technology, and she could not explain how to use it.	Alison met with her Swedish partner once and chatted about course-related topics. They used typed chat rather than voice chat.
4	Object vs. Division of Labor	Alison reported attempting to contact her partner 10 times or more.	A time that worked for both of them was not found for additional meetings.

## Case Study Analysis – “Britta”

### *Before the Interaction*

Britta, (a pseudonym) was an 18-year old white American female majoring in nursing, and she took the course in the Fall of 2010. On her pre-survey, she reported having both a computer and Internet access at home and was fairly comfortable or very comfortable using various Internet technologies such as Facebook, search engines, email, and course management sites. Her pre-survey also showed that she felt somewhat uncomfortable with Second Life, and she had never used it before starting this class. She indicated that she preferred class formats that are face-to-face and with no technology.

According to her pre-survey responses, Britta had almost no international experience aside from language study, and she reported that she would not feel comfortable communicating in anything other than English. In addition, she did not feel that her geography skills were very strong, and reported that she did not seek out information about current events. She also did not feel confident that she could relate current events to events from the past. Her only interest in international activities was in taking a vacation in another country. Her interest in global awareness score before the course was 22% (shown in Table 4.5 below).

Pre-survey responses indicated that Britta felt that the university had a role to play in international education, but that it should not be mandatory. Her attitude score for this section was 2.25, with 1 being the strongest disagreement for university involvement and 4 being the most agreeable to university involvement (shown in Table 4.5 below). The results of her interview supported this attitude when she said that university involvement

can be important to learn about people from other cultures. She was somewhat interested in meeting people from other cultures, but only if they could speak English fluently.

Her attitude about intercultural sensitivity suggested some agreement in acceptance and adaptation, the strongest agreement being in the acceptance area with a score of 3.5 on a scale from 1 to 4, with 4 being the most agreeable. The acceptance category reflects a mindset in which differences are acknowledged and valued equally. In the adaptation stage, a person begins to understand how to shift their perspective relative to the cultural situation (Hammer et al., 2003). A chart of Britta's responses to questions for each stage is shown below (Figure 4.7). Patterns in her interview and blog data supported attitudes of openness toward her international partner, but some ethnocentrism related to the differences of others, which is detailed below.

#### *After the Interaction*

Britta's attitude toward using Second Life was 2.25, with 1 being the strongest disagreement and 4 being the most agreeable. This attitude was supported by a comment she made in her interview when she said that at first she didn't like it, but that it could be a place for learning and fun. Her only reported problem using Second Life was that it would lose connectivity or show slow connectivity at times. Although she did not think she would use Second Life again or that it was a good tool for communication, she reported through the post-survey that her experience overall with Second Life was somewhat positive (3 on a scale of 1-4).

Britta's post-survey results indicated that her interest in global awareness increased a little from 22% to 34% after the interaction. She reported more confidence in

her ability to relate current events to historical events and in her geography skills (3 on a scale out of 4). Her attitude about the university's role in an international education remained the same as the pre-survey, 2.25 out of 4 (as shown in Table 4.5 below). Her intercultural sensitivity remained about the same with agreement of 3 on a scale of 4 in the minimization, acceptance, and adaptation stages (shown in Figure 4.7 below).

Table 4.5.

*Summary of Britta's Pre- and Post-Survey Attitudes*

	Pre	Post
Interest in global awareness (100%)	22%	34%
Interest in meeting international people (1=not at all; 5=very interested)	2	2
Attitude about university's role in international education (1=strongly disagree; 4=strongly agree)	2.25	2.25
Attitude about Second Life (1=strongly disagree; 4=strongly agree)	n/a	2.25

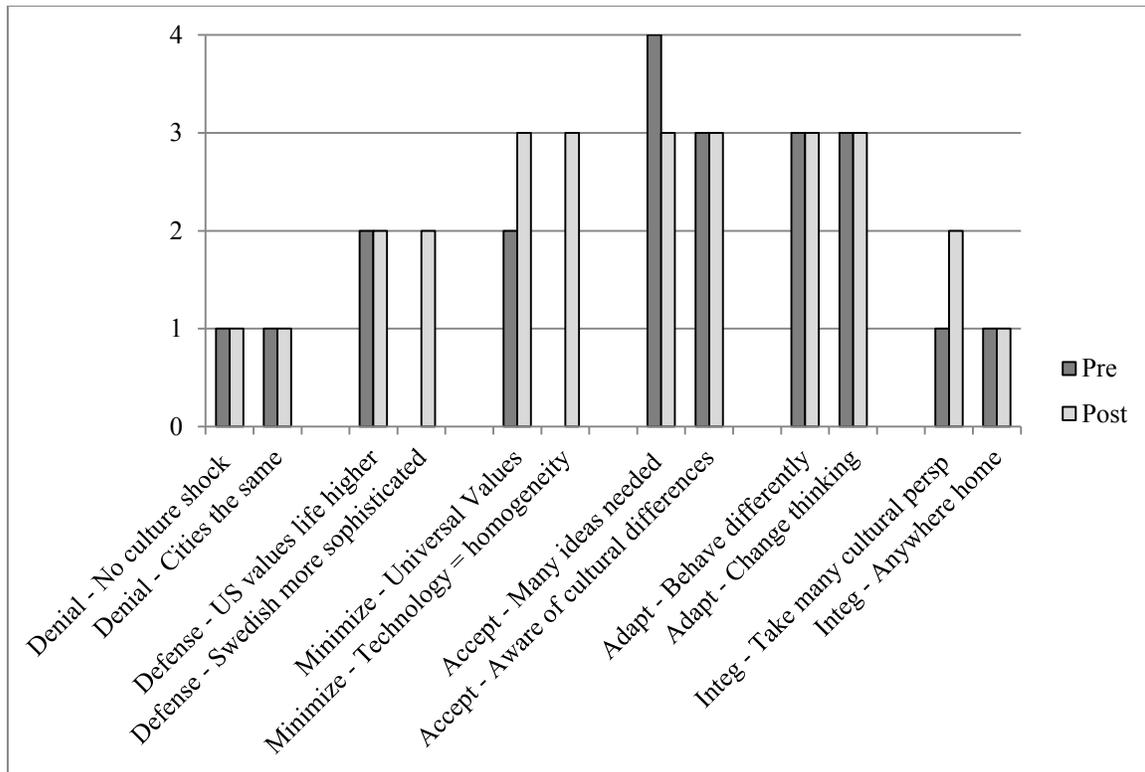


Figure 4.7. Chart of Britta's Attitude toward Cultural Difference (Intercultural Sensitivity). (Summary of Likert Scale, 1=Strongly Disagree, 2=Somewhat Disagree, 3=Somewhat Agree, 4=Strongly Agree. Agreeability indicates stronger representation of a particular stage.)

Britta's activity from her blog, interview, and papers is summarized in Table 4.6 below. Most of her activity was related to the theme of interacting with her international partner (49) and evaluating (47). Of the interaction activities, most of them were related to scheduling (15) and exploring (14), but activity also included exchanging language (4), exchanging culture (8) and helping her partner with using Second Life (8). Another theme found in Britta's activity was interaction with others besides her partner (10), with most of this activity involving the exploration of Second Life (9) and one statement related to

collaborating. Activities that fell under the theme of evaluating included statements about Second Life (27) and evaluation of her partner (12). Information from Britta's interview and blogs revealed some changes in ideas (6), which related to her initial expectations (5) and showing surprise (1).

When asked about the course overall, she told me, "I thought it was an interesting course. It wasn't what I was expecting" (Britta, personal communication, December 8, 2010). When asked for further comments about Second Life she said,

I know I didn't like it at first...Finally toward the end [I] learned that it was, like you could have fun in it and that it was also... that you could also learn certain things and stuff, just through the topics that I wrote about on my papers. (Britta, personal communication, December 8, 2010)

She expanded on this, "I can see how Second Life can...actually be an educational spot... And it also is a great social networking place to meet people and they can help you" (Britta, personal communication, December 8, 2010). Aside from a technical difficulty, other evaluations of Second Life generally referred to the experience of exploring in the virtual world, for example, "It was really fun and I loved it and really enjoyed it." Her pre-survey data supported the perceived discomfort at the beginning - she reported being somewhat uncomfortable using Second Life before the class. In addition, the post-survey data supported the idea that she became more comfortable using the virtual world based on her report that her Second Life experience was somewhat positive.

For the first month of blog entries, Britta posted content related to completing assignments. Later, other patterns of interactions with her partner and within Second Life

emerged. At the beginning, her activity suggested uncertainty about using Second Life and with collaborating with her international partner. However this activity was followed by a pattern of high interaction and exploration of the Second Life environment, both with her international partner and other classmates. She mentioned exploring with her international partner more frequently (14) than exploring with classmates or others in Second Life (9). Even with scheduling difficulties, she met with her partner in Second Life at least 8 times. After the meetings began in Second Life, she expressed evaluations of her shared experience with her partner. An example was,

When I met up with my Swedish person, she was a really nice person, and she was really kind and caring and it was interesting to help her and to learn the different barriers - language barriers - and different things about their culture.”

(Britta, personal communication, December 8, 2010)

While exploring with her partner, they visited areas related to Britta’s paper, such as a medical examination room and a biomedical laboratory. They also visited areas for fun, such as swimming pools, dance clubs, a kayaking location, and an amusement park. Places that they visited that related to their exchange of each other’s culture were a horseback riding location, a haunted house, and a live Swedish musician. She referred to exchanging cultural information and language with her Swedish partner on her blog, “I took her around to various activities like horseback riding, and we talked about that activity, and ... how... we did it here in the States and how big of an activity it was” (Britta, personal communication, December 8, 2010). Britta also learned something about her partner, “...we discussed her family and her son... and the different cultural aspects,

like schooling over there compared to over here, while we were doing the various activities” (Britta, personal communication, December 8, 2010). Her post-survey response was consistent with these patterns as she strongly agreed that the experience with her Swedish partner was positive overall. Her overall evaluation of the experience could be summarized in something Britta told me during her interview,

I learned that just because ... I felt that it was going to be a different situation and that we ... shouldn't think negatively about it or whatever, because you could end up learning something and it'll be a different experience.” (Britta, personal communication, December 8, 2010)

Toward the end of the class, scheduling became more difficult based on what she wrote on her blog, “I have been trying to contact her... I believe she must be a busy lady.” Even with scheduling difficulties and time differences, Britta reported helping her partner learn to use Second Life, and she gave her feedback on her partner's presentation, “I tried to help her as best as I could by answering her questions and telling her how to search for stuff...She was telling me about her presentation she has to give...” (Britta, personal communication, December 8, 2010).

The amount of activity related to the theme of changing ideas also suggested that the experience gradually changed for her from the beginning to the end of the course. I interpreted some comments as having initial expectations of the assignment and of her partner. For example, “I was kinda leery about it since they were somewhere else and we were told it would be their first time speaking English” (Britta, personal communication, December 8, 2010). She also told me,

I figured we would have to take a lot of time out and that the language barrier would be different. It would be complicated to explain different things and at first we were told that they hadn't been in Second Life at all and we were supposed to show them around and everything... (Britta, personal communication, December 8, 2010)

Based on these initial expectations, the theme of changing ideas emerged. For example, she wrote on her blog, "Surprisingly her English is [quite good], she does ask me about what we call some things, but overall I was shocked."

Her evaluation of global awareness from her interview was, "[It can be important] when you're learning how to interact with them and deal with them because they have different cultures and beliefs" (Britta, personal communication, December 8, 2010). This comment might have reflected indication of ethnocentric stages, considering her choice of the phrase, "deal with them." In her interview, she believed that international education opportunities should be available but not required, "I think it should be offered and given as an option for those who want [it]. And then those who don't, they wouldn't have to partake in it" (Britta, personal communication, December 8, 2010).

Table 4.6.

*Britta's Blog, Papers, and Interview Activity*

Type of Activity (Themes and Interpretive Codes)	Occurrences
Changing Ideas	6
Initial Expectations	5
Showing Surprise	1
Completing Assignments	9
Completing Papers	1
Posting an Outline	1
Posting a Thesis Statement, Topic, or Introduction	7
Evaluating	47
Course	2
Other Technology	4
Partner	12
Second Life	27
Value of Global Competence	2

Table 4.6 Continued

Type of Activity (Themes and Interpretive Codes)	Occurrences
Interacting with International Partner	49
Exchanging Culture	8
Exchanging Language	4
Exploring	14
Helping	8
Scheduling	15
Interacting with Others	10
Collaborating	1
Exploring	9

There appeared to be three turning points in Britta’s Activity Theory model, which are summarized in Table 4.7 below. First, her initial attitude about using Second Life was shown in her pre-survey and in her interview – a conflict between the subject and the tool. Her pre-survey showed that she was somewhat uncomfortable using Second Life for the course, and she said in her interview, “I didn’t like it at first.” The conflict was resolved with continued use of Second Life and she reported many interactions in the virtual world in her blogs, papers, and interview. Second, she revealed some pre-conceived ideas about her partner’s level of English, a conflict between the subject and

the object. She reported that she was worried about the interaction because they were told it would be the first time the students in Sweden would use English. The conflict was resolved during the first meeting when Britta discovered that her partner spoke English well. Finally, the third turning point was between the division of labor and the object. Though Britta had met a few times with her partner, as the semester progressed, there were some scheduling conflicts. These conflicts were resolved with Britta's diligent communication and rescheduling of the meetings. In Figure 4.8 below, broken arrow lines among the nodes indicate a conflict that occurred, but did not stop, the interaction with the object.

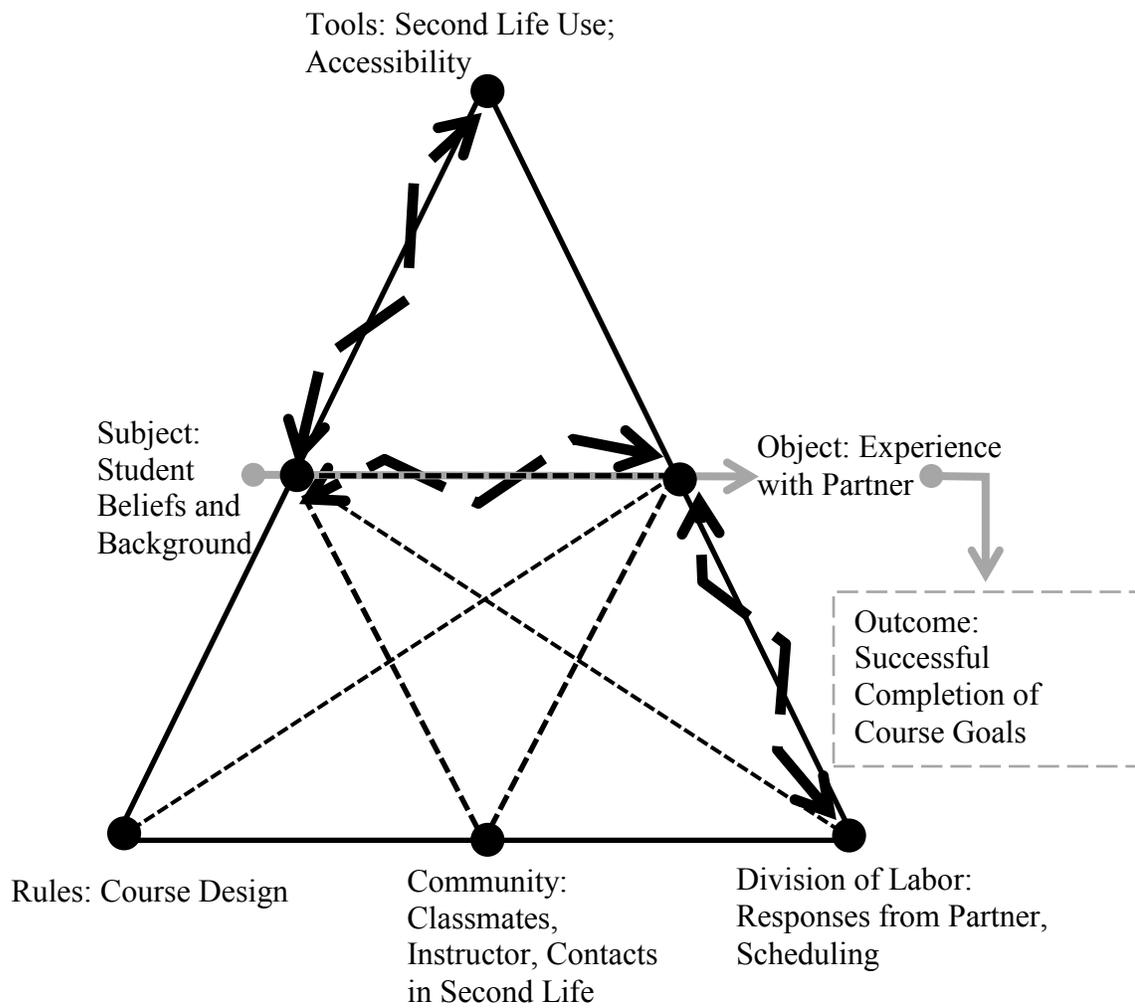


Figure 4.8. Activity Theory Model for Britta

Table 4.7.

*Turning Points for Britta*

Turning Point	Conflict	Indicator	Resolution
1	Subject vs. Tool	Britta was uneasy about using Second Life for a composition class. She said she did not like it at first.	Britta used Second Life to explore paper topics and writes about several experiences in her blog and paper.
2	Subject vs. Object	Britta expected to have difficulty communicating in English with her partner.	Once Britta met her partner and realized she could speak English, they were able to meet several more times.
3	Object vs. Division of Labor	Time changes, schedule incompatibility, and unexpected events were obstacles to arranged meetings.	Britta was persistent at communication with her partner until alternative times were arranged.

## Case Study Analysis – “Donald”

### *Before the Interaction*

Donald (a pseudonym) was a 22-year-old African-American male majoring in criminal justice. He took the course during the Fall 2010 semester. His pre-survey reported having a computer and Internet at home, but that he had never used Second Life outside of this class and that he felt a little uncomfortable with the technology. He also reported feeling a little uncomfortable with Internet technologies such as email, online discussion boards, search engines, and databases.

Donald had never traveled outside of the United States and said that he had never studied and did not speak any other languages besides English. He somewhat agreed to statements about his confidence in locating places on a map, connecting historical events to current events, and keeping up with current events. He did not indicate any interest in pursuing international activities on the pre-survey, and his interest in global awareness was calculated to be 28% on the pre-survey (as shown in Table 4.8). His attitude score for university involvement in international education was 3 on the pre-survey, on a scale from 1 to 4, with 4 being the most agreeable. Information from his interview supported this attitude, as discussed further below.

In terms of intercultural sensitivity, he reported somewhat agree to statements related to minimization, acceptance, adaptation, and integration, which suggested ethnocentric stages with some progression into ethnorelativism. A chart with Donald's responses to statements at each stage is shown below in Figure 4.9. Although the survey responses were not clear, Donald showed a pattern of general openness to learning about

other cultures in his interview. This openness was characterized by statements that he believed he would benefit from learning from different people. His statements are given in more detail below in the discussion of themes found in his documents and interview.

#### *After the Interaction*

Donald's post-survey attitude about using Second Life was calculated to be 2.25 on a scale from 1 to 4, with 4 being the most favorable (see Table 4.8 below). Although he did not believe he would use Second Life again, he somewhat agreed that his Second Life experience was positive. He said that he somewhat disagreed that he liked using Second Life for the course, which he also stated during the interview. He reported additional technical difficulty on his post-survey, listing issues such as computer crashes and problems with sound/microphone.

On the post-survey, Donald's overall interest in pursuing international activities included taking a vacation and his interest in global awareness was calculated to be 31% (as shown in Table 4.8). During the interview, he told me that traveling outside the United States was something he would like to do eventually because there were "bigger opportunities" outside of the United States. When asked for more information about the kind of travel he would like to do, he was not sure (personal communication, December 8, 2010). In addition, he was less confident in his geography skills and in keeping up with current events, to which he responded somewhat disagree.

His attitude score for university involvement in international education was 3 on the post-survey, on a scale from 1 to 4 with 4 being the most agreeable, as shown in Table

4.8 below. This attitude was supported during the interview when Donald expressed the importance of international opportunities and said that it would be a benefit to him.

Table 4.8.

*Summary of Donald's Pre- and Post-Survey Attitudes*

	Pre	Post
Interest in global awareness (100%)	28%	31%
Interest in meeting international people (1=not at all; 5=very interested)	3	3
Attitude about university's role in international education (1=strongly disagree; 4=strongly agree)	3	3
Attitude about Second Life (1=strongly disagree; 4=strongly agree)	n/a	2.25

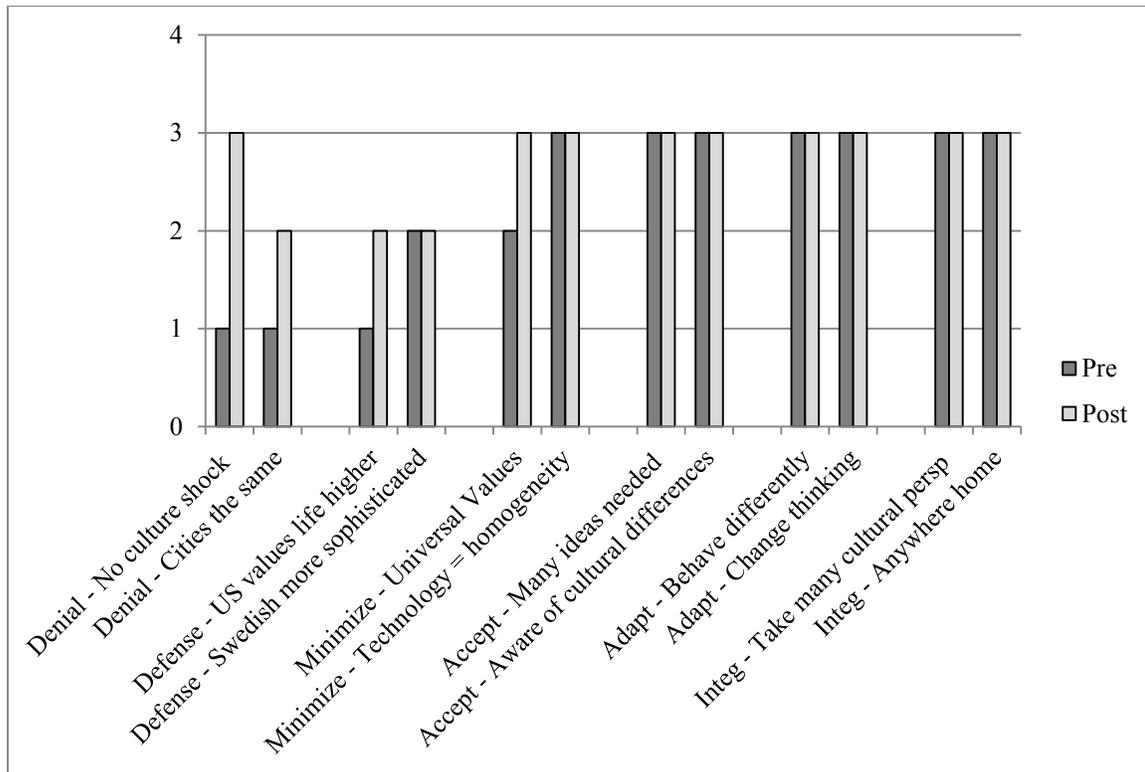


Figure 4.9. Chart of Donald's Attitude toward Cultural Difference (Intercultural Sensitivity). (Summary of Likert Scale, 1=Strongly Disagree, 2=Somewhat Disagree, 3=Somewhat Agree, 4=Strongly Agree. Agreeability indicates stronger representation of a particular stage.)

Table 4.9 summarizes the activity for Donald's blog, interview, and papers. Most of his activity was related to the theme of evaluating (24), specifically, evaluating Second Life (15). Donald was not able to meet with his international partner, but there were several statements related to the theme of interactions with others in Second Life (17). Some of his interactions with others were related to seeking help from the librarians or meeting a study partner in order to get help with assignments (6). Interactions with others

also included people he contacted in-world at sites related to his paper topic (5). There was some activity related to completing assignments (7).

Donald's evaluation of Second Life showed a mixture of attitudes that related to the application of Second Life, "I like Second Life... I met...new people, and then I learnt other people's cultures and stuff like that, but through the classroom, I didn't really like it cuz, I didn't understand everything that he wanted us to do...sometimes on Second Life, the computer would...crash and stuff like that" (Donald, personal communication, December 8, 2010). He expanded on his attitude about Second Life, "So, I say, the only downfall on Second Life, basically, is...a whole bunch of lag and...it always crashes" (Donald, personal communication, December 8, 2010). When asked about the class in general, he said,

When I signed up for his class, I figured it was like a regular, traditional classroom. But I found out...it was more of an online class ... I never had an online class before, so I went ahead and actually stuck with [it]. (Donald, personal communication, December 8, 2010)

His interaction with his partner was related exclusively to scheduling, "I never really had a chance to meet him because I couldn't get him through email, so I never had a chance to really actually talk to him or interact with him on Second Life" (Donald, personal communication, December 8, 2010). When Donald did not get a response, he gave up on the interaction, and he relied on people in Second Life for the information he needed for his assignment, "[In] Second Life I had [to] visit some of their religion sites, and I just talked to them about their religion" (Donald, personal communication,

December 8, 2010). He explained his exposure to other cultures in terms of the religious sites he visited related to Buddhism, Hinduism, and Christianity. His paper described different things he saw while he visited the sites, and an example of learning culture was interpreted from his comment, “I found out that Buddh[ism] is a religion that has no world owned materials because they don’t want to be selfish” (Donald, personal communication, December 8, 2010). His interactions with others in Second Life provided some insight for him that led to writing about a correction of a misconception about Hinduism in his paper, “I thought that people who believe in Hinduism believe in ghosts, demons...I thought people who believe in that religion believe in black magic...and white magic, which is good magic” (Donald, personal communication, December 8, 2010). While this statement suggests that he had learned something about a religion, it also may indicate racial bias in his use of the terms, “black magic” and “white magic” and his association of “white magic” with “good magic”. The implication of this is discussed in more detail in the next chapter.

Follow-up questions during the interview regarding his attitude about international education and the university’s role in it showed support for his openness, “...people that are outside of the U. S. I can actually learn about their culture and their ways... and I can probably benefit... about the way I go about life. I think it would be a good benefit for me,” (Donald, personal communication, December 8, 2010). He explained why he thought it was important to know about people from other cultures, “You know, you can best understand why different people from other countries, does the things that that they do” (Donald, personal communication, December 9, 2010).

Table 4.9.

*Donald's Blog, Papers, and Interview Activity*

Type of Activity (Themes and Interpretive Codes)	Occurrences
Changing Ideas	1
Correcting Misconceptions	1
Completing Assignments	7
Completing Papers	2
Posting an Outline	1
Posting a Thesis Statement, Topic, or Introduction	4
Evaluating	24
Assignment	2
Course	1
Other Technology	2
Second Life	15
Value of Global Competence	4

Table 4.9 Continued

Type of Activity (Themes and Interpretive Codes)	Occurrences
Interacting with International Partner	3
Scheduling	3
Interacting with Others	17
Collaborating	6
Exploring	5
Inquiry	5
Learning Culture	1

There were three main turning points for Donald in his Activity Theory model, one of which interfered with the completion of the goal. The first conflict was between the subject and the tool – Donald reported that it was his first online class and that he was expecting a traditional class. Though he had never used Second Life, he stayed with it. He had also experienced some technical difficulties using Second Life in general, but he persisted in exploring the sites related to his paper topics. Second, Donald seems to have had difficulty with the class design. He commented in the interview, “I didn’t understand everything that he wanted us to do,” (personal communication, December 8, 2010). He also sought additional help from classmates and the librarian to complete his assignments. The third conflict prevented him from accomplishing the goal. He had emailed his partner

to schedule a time to meet, but never received a response – a conflict between the object and the division of labor. He ultimately gave up on the interaction and found another way to complete the requirements of his paper by talking with others in Second Life. In Figure 4.10 below, broken arrow lines among the nodes indicate a conflict that was overcome. Solid arrow lines indicate a conflict that ultimately stopped the interaction and attainment of the project goals.



Table 4.10.

*Turning Points for Donald*

Turning Point	Conflict	Indicator	Resolution
1	Subject vs. Tool	Donald had expected a traditional class and had never used Second Life before.	He decided to stay with the course.
2	Subject vs. Rules	Donald said that he did not understand what he was supposed to do.	He sought help from his classmates and a librarian to complete his assignments.
3	Object vs. Division of Labor	Donald said that he emailed his partner and never got a response.	When Donald did not get a response from his partner, he gave up on the international interaction.

## Case Study Analysis – “Kyle”

### *Before the Interaction*

Kyle (a pseudonym), was a 20-year-old white American male studying business management. He took the course in the Spring 2011 semester. Although he owned a computer, his pre-survey responses indicated that he did not have Internet access in his home. He had never used Second Life before taking the class, and he reported on his pre-survey that he preferred a traditional classroom. His comfort level with technology was mixed – he reported being very comfortable or fairly comfortable using search engines, email, social networking sites, and course sites such as Blackboard. He reported feeling a little uncomfortable with Second Life and a little uncomfortable or very uncomfortable with online discussions, wikis, or online databases.

Kyle had traveled outside of the United States on vacations to Mexico and the Caribbean. He was fairly confident in his ability to relate current events to historical events, to keep up with current events, and to locate different countries on a map. He had studied another language besides English, but did not feel comfortable using it. He was interested in pursuing other international activities such as traveling for vacation or studying abroad. His interest in global awareness was 50%.

In terms of the university’s role, Kyle’s responses indicated that he did not feel strongly that the university should be highly involved in an international education. He somewhat agreed that students should have a study abroad experience, but strongly disagreed or somewhat disagreed that courses should be taken on international topics and that a university is responsible for giving its graduates an international education. Overall,

Kyle's attitude score for university involvement in international education was 2, with 4 being the most agreeable.

His intercultural sensitivity responses showed some agreement in the minimization stage and acceptance stage. This suggested an ethnocentric mindset with progression into ethnorelativism. In the minimization stage, differences are thought of as superficial, and different cultures are considered equal but still different compared to one's own culture. An acceptance mindset values differences and can see differences relative to context (Hammer et al., 2003) (See Figure 4.11 below).

#### *After the Interaction*

Kyle's overall attitude about using Second Life was 2.75, with 4 being the most agreeable. He reported that he somewhat agreed that technological problems were a barrier to using Second Life, stating computer crashes, difficulty installing or running Second Life, problems with connectivity, and problems with his sound/microphone as issues. These survey responses were supported by the comments in his interview, which appear below. Despite the technological problems, on his post-survey, he somewhat agreed that his Second Life experience was positive overall and that he liked using Second Life for communication.

Kyle's interest in global awareness from his post-survey results stayed about the same as his pre-survey results – 41%, with the omission of taking a vacation from his post-survey international activity interests being the only difference (below in Table 4.11). His attitude about meeting people from other countries remained the same, as did his attitude about the university's role in an international education (see Table 4.11

below). Kyle’s attitude about intercultural sensitivity stayed about the same as his pre-survey results (see Figure 4.11 below). He reported that he somewhat agreed that the interaction with his international partner was overall positive. As shown in more detail below, he also stated in his interview that it was a good experience.

Table 4.11.

*Summary of Kyle’s Pre- and Post-Survey Attitudes*

	Pre	Post
Interest in global awareness (100%)	50%	41%
Interest in meeting international people (1=not at all; 5=very interested)	2	2
Attitude about university’s role in international education (1=strongly disagree; 4=strongly agree)	2	2
Attitude about Second Life (1=strongly disagree; 4=strongly agree)	n/a	2.75

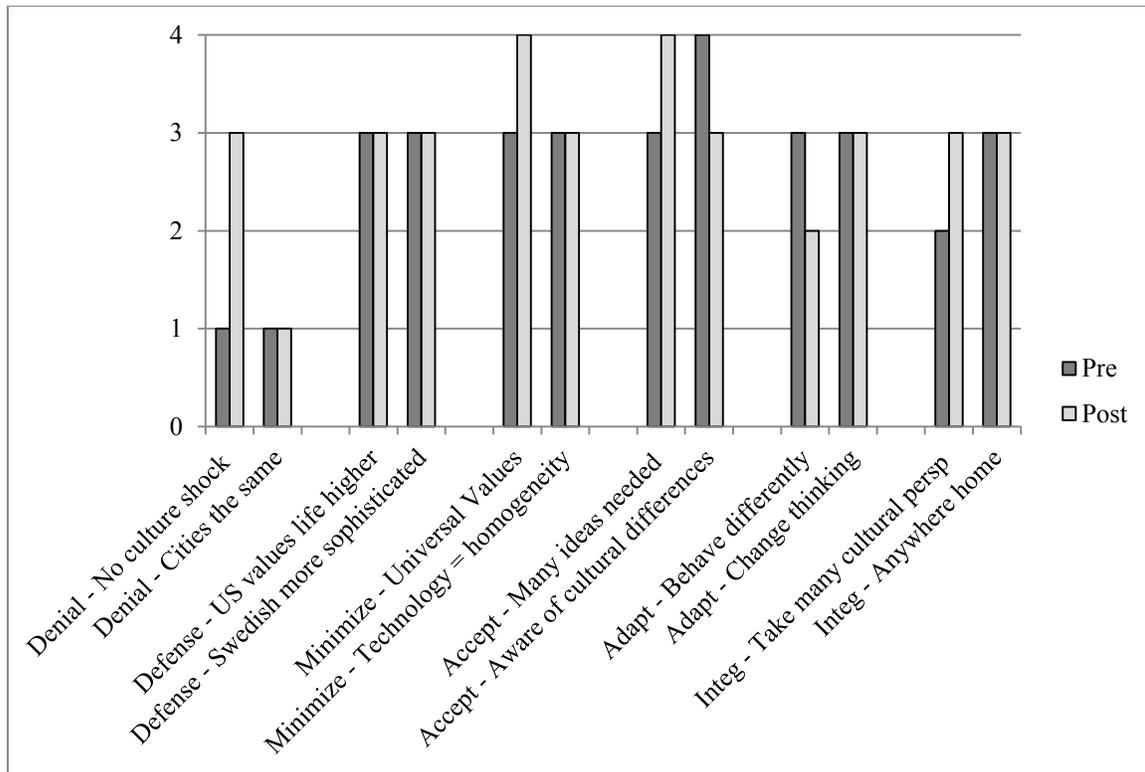


Figure 4.11. Chart of Kyle's Attitude toward Cultural Difference (Intercultural Sensitivity). (Summary of Likert Scale, 1=Strongly Disagree, 2=Somewhat Disagree, 3=Somewhat Agree, 4=Strongly Agree. Agreeability indicates stronger representation of a particular stage.)

The table below shows a summary of Kyle's activity from his blogs, interview, and papers (see Table 4.12 below). His primary activities shared the theme of evaluating (26) and interacting with his international partner (14). His evaluating activity was mostly related to comments about Second Life (10) and statements about his partner (6). In addition, he evaluated some ideas about global competence (5). Activities related to communicating with his partner were related to exchanging language (4) and exchanging culture (6). In addition to exchanging language and culture, there was also some helping

(2) and scheduling (2). Kyle made two different comments about identity with a Second Life avatar – one of himself, and another of his international partner. Other activities for Kyle referred to interacting with others (8), most of which were exploring (7).

His overall evaluation of the course and assignment was shown in a comment from his interview, “I thought it was kinda cool how we could talk to a person from a different country through using the Internet” (Kyle, personal communication, April 25, 2011). His expectations of Second Life and a change in ideas was reflected with his blog entry about the potential for social networking, “Although my mission was to meet some friends, I was not prepared for the large quantity of friendship requests I received...I realized that someone could have this much fun for entertainment in Second Life.” However, he explained some of the problems with the assignment in terms of the time it took, “Other assignments for a comp class, you’d either read a book or explore through a book, and I had to explore through Second Life. So that took time...” (Kyle, personal communication, April 25, 2011). He also referred to the inconvenience of using the virtual world,

I didn’t have my WiFi, and my computer wasn’t strong enough to do the program, so every time I wanted to get on Second Life and meet with the class, I had to go to the library... I just couldn’t do it just wherever because my computer couldn’t do the program, so I had to go to the library every time. (Kyle, personal communication, April 25, 2011)

Kyle said that he enjoyed using the other formats of technology, the blogs and Adobe Buzzword to post drafts and upload his papers because of the feedback from the

professor he was able to receive. Referring to the blog site, “[The professor] would get on there and...critique us and comment on it and tell us ways to make it better...positive and negative comments on there as well” (Kyle, personal communication, April 25, 2011). In reference to uploading papers on Adobe Buzzword, “I liked it because, you’re just not, using up a whole paper... [the professor will] tell you, oh, this is not what I want you to do. If you’re using the blogs, then you know you’re on the right track for writing your paper” (Kyle, personal communication, April 25, 2011).

It was unclear how many times he met with his international partner, but his comments suggested that Kyle and his partner were able to extend their communication beyond exploring for the sake of completing the assignment. Although Kyle expressed difficulty and inconvenience in using Second Life, he persisted in the communication with his partner and stated that the experience ultimately had an impact on his desire to study abroad, “I’ve thought about studying abroad, so this kinda encourages me to want to go study abroad now, having talked to another person and wanting to go to another country more and more,” (Kyle, personal communication, April 25, 2011). When I asked him if he wanted to go to Sweden to study abroad he replied, “I don’t know if Sweden or just more countries...I’d like to go over in Europe and explore” (Kyle, personal communication, April 25, 2011).

He spoke about the interaction with his partner overall, “It was kinda cool talking to them...I thought they were rather positive. I got to learn about him, he got to learn about me... I know kinda what Sweden’s like” (Kyle, personal communication, April 25, 2011). He evaluated his partner in the following comment, “He was kind of a high class

[Swede]...he was very educational, and he was a rather smart guy, so I guess I could have had high expectations for him” (Kyle, personal communication, April 25, 2011).

Other examples of interacting with his partner included exchanging language, “I noticed that his English was not fluent, like he was still in the process of learning the American language, but I feel as time went on it got better” (Kyle, personal communication, April 25, 2011). He told me what they discussed in terms of language, “We got to teach them different ways that we talk from what they learned in actual books too” (Kyle, personal communication, April 25, 2011). He also said, “We got to learn the different ways they talk, and different ways they thought Americans used words,” (Kyle, personal communication, April 25, 2011). Kyle didn’t mention exploring in-world with his partner in any of his documents, but there were some references on his blog of interacting with others, “While here, I was able to find a couple female avatars that did not have any dance partners and danced with them to the romantic jazz music.”

In Kyle’s interview, I asked him to elaborate on his responses to his attitude about international education and he said, “I think it’s important to understand what other cultures do and what we do and the differences between them.” However, he did not see it as important for everyone, “It depends on the major you’re going into. I mean, a physical education major is not going to want to know more about other countries that much” (Kyle, personal communication, April 25, 2011).

An unexpected theme in Kyle’s data sources was avatar identity. In his interview, he referred to his partner’s avatar as a way that he could see what they might look like, “We kinda got an idea of what they sorta look like from the way they made their avatar.

We didn't get a real picture of them, but kinda close, like to what they would have looked like," (personal communication, April 25, 2011). Another time, he self-identified with his avatar, "It took me a little time at first to get used to moving my avatar around. However, as soon as I found out how easy it really was, I began to discover that my avatar was an identity of myself."

Table 4.12.

*Kyle's Blog, Papers, and Interview Activity*

Type of Activity (Themes and Interpretive Codes)	Occurrences
Avatar Identity	2
Other – Identity with Avatar	1
Self-Identity with Avatar	1
Changing Ideas	2
Initial Expectations	1
Trying New Things	1
Completing Assignments	8
Posting Thesis Statements, Topics, or Introductions	8

Table 4.12 Continued

Type of Activity (Themes and Interpretive Codes)	Occurrences
Evaluating	26
Assignment	1
Course	1
Other Technology	3
Partner	6
Second Life	10
Value of Global Competence	5
Interacting with International Partner	14
Exchanging Culture	6
Exchanging Language	4
Helping	2
Scheduling	2
Interacting with Others	8
Collaborating	1
Exploring	7

The main conflict in Kyle's Activity Theory model occurred between the tools and the object. Kyle reported having a lot of difficulty with the technology and talked about the inconvenience of having to go to the library to use Second Life. However, the conflict was resolved and he continued his online interactions with his international partner. The turning point is summarized in Table 4.13 below. The Activity Theory model below in Figure 4.12 shows a broken arrow line, indicating a conflict that was resolved between nodes.

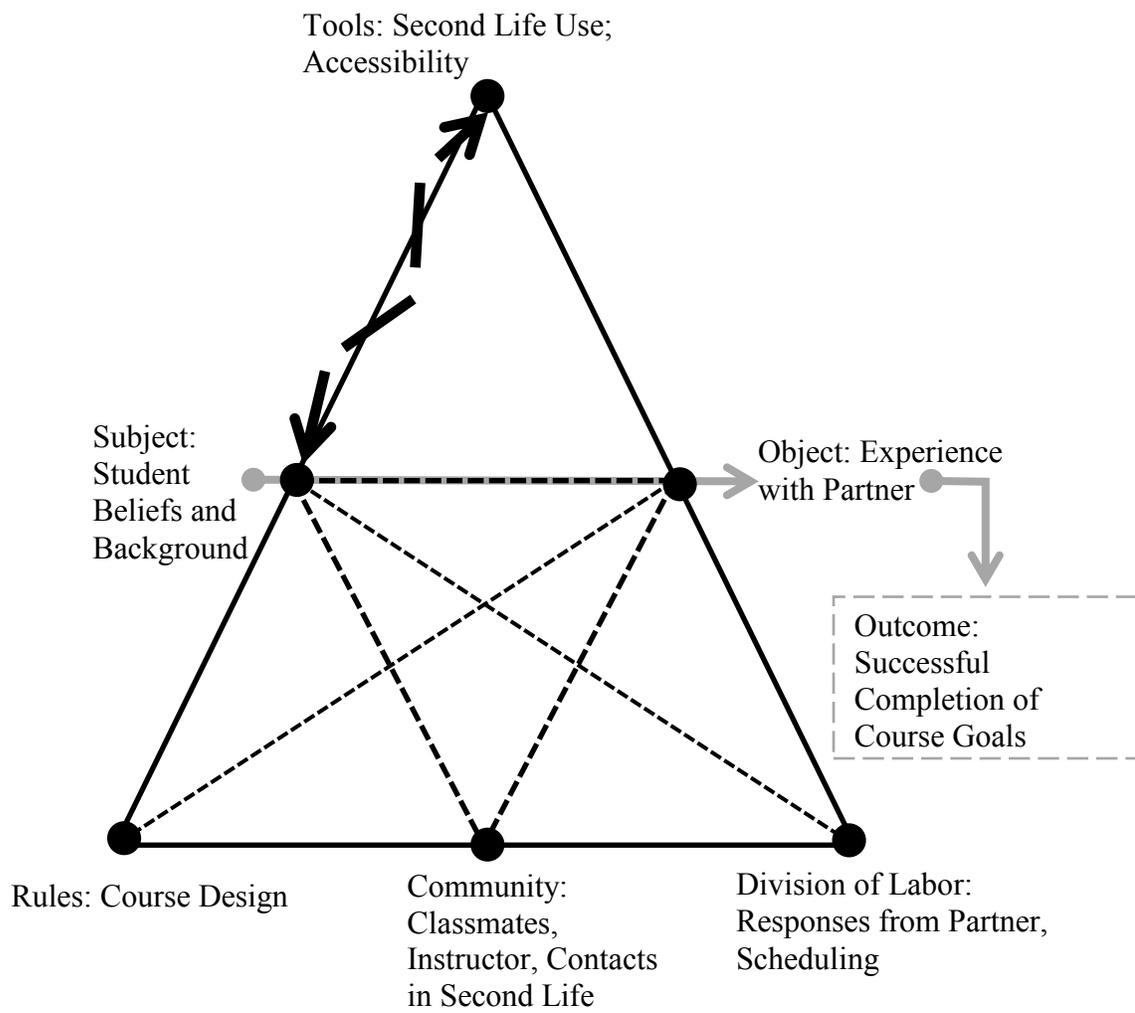


Figure 4.12. Activity Theory Model for Kyle

Table 4.13.

*Turning Points for Kyle*

Turning Point	Conflict	Indicator	Resolution
1	Subject vs. Tool	Kyle expressed how inconvenient it was for him to use Second Life because he could not use it at home.	Kyle planned his meetings with his international partner and used the library's computers.

## Case Study Analysis – “Mary Ann”

### *Before the Interaction*

Mary Ann (a pseudonym) was a 20-year old white American female, majoring in family and child development. She took the course in the Fall 2010 semester. On her pre-survey, she reported that she owned a computer and had Internet access at home. She felt fairly comfortable or very comfortable with Internet technologies such as search engines, email, social networking sites, and course management sites. She had not used Second Life before taking the class, but she reported feeling somewhat comfortable with the idea of using it. Her preference for learning was a traditional classroom rather than an online class.

Mary Ann had very little international experience. Although she had studied another language besides English, she did not feel comfortable using it. In terms of her interest and global awareness, she reported that she felt fairly confident in being able to locate different countries on a map, keeping up with current events, and being able to relate historical events to current events. She had no interest in pursuing international activities, and the number calculated for her interest in global awareness was 29% (see Table 4.14 below). She had some interest in meeting people from other countries, but did not feel it was much different than meeting people from her own country.

Mary Ann’s agreeableness to a university’s role in international education was 3, with 4 being the most agreeable. She agreed somewhat that studying abroad and international courses should be part of a university education, and she agreed somewhat

that the experience of American students was enriched by international students and faculty on campus.

Her attitude toward intercultural sensitivity showed agreement in all stages, so interpretation is unclear. However, some of the comments in her survey results and interview might suggest a minimization of difference - an ethnocentric mindset. She told me that she had no expectations for her international partner because she believed it would be very similar to meeting any other classmate.

#### *After the Interaction*

Mary Ann's attitude about Second Life after the class was a 2.75, with 4 being the most agreeable. This was consistent with feedback during her interview. She had a few technical difficulties such as slow connections and lag, but did not feel that it was a barrier to using Second Life because it occurred mostly during the last two weeks of class. She reported on her post-survey that she liked using Second Life for communication, although she did not think that she would continue using it. Overall, she agreed somewhat that the Second Life experience was positive. She wrote in the comments section of her post-survey, "When I first signed up for this class I thought it was going to be a lot different... Now that I have taken it, it has shown me how to use so many different thing[s] and I'm glad I took it."

Results on Mary Ann's post-survey remained similar for her general interest in international activities. Her confidence in locating different countries, relating historical events to current events, and keeping up with current events was lower, as she reported somewhat disagree when asked if she thought she could do these things. Overall, her

interest in global awareness was 19% and her attitude about a university's role in international education dropped from 3 to 2, with 4 being the most agreeable (see Table 4.14 below). Attitudes about intercultural sensitivity remained about the same, with some slightly stronger agreement in the acceptance and adaptation stages, but some agreement in all stages (see Figure 4.13). After the interaction, she reported that she was interested in meeting people from other countries and that she might be able to learn something new. She wrote in one of her papers that she has always been interested in traveling abroad.

Table 4.14.

*Summary of Mary Ann's Pre- and Post-Survey Attitudes*

	Pre	Post
Interest in global awareness (100%)	28%	19%
Interest in meeting international people (1=not at all; 5=very interested)	3	4
Attitude about university's role in international education (1=strongly disagree; 4=strongly agree)	3	2
Attitude about Second Life (1=strongly disagree; 4=strongly agree)	n/a	2.75

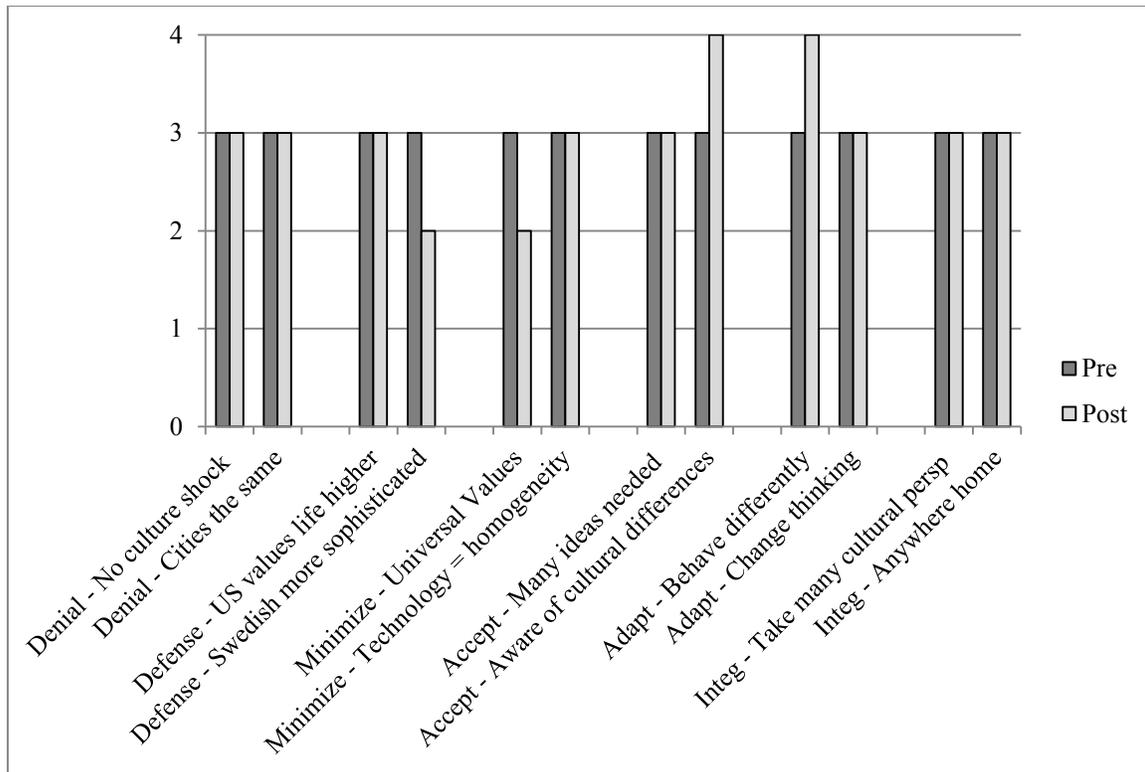


Figure 4.13. Chart of Mary Ann's Attitude toward Cultural Difference (Intercultural Sensitivity). (Summary of Likert Scale, 1=Strongly Disagree, 2=Somewhat Disagree, 3=Somewhat Agree, 4=Strongly Agree. Agreeability indicates stronger representation of a particular stage.)

Table 4.15 below summarizes the kind of activity in Mary Ann's blogs, interview, and papers. The highest activity was under the theme of evaluating (40), including evaluations of Second Life (21) and evaluating her international partner (7). She made one comment about self-identity with her avatar. Her other activity was interacting with her international partner (29), which included scheduling (9), helping (6), and exploring (9), but she also made some statements that suggested an absence of exchange of culture

(5). Some of her statements about comfort zone barriers (1), trying new things (1), and an absence of change (1) fell under the theme of changing ideas (3).

Mary Ann gave an overall evaluation of the course and the assignment, I thought it was pretty neat...I thought it was very different than most courses I've taken, but I did learn a lot from it with how to do some things with my comp paper, and then how to use Second Life and all the other different programs we used. (Mary Ann, personal communication, December 8, 2010)

She also had several comments related to Second Life in her papers and blog posts, "Second Life has let me experience so many different things that I didn't think were possible and I'm glad I got the chance to do so" (Mary Ann, personal communication, December 8, 2010). In reference to her paper topic on nursing in Second Life, she explained the virtual world's benefit, "This [site] provides the students to practice on other avatars but the better thing is that it is not a human being...they are not at risk of hurting someone" (Mary Ann, personal communication, December 8, 2010). Mary Ann reported one problem with the lag in her interview, "Sometimes my avatar...I'd try to move her and she wouldn't move but then she'd walk by herself...That started happening...the last two weeks of class" (Mary Ann, personal communication, December 8, 2010).

According to her blog posts, Mary Ann met with her international partner at least 3 times. Mary Ann made some comments that suggested an absence of exchange of culture, and her interactions with her partner seemed focused on exploring the Second Life environment rather than exchanging information, "We just walked around and

looked at everything. It was kinda normal because I do that with another person in the class” (Mary Ann, personal communication, December 8, 2010). She told me, “I just kinda thought of her as, like, another student in the class that I didn’t really know and I just met them over Second Life” (Mary Ann, personal communication, December 8, 2010). When asked if anything was different about working with her partner, she said, “No, not really, just having to put her in our paper was a little different” (Mary Ann, personal communication, December 8, 2010). I asked if she had the opportunity to talk with her partner about Sweden, and she replied, “No... she just explained to me what her class was...who she was, how many kids she had... that kind of information on her” (Mary Ann, personal communication, December 8, 2010). When asked about what she and her partner discussed, she responded,

She asked me to show her different places...and I showed her, like, the different places that I used...then later on when I did meet up with her, she showed me some places that she found... that she thought would be good for my paper. (Mary Ann, personal communication, December 8, 2010)

Mary Ann’s comments above might suggest that she was approaching the meeting with her partner with an ethnocentric mindset – especially when she referred to her as similar to any other classmate. The places she explored with her partner included a dance club, a shopping area, Hawaii, a location in virtual France, and the virtual St. Louis Gateway Arch. The monument is an important Missouri landmark, and it was the only suggestion that any sort of cultural information was exchanged. On the other hand, upon arriving, they realized that it was a site that required payment, so they did not explore the site.

On her blog, she explained some difficulty she had with helping her partner learn to use Second Life, “I didn’t know how hard it would be to explain for her to teleport herself...this took about 15-20 minutes to get down. After that, the only place she could find was the nightclub...” (Mary Ann, personal communication, December 8, 2010). When asked if she took away anything from the meetings with her partner, she replied, “Um, just, well, not really. But, I got to teach her how to use it [Second Life], which was kinda cool, knowing I could teach someone how to do that” (Mary Ann, personal communication, December 8, 2010).

Even though Mary Ann’s interest in international activities was fairly low, her international partner seemed to be the source of the obstacles, not Mary Ann. Mary Ann had difficulty getting in touch with her partner, “She’s really busy and hard to get ahold of because she’s also a teacher and then, she has a lot of kids, so it was hard for her to even meet with me” (Mary Ann, personal communication, December 8 2010).

Mary Ann’s partner also seemed to be more task-focused than Mary Ann. Mary Ann helped her learn how to better use Second Life and gave her feedback for her presentation, but Mary Ann was more willing to explore different places in Second Life just for the sake of exploring. During her first interaction, Mary Ann took her partner to a club that she had found interesting and fun. She wrote on her blog,

She found it very hard to hear so we teleported back to her island. She told me that she doesn’t like loud music very much since it was hard to hear. So next time I met with her this week I will be taking her to a more peaceful place, so it won’t bother her. (Mary Ann, personal communication, December 8, 2010)

Mary Ann writes with enthusiasm on her blog about another meeting when they went shopping together in the virtual world, “We looked around at many stores and I [think] she enjoyed it, I did. I can’t wait to explore some more with her!” However, after that meeting, Mary Ann’s partner asked not to meet anymore except for when she needed help with her presentation. According to Mary Ann’s blog, “I just got an email yesterday...saying that right now she didn’t need to explore any more but when it comes for her to present some project she would like me to watch it and I said I would.” Even after that correspondence, Mary Ann tried again to schedule a meeting with her partner, but was unable to. She wrote on her blog, “I have tried to get a hold of my partner but she said that she doesn’t need to meet with me until she has her thing to present to her class.”

When I asked if she thought people should learn about other countries and cultures she said, “I think so, so they can know what they’re all about...Instead of just knowing one thing” (Mary Ann, personal communication, December 8, 2010). Mary Ann reported that she was more interested in traveling after meeting her partner, but attributed the increased desire to the places she had seen while exploring in Second Life instead of the interaction with her partner, “Just after visiting different place[s] with her on there and seeing how they worked, made me really want to go visit other places” (Mary Ann, personal communication, December 8, 2010). She wrote in a paper,

Ever since I was little I have always wanted to travel around the world but was kind of hard for me since I didn’t have the money and because I have a big family. Even though this is only Second Life it was still a pretty neat experience for me and made things seem real for me.

During her interview, I asked her to elaborate on this desire to travel. She stated,

I think if I went... I'd be a little nervous to do it at first, I think I'd want at least someone I know to do it with me. But if I had to be, like... a Swedish person and then they got another student in my class, I think that would be kinda cool. That way I wouldn't have to physically go over there, but I would get to know someone. (Mary Ann, personal communication, December 8, 2010)

Mary Ann interacted with others in Second Life too. She mentioned exploring with one other classmate, and they engaged in activities like shopping, visiting nightclubs, and visiting different landmarks. She used people in-world to collect information for her paper on nursing. In a paper, she described one encounter with a nurse who was taking a nursing class in Second Life. She had asked her opinion about using the platform for class and what she thought the disadvantages were. She also talked to the professor about what he thought the experience was like for his students.

An interesting comment on her blog was related to avatar-identity, "With all the different appearances, body structures, and facial features...there are so many different things you can do with your avatar...[you can] make them just like you." This relationship of self-identity and avatar is discussed more in the next chapter.

Table 4.15.

*Mary Ann's Blog, Papers, and Interview Activity*

Type of Activity (Themes and Interpretive Codes)	Occurrences
Avatar Identity	1
Self-Identity with Avatar	1
Changing Ideas	3
Absence of Change	1
Comfort Zone Barriers	1
Trying New Things	1
Completing Assignments	9
Complete Papers	2
Posting Outlines	1
Posting Thesis Statements, Topics, or Introductions	6
Evaluating	40
Assignment	1
Course	2
Other Technology	1
Partner	7
Second Life	21
Value of Global Competence	8

Table 4.15 Continued

Type of Activity (Themes and Interpretive Codes)	Occurrences
Interacting with International Partner	29
Absence of Exchange	5
Exploring	9
Helping	6
Scheduling	9
Interacting with Others	11
Exploring	8
Inquiry	3

As summarized below in Table 4.16, there were two turning points for Mary Ann related to the scheduling of meeting times with her international partner and her partner's willingness to meet. The first was a conflict between the object and the division of labor – Mary Ann stated that it was difficult to get in touch with her partner. A second conflict was between the object and the community – the partner. Mary Ann was willing to continue to meet and explore, but her international partner terminated the interactions until a time when she needed help from Mary Ann. Although it did not fully impede her reaching her goal, it shortened her experience. In Figure 4.14 below, the broken arrow lines indicate the conflict that limited, but did not stop the completion of the goal.

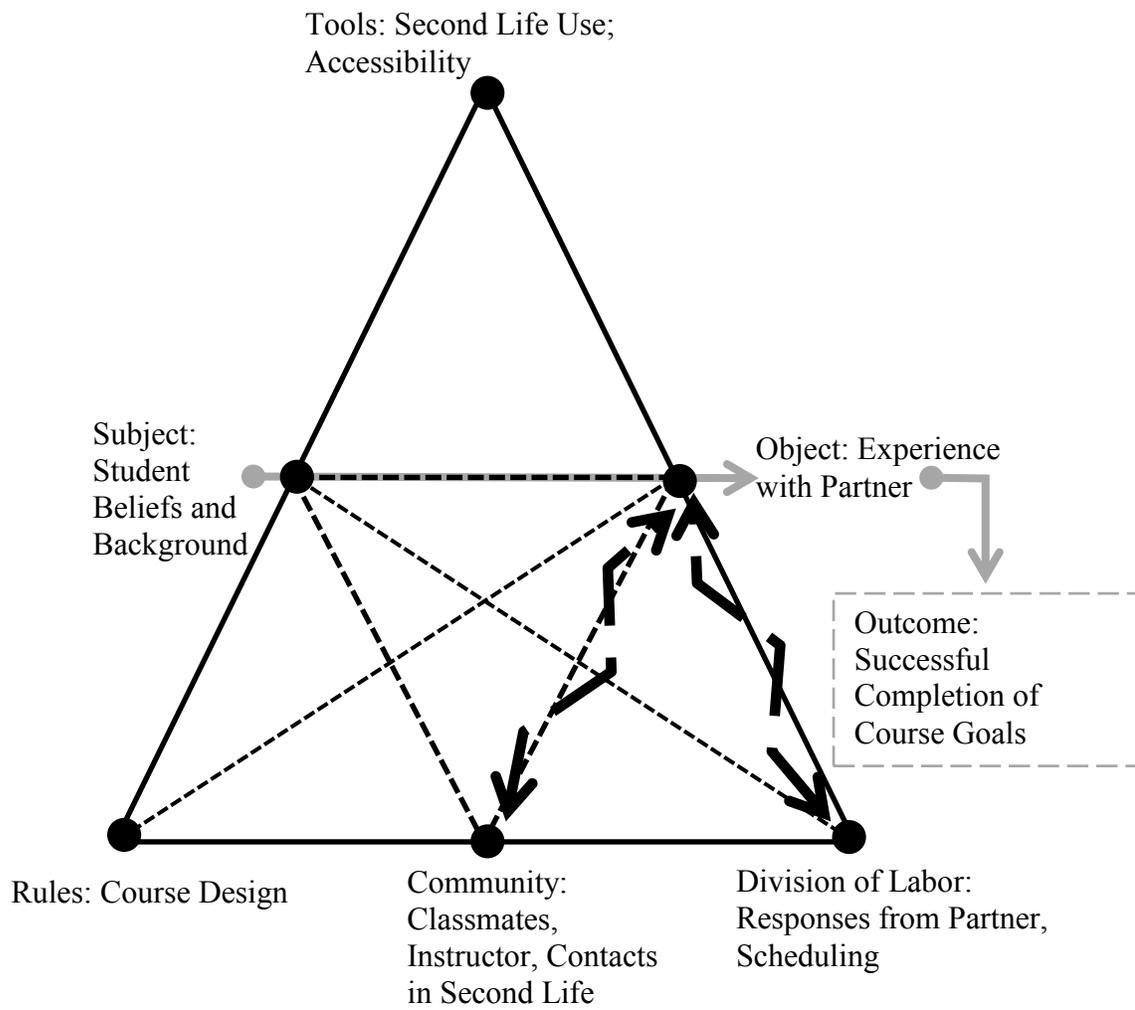


Figure 4.14. Activity Theory Model for Mary Ann

Table 4.16.

*Turning Points for Mary Ann*

Turning Point	Conflict	Indicator	Resolution
1	Object vs. Division of Labor	She stated that her partner was difficult to contact.	She persisted in communicating until she received a response from her partner.
2	Object vs. Community	She received a message from her partner that she did not need to meet anymore until she would need help with her presentation.	Mary Ann tried to maintain contact, but they did not meet anymore except for Mary Ann to check her partner's presentation.

## Case Study Analysis – “Todd”

### *Before the Interaction*

Todd (a pseudonym), was a 19-year-old African-American male studying business. He took the course in the Spring 2011 semester. According to his pre-survey, he did not have a computer or Internet access at home. He reported that he was fairly comfortable or very comfortable with Internet technologies such as email, course management sites, social networking sites, search engines, and databases. He had never used Second Life, and preferred a traditional classroom, although his comfort level with using Second Life was reported as fairly comfortable.

He had studied another language even though he did not feel comfortable using anything besides English, and he reported no other international experiences. His interest in global awareness was 44% on his pre-survey (see Table 4.17 below). Specifically, he indicated interest in studying or working abroad and in taking a vacation in a different country. Although he felt that he could relate current events to historical events, he did not feel confident in his skills to locate countries on a map and did not keep up with current events.

Todd’s attitude about the role of a university in providing an international education was agreeable – a 3, with 4 being the most agreeable. Although he disagreed that studying abroad should be part of a university education, he agreed that an international education should be the university’s responsibility, that courses involving international issues should be taken, and that American students were enriched by having international faculty and students on campus. He indicated that he was somewhat

interested in meeting people from other countries, but only if their English was very good.

As shown in Figure 4.15, Todd's overall intercultural sensitivity indicated agreement in all stages. Other responses during his interview revealed some openness. He told me that he was interested in studying abroad, but that he wasn't actively seeking an opportunity.

#### *After the Interaction*

Todd's overall attitude toward using Second Life was 2.25, with 4 being the most agreeable. He reported a 3 in agreeableness that his overall experience was positive, with 4 being the most agreeable. However, he disagreed that the orientation in Second Life prepared him for its use, he did not like it for communication purposes, and he thought that technological problems were a barrier to its use. He spoke about his problems in the interview as well as in the post-survey.

His interest in global awareness stayed about the same on his post-survey results, but his attitude about the university's role in an international education decreased to 1.75. On the post-survey, he disagreed that courses covering international issues should be taken as part of a university education. Despite this change, he still somewhat agreed that universities should be responsible for providing an international education. This information was confirmed in his interview. In his post-survey, he indicated a higher interest in meeting people from different countries, saying that he would like to meet them because he might learn something new. Studying abroad and taking a vacation in a different country were both indicated as interests on his pre- and post-surveys, and he

also said during his interview that he would like to travel outside of the U. S. However, he told me he had not pursued this idea.

Table 4.17.

*Summary of Todd's Pre- and Post-Survey Attitudes*

	Pre	Post
Interest in global awareness (100%)	44%	47%
Interest in meeting international people (1=not at all; 5=very interested)	2	4
Attitude about university's role in international education (1=strongly disagree; 4=strongly agree)	3	1.75
Attitude about Second Life (1=strongly disagree; 4=strongly agree)	n/a	2.25

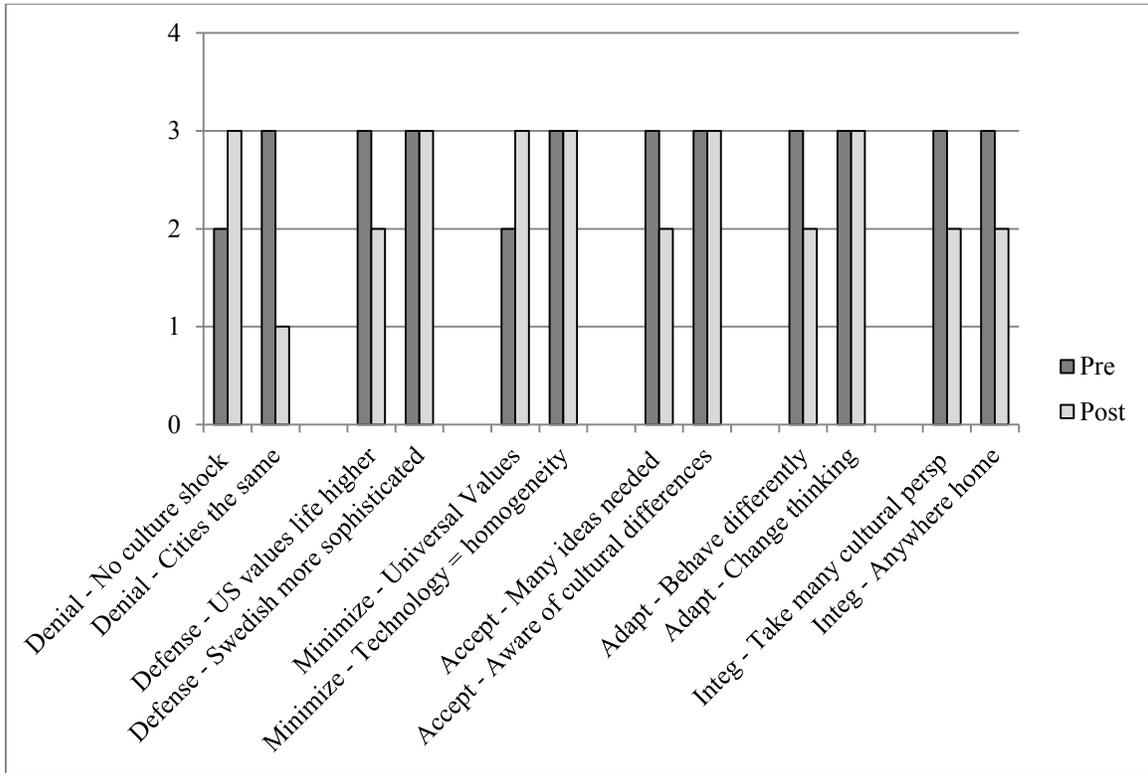


Figure 4.15. Chart of Todd's Attitude toward Cultural Difference (Intercultural Sensitivity). (Summary of Likert Scale, 1=Strongly Disagree, 2=Somewhat Disagree, 3=Somewhat Agree, 4=Strongly Agree. Agreeability indicates stronger representation of a particular stage.)

Todd's activity from his blog, interview, and papers is summarized in Table 4.18 below. Todd's most frequent activity was related to the themes of completing assignments (6) and evaluating (12). There was also some activity related to interacting with others (6), which were sources that he used to complete assignments or collect information for his papers.

Todd's evaluation of Second Life was, "I think it was a good experience using Second Life. It was different [than] being in a regular classroom" (Todd, personal communication, April 27, 2011). His comment about the assignment suggested a positive attitude, "I was able to explore different [places]... I did entertainment, so I was traveling different places...So, it was easier I guess, it was like there was a broader range of topics" (Todd, personal communication, April 27, 2011). Todd also explained his post-survey responses about his problems with Second Life, "I couldn't get onto it from my laptop, so I had to go to the library, and then sometimes...the connection would...drop. So, it was kinda hard to keep up from the beginning, I started off kinda bad" (Todd, personal communication, April 27, 2011). Todd was not able to meet his international partner in Second Life. When asked about it during his interview, he stated that he had a family emergency and was not able to make their first meeting. After that, he tried to communicate through email to his partner, "I wrote my Swedish partner and I didn't get no reply. And I kept writing him and I kept getting no reply" (Todd, personal communication, April 27, 2011). His interactions with others related to collaborating with classmates to do peer reviews of papers. In addition, his paper indicated that he interacted

with people in-world about his paper topic, “I decided to ask some of my own Second Life friends what they thought of the music video.”

During his interview, I asked him to tell me more about his desire to study abroad. He clarified, “If the opportunity comes, I will, but I haven’t been looking into it as much,” (personal communication, April 27, 2011). I asked him to comment on his attitude about the role of universities in international education, and he confirmed that he thought it was important and that universities should be responsible, but he added no additional information.

Table 4.18.

*Todd's Blog, Papers, and Interview Activity*

Type of Activity (Themes and Interpretive Codes)	Occurrences
Completing Assignments	6
Complete Papers	1
Posting Outlines	1
Posting Thesis Statements, Topics, or Introductions	4
Evaluating	12
Assignment	2
Course	1
Other Technology	2
Second Life	6
Value of Global Competence	1
Interacting with International Partner	3
Scheduling	3
Interacting with Others	6
Collaborating	3
Exploring	1
Inquiry	2

Todd's activity indicated that there were two main turning points for him, which are summarized in Table 4.19 below. The first conflict was that he had technical difficulty when using Second Life, especially at the beginning of the class, a conflict between the subject and the tool. He also had to rely on the library's computers to complete his assignments. Despite this, he continued using Second Life to complete his papers. The second conflict was between the object and the division of labor – he tried to contact his partner to set up a meeting time, but he did not receive a response from him. Eventually, he gave up on the international interaction and relied on publications and sources inside Second Life to complete his assignment. The broken arrow in Figure 4.16 below indicates an obstacle that he overcame, and the solid line indicates an obstacle that ultimately prevented him from reaching his goal.

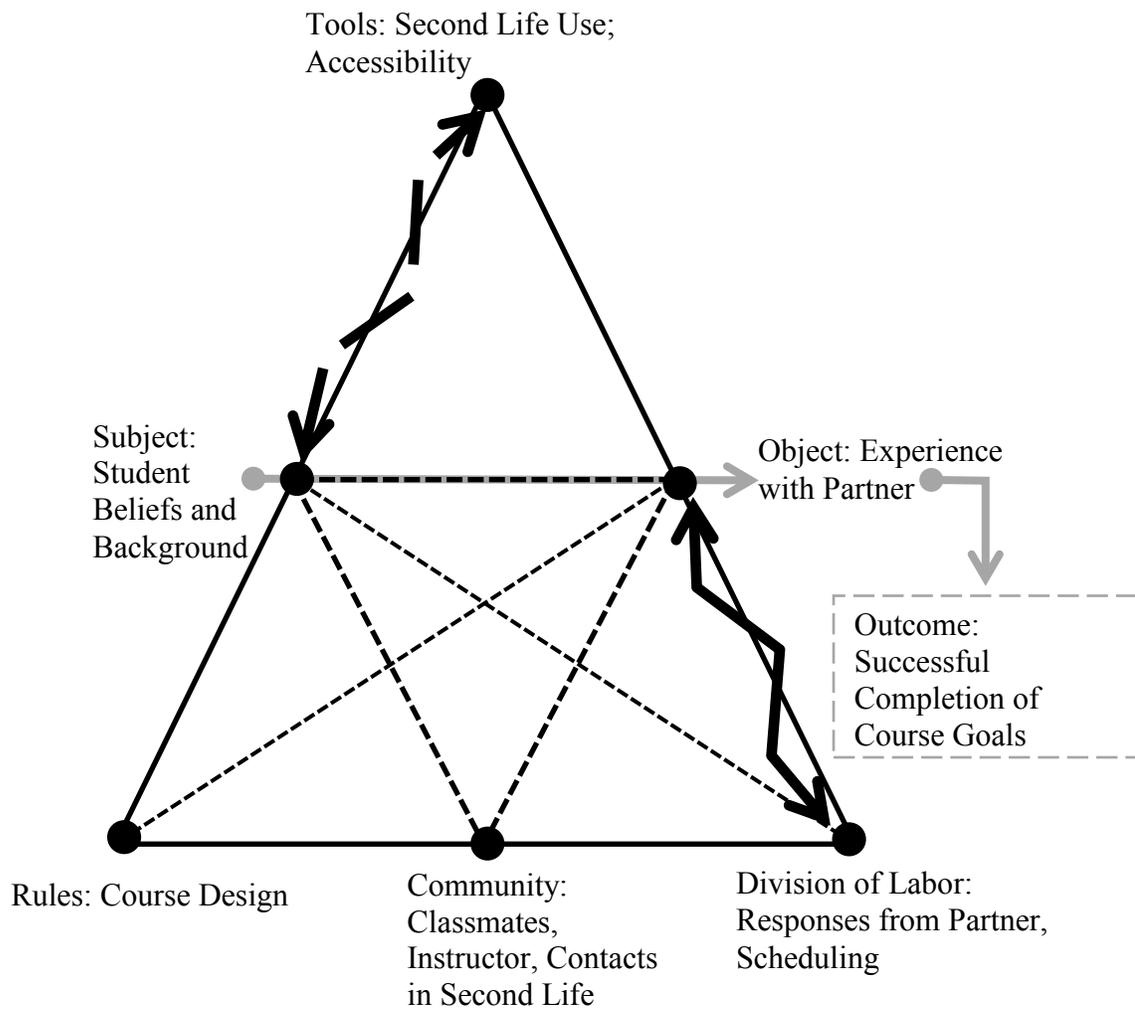


Figure 4.16. Activity Theory Model for Todd

Table 4.19.

*Turning Points for Todd*

Turning Point	Conflict	Indicator	Resolution
1	Subject vs. Tool	Todd experienced a lot of difficulty using Second Life, and stated that he got off to a bad start.	He used the computers at the library to complete his assignments and papers.
2	Object vs. Division of Labor	Todd tried to email his partner but did not get a response.	Todd gave up on the interaction after trying to contact his partner a couple of times.

## Cross-Case Analysis

The following two matrixes represent a cross-case analysis of similar themes among the cases. Table 4.20 shows the presence of general themes found within the data sources. Table 4.21 shows common areas of conflict within the Activity Theory models for the six cases.

Table 4.20

*Cross-Case Analysis of Themes*

Type of Activity (Themes)	Alison	Britta	Donald	Kyle	Mary Ann	Todd
Avatar Identity				X	X	
Changing ideas	X	X	X	X	X	
Interacting with international partner	X	X	X	X	X	X
Interacting with others	X	X	X	X	X	X
Evaluating	X	X	X	X	X	X
Completing Assignments	X	X	X	X	X	X

Table 4.21

*Cross-Case Analysis of Turning Points within Activity Theory Models*

Conflict	Alison	Britta	Donald	Kyle	Mary	Todd
					Ann	
Subject vs. Tool	X	X	X	X		X
Subject vs. Rules	X		X			
Subject vs. Object		X				
Object vs. Tool	X					
Object vs. Division of Labor	X	X	X		X	X
Object vs. Community					X	

**Summary**

The six cases showed many similar themes, but each of the students had a different experience and variability within the interpretive codes. Analysis of surveys, student blogs, student interviews, and student papers revealed common themes related to interacting with their international partners, interacting with others, evaluating, and completing assignments. There were also six different tensions within the Activity Theory model. A cross-case analysis showed that a common tension included the object vs. division of labor, which related to the different projects the students and their partners

had and the lack of responses or long response times from their partners. Another common tension was the subject vs. the tool, related to the use of Second Life.

Triangulation of data sources was done to support findings among surveys, documents, and interviews. In one case, an inconsistent attitude toward the use of Second Life for the class emerged between the data sources available to the instructor (blogs and papers) and the confidential data sources (surveys and interview). Two of the students were unable to accomplish the goal of interacting with their partners due to lack of responses to attempts to schedule a meeting time, but four of the students met with their international partners. Of the four, global competence skills perceived in the data sources included awareness-raising, changing ideas of initial expectations and surprise, exchanging language, and exchanging culture. In one of the four cases in which students met with their partners, there was a suggestion of an absence of exchange of language or culture. Three of the four students experienced cultural learning or interest in travel by exploring Second Life outside of their interactions with their partners. Five of the students had some form of conflict with Second Life, but they were ultimately able to overcome the conflict. In addition, five of the six students had conflicts between the object (meeting with their international partner) and the division of labor (scheduling, getting responses back from the partner), but none of the students indicated any development of negative attitudes toward their partners. Two of the students mentioned some kind of avatar identity – identity with themselves or identity of their partner in Sweden. The results of this analysis have been discussed in more detail in the next chapter, conclusions and discussion.

## CHAPTER 5

### CONCLUSIONS AND DISCUSSION

This case study with a constructivist orientation examined the nature of the interactions that took place in a 3-D virtual environment between American students in an English composition course and their international partners in Sweden. The theoretical background of this study involves work on internationalization and global competence, online international interactions and 3-D virtual environments, and socio-cultural learning and Activity Theory.

Data were collected during the Fall 2010 and Spring 2011 semesters and sources included student survey responses, blog posts, papers, and interviews. The surveys were used to provide information about the students' background, comfort level with technology, previous international experience, and attitudes about internationalization. Summary scores and demographic information from the student surveys were used to help describe each of the students and provide a background for the student experiences. Blogs, papers, and interview transcripts were imported into QSR's NVivo 10 software (2012) and a code list was created using a generic coding method as outlined by Miles & Huberman (1994). The activity of the students was described and explored further using an Activity Theory model to investigate conflicts among different aspects of the project. The conflicts that resulted were described in terms of how they were resolved and the extent to which they limited the accomplishment of the student-to-student interactions.

The analysis of the six cases revealed that the students brought different backgrounds to the project and that their experiences were unique. There was some

evidence that limited development in global competence occurred in the form of awareness-raising, language and culture knowledge, and interest in studying and traveling abroad. However, these developments occurred both through interactions with their partners and through exploring in Second Life. Components of the course design that were perceived to impact the experience of the students were the Second Life virtual environment and the scheduling and commitment of their international partners. Finally, a cross-case analysis compared themes and conflicts in the Activity Theory model in all the cases. Suggestions for possible solutions to the issues that limited the interactions and additional enhancements for the project are discussed below.

### **Conclusions**

The findings raise several issues in terms of the nature of the interactions, the development of global competence, and the impact of the course design. Overall, the nature of the student activity was very task-focused. For example, they posted homework, they talked of scheduling times to meet with their partners in order to complete a task, or they were exploring the Second Life environment in order to collect information to use for their assigned papers. Despite the similarity of the assignments for all the students, the project was experienced differently. These issues are discussed in more detail below in response to my research questions.

*What is the nature of the interactions that will take place between American university students and international university students in a 3-D virtual environment?*

For all six of the students, at first, the nature of the interactions was focused on scheduling meeting times, which was initially done by emailing each other. For the four

students who were able to meet with their international partners, the interactions were generally focused on fulfilling the goal that their professor had set forth for them. Within the themes of interacting with their partner, many of the interpretive codes were related to scheduling. In terms of global competence, there was exchange of language in Kyle's, Britta's, and Alison's cases, though in differing degrees. There was exchange of culture in Britta's and Kyle's cases. In Britta's, Kyle's, and Mary Ann's cases, the American students helped the students in Sweden with English and give feedback to them on a presentation assignment. Also within the theme of interacting with partners, Britta and Mary Ann mentioned exploring. Locations that were explored in Second Life were sometimes new to both the American student and their partner. Sometimes the partners would show each other interesting places that they had visited in Second Life. All exploring activities took place in Second Life, and once the assignments were complete, there was no further contact planned between the partners. A theme of changes in ideas relevant to their international partner was perceived in Britta's and Alison's cases, and Kyle reported that he was more interested in studying abroad after interacting with his partner.

Examining the experiences with the Activity Theory model revealed a common conflict among the six cases between the object and the division of labor. Five of the six students indicated difficulty in negotiating times to meet with their international partner, and for two of the six cases, this is what ultimately prevented the student from meeting the goal. For the remaining four that met with their partners, three experienced scheduling difficulties. For two of those three, it limited the interaction – Alison only met and

explored once with her partner, and Britta was told by her partner after meeting twice that she did not want to meet until her own presentation project was due. This highlights the importance of the project's interdependency - the experience of the American students was dependent on their international partner's commitment, and vice versa.

*What will the analysis of student documents, student interviews, and a pre- and post-survey suggest about the development of global competence for the American students?*

In my literature review, I referred to the development of global competence according to a model by Hunter et al. (2006). Hunter's (2004) initial study that informs this model found that there are some base points in the development of global competence, with a foundation in a student's understanding of their own culture and expectations. Self-reflection and exploration of one's own cultural boundaries are some ways to develop this awareness. After that, students can explore aspects of other cultures. Simultaneously, they should also work on establishing openness to differences. The resulting skills that develop can be categorized into attitudes, knowledge, and participation.

It would be rare to find such a process formalized in a university curriculum. Opportunities are sometimes presented that might require the student to do all of this at once, and even then, not all parts of the process would be automatic. For example, a student may have the opportunity to explore aspects of another culture, but they may not be aware of their own culture. Depending on their reaction to differences, if they are not familiar enough with their own culture, they may not have the base from which to begin reflecting about the experience. In addition, they may not be open to experiencing

difference. It is not known what the six students in this study had been exposed to in terms of understanding their own culture, but the interest in global awareness and intercultural sensitivity questions on the survey helped describe their openness to difference.

There was relatively low interest for all participants in global awareness and international activities. Of the different international activities given, four of the six students showed interest in taking vacations in other countries on both the pre- and post-surveys, and two of the six students indicated interest in studying abroad in an English speaking country on both the pre- and post-surveys. Although the survey questions regarding intercultural sensitivity were not robust enough to state with certainty which stage represented the students' attitudes, analysis of the student documents and interviews was used to add to the information suggested by the pre- and post-survey questions. The combination of these sources suggests that the students may have been in the upper stages of ethnocentrism with some development into ethnorelativism. In the ethnocentric stages, even small things such as awareness-raising can be important (Bennett 1993).

There were a few discoveries for the four students who met with their international partners that may suggest some interesting but small developments of global competence. For example, Alison only met with her partner once, and based on her pre- and post-surveys and her interview, she made it clear that she did not enjoy using Second Life for a composition class. However, it is possible that there was awareness-raising for Alison. She reported learning from the experience, "I don't know how to say this...just how Swedish people can learn English... they still, they want to learn our stuff, our

English, and how, like, we live. That was pretty cool” (Alison, personal communication, April 27, 2011). This awareness-raising may be an important step in understanding something about her own culture and how others perceive it. In Bennett’s (1993) scale of intercultural sensitivity, this could be a start that leads to deeper reflection.

Britta’s interview also revealed some awareness-raising. She said, “. . .It was interesting to help her and to learn the different barriers – language barriers – and the different things about their culture” (Britta, personal communication, December 8, 2010). She also reports, “We were told it would be their first time speaking English,” but she expanded on this with, “Surprisingly, her English is [quite good]. . .overall I was shocked” (Britta, personal communication, December 8, 2010). In addition to awareness-raising, Britta also exchanged cultural information including information about horseback riding in the United States and her Swedish partner’s family and the Swedish school system. The impact of this experience on Britta’s awareness was nicely put in her statement about what she learned, “I learned that just because. . .I felt that it was going to be a different situation and that we. . .shouldn’t think negatively about it. . .because you could end up learning something” (Britta, personal communication, December 8, 2010).

In Kyle’s case, he not only exchanged cultural and language information with his partner, but he also became more interested in pursuing his interest in studying abroad, “I’ve thought about studying abroad, so this kinda encourages me to want to go study abroad now. I’d like to go over in Europe and explore” (Kyle, personal communication, April 25, 2011). When talking about how the experience was positive overall, he told me, “I got to learn about him, he got to learn about me. I know kinda what Sweden’s like I

guess” (Kyle, personal communication, April 25, 2011). He expanded on their language exchange, “We got to learn the different ways they talk, and different ways they thought Americans used words because the American language is different than just the English language” (Kyle, personal communication, April 25, 2011).

In contrast to the above experiences, when I asked Mary Ann if she thought she had learned anything from her international partner, she told me, “Um, just, well, not really” (Mary Ann, personal communication, December 8, 2010). Even though she did not think she learned anything, she seemed to enjoy teaching her partner how to use Second Life. Her international partner had cut the interactions short, so even though Mary Ann had wanted to meet more, her partner told her that she did not want to meet until closer to the time when her own project was due. Even though the experience with her partner did not suggest any development of global competence, Mary Ann told me that she was more interested in traveling to other countries, but not because of her partner. Seeing different places in Second Life raised her curiosity. When I followed up on this idea, she admitted that she would be too nervous to study abroad, but she told me that she would like having classes with international students, “I wouldn’t have to physically go over there, but I would get to know someone” (Mary Ann, personal communication, December 8, 2010). This information implies that she has some openness to differences, but has some barriers related to her comfort zone. Bennett (1993) recommends types of experiences that should challenge yet support the learners to help promote them into higher stages of openness. In ethnocentric stages, non-threatening and non-blaming contexts are important. Her comments could be an indicator that she needs further

exposure of safe international experiences in order to be more comfortable with unknown situations.

In addition to Mary Ann's desire to travel more because of the places she visited in Second Life, others had learning experiences related to culture that were not initiated through interactions with their partners. Donald, who did not meet with his international partner, reported learning about religions in Second Life and correcting a misconception he had about Hinduism in his paper. Similarly, Alison learned about Catholicism by interacting with another person in Second Life.

These indicators of awareness-raising, language and culture exchange, and increased desire to participate in study or travel abroad are very small in the context of what Hunter et al. (2006) describe as being globally competent. However, they can be important starting places for students who have had little exposure to difference.

*How will the students experience the course design and the use of the 3-D virtual environment?*

There were two distinct issues related to course design that emerged through themes of evaluating that were perceived to have an influence on the experience of the students. The first was the use of Second Life, and the second was the process of scheduling and meeting with their partners. Overall, the students were not favorable toward the use of Second Life for their course. Four of the six students somewhat agreed that it was a barrier to completing assignments or joining the class-related activities, and two somewhat disagreed that it was a barrier. When asked if they thought it was a good

tool for an English composition class, one student strongly disagreed, three students somewhat disagreed, and one student somewhat agreed.

In terms of the students' comfort levels and experience with Second Life, none of the six students had ever used it before, and at the beginning of the course, four of the students reported feeling a little uncomfortable and two of the students reported feeling fairly comfortable using Second Life. In addition, five of the six students reported that generally, they would prefer face-to-face classes on campus to an online class while one student reported preferring an online class.

While analyzing the student activity, all six of the students had a conflict between the subject (themselves) and the tool (Second Life), although the conflicts were resolved. Four of the students used Second Life with their computers and Internet access at home, while two of the students used the library's computers and Internet access. Problems that were reported included difficulty installing or running the program (3), computer crashes (4), sound or microphone problems (3), and loss of connection or lag (5).

Another emergent issue from the data was a conflict between the object (the interactions) and the division of labor (scheduling, receiving responses). According to the student interview and information from the professor, the students were matched and then were to independently work out times when they could meet in Second Life. The students having to work through their busy schedules to try to meet was an obstacle to their interactions. Five of the six students reported conflict within this area. In two of the cases – Donald and Todd – non-responsiveness from their international partners prevented them from reaching the goal of meeting and collaborating. Although they did not meet

with their partners, they found other ways to fulfill the assignment of writing their papers, but they relied on exploration by themselves or with other classmates. In two other cases – Alison and Mary Ann – the incompatibility of schedules or their partner not wanting to meet limited the experience.

Scheduling meeting times seemed to require a high investment of the students' time. In Alison's case, she reported 10 different attempts to schedule a meeting time but met her partner only once. Britta met her partner 8 times, but that required 16 attempts at scheduling, and Mary Ann met with her partner 3 times with 8 scheduling attempts. This highlights the importance of the commitment required by both parties in the interdependent relationship.

### **Discussion**

In order to advance the success of future projects similar to this one, there are four issues for discussion. These issues are the possible enhancement of global competence skills, the investment of time to complete the assignments, the technical problems with the Second Life technology, and the compatibility of each of the students' goals in the interaction. An additional item of discussion will be the theme of avatar identity found in two of the six cases in this study.

First, in terms of global competence skills, these task-based interactions, as interpreted from the student documents, suggested small indicators of global competence development. Considering this in addition to the issues of task-focused interactions and high time investments, there are some suggestions to explore that might enhance future projects.

The course design was strong in terms of the socio-cultural learning context it provided and the diversity of rich material that was provided for the students to explore. Students had plenty of opportunities to investigate topics of interest on their own and to discuss them with classmates and international partners. Their blog posts and papers revealed exploratory activity of many different places within Second Life. The assignments given were broken down into smaller pieces that focused on specific goals, and the professor gave frequent feedback. Additional enhancements of the course design, however, may support improvement of the student learning experience and stronger development of global competence.

One idea to enhance the course design would be the use of structured tasks to deepen the level of interaction between the students. In the current design, the students were told to explore their paper topic in-world with their international partner. In this design, there was an assumption that they would exchange information and perspectives while exploring. This happened spontaneously with a couple of the students, but according to Hunter et al. (2006), before exploration of differences happen, students should have a deep understanding of their own cultural norms and expectations. Establishing this type of consciousness is not formalized, and it is not always practical to invest the time it would take to undergo this process before exposure to cultural differences. For example, the time constraints on an English composition course may not allow time for deep cultural self-examination. Therefore, a task that could help students self-identify while also providing other benefits to the composition course would be useful.

One way to construct such a task is to give the students a diagnostic assignment that would allow students to engage in self-reflection while giving information to the professor about their level of writing skills. For example, students could be asked to write a short composition based on a prompt that would elicit self-reflection about their cultural values. A follow-up discussion in class would let the students see what others believe, could challenge students to do more introspection, and could be a step toward developing openness. It could also be a starting point for examining the different topics they might explore in Second Life. Even though all six of the students in this study self-identified as Americans, they came from different backgrounds, so seeing the range of diversity among their classmates may provide an additional benefit. The diagnostic could be done on the blog so that both the student and professor could return to it easily at a later time.

A diagnostic writing task such as this could provide two different benefits. First, it would give the student an opportunity to reflect on the identity of his or her own cultural values. Through the discussion, the students could see others' ideas and have an opportunity to challenge some beliefs. According to Hunter et al. (2006) exposure to new information should also accompany openness to difference. Reflection about cultural experiences had an impact on the quality of international experiences in several of the studies I discussed in the literature review (Anderson, 2003; Engle & Engle, 1999; Gemingnani, 2009; Lutterman-Aguilar & Gingerich, 2002; Mahon, 2007; Marx & Moss, 2011; Sharma et al., 2011; Tonkin & Quiroga, 2004, Walters et al., 2011). Although the themes of evaluating and changing ideas showed some student reflection, additional reflective activities could be brought up in the class discussions or posted through the

students' blogs. Second, the diagnostic task would provide the professor information about weaknesses in the students' composition skills so that they know which lessons might require more focus than others.

With a more developed base of self-awareness and openness, the students could then be given the project to explore with an international partner. Adding some light structure to the interaction might help promote it from task-oriented to something that would utilize more of the partner's different cultural background. An ideal structure would not be time consuming or elaborate – the socio-cultural learning environment is already strong, and too much structure could destroy the joy of discovery and spontaneity. In addition, it could save time for the professor and provide a learning opportunity to the students if they create the structure themselves. Before interacting with their partners, the students might be asked to return to what they had already written on their own cultural identity and the discussion in class. They might then use the information and their particular interests on their paper topic to create a set of three to five interview questions for their partners.

The interview would serve a few purposes. First, it would facilitate discussion and the exchange of cultural information. Second, it establishes the idea that asking questions of each other is acceptable. There is also the possibility for follow-up questions and new questions as the students explore together, which may lead to subsequent spontaneous discussions. To improve goal compatibility, the interactions might be further strengthened if both the American students and their partners prepared interview questions for each other. An additional benefit of the interview task would be to give the students a way to

record the perspectives of the Swedish students, which could be referred to later and used as a resource in their papers. The interview activity would be an additional teaching opportunity for the professor to show his students how to design questions, conduct interviews, and cite information from interviews when they write. It may also further clarify the expectation of the professor that the students include the perspective of their international partners in their papers – mention of their partners was either nominal or omitted in the papers of the students in this study.

Another possible task for the American students, in the form of a small group activity, could take place during the weeks that the students work with their international partners. This could encourage additional reflection and sharing of information among the American students. The students in the United States were meeting in-world for classes, and 15-20 minutes after class might be taken for them to split into groups of 4 or 5 to discuss what they had been doing with their partners. Students could take turns being the facilitator to further develop group work skills.

The second issue for discussion is in the time management of the assignment. Arranging the interactions was high-cost in terms of time for the students. Not only did students spend time sending multiple email messages in order to plan a single meeting with their partner, but the students also spent considerable amounts of time exploring Second Life environments on their own, with classmates, and with their international partners. Some observations were perceived to have influenced the issues related to time. One observation is that the students in the United States were required to use the Second Life environment for a longer duration because of the term structures – they were in a 16-

week semester, but the students in Sweden were in session for a five-week term. Thus, the American students had to invest some time in getting their partners ready to use Second Life before they could explore together. This may have placed additional strain on an already short time span. Another influence on time management could be the motivation and commitment of both parties. It would be important to make sure the goals of the two students are compatible. This issue is discussed further in terms of the student goals below. Finally, there was some indication that the students in the United States and Sweden had differing lifestyles that impacted their availability of free time. The students in Sweden seemed to be non-traditional students with jobs, busy schedules, and families, whereas American students were traditional students in their late teens and early twenties. One potential solution to the problem of negotiating times could be to have a scheduling template. Students in each group could designate blocks of time when they are available. Matching of partners could then be done based on the most compatible schedules. The students would be able to refer to a chart of times to help them schedule meeting times.

The third issue for discussion is the limitation of the Second Life tool on the student experiences. By the end of the course, four of the six students reported that they did not like using Second Life for the course. Some of the attitude of the students toward the tool might have originated from their expectations that the course was a traditional face-to-face course. One possible solution, therefore, is to be sure that the course description is accurate. In addition, for students who are more timid about using the technology, optional face-to-face sessions could be scheduled in a computer lab. This would provide the comfort of direct access to the professor for those who need it, while

other students, who are more confident with the technology, could continue meeting online.

There were problems with slow connections, lag, computer crashes, running the program, and sound and microphones, which might have also influenced the students' attitudes about Second Life. Second Life is a program that requires a powerful computer, and the professor was clear about the minimum requirements needed for computers to run the Second Life environment. He had also ensured that the library computer labs provided computers suitable for Second Life use. Issues such as these may fade as technology develops, but until then, it is up to individuals to decide whether the benefits provided by tools such as Second Life outweigh the problems with technology.

Finally, related to the compatibility of the students' goals, some of the goals seemed to be in alignment, but the time commitments, responsibilities, and the final outcome for each student was different. The interactions between the students in the United States and the students in Sweden were to give both parties an opportunity to interact with someone different and to use that person as a resource. For the American students, the students in Sweden were meant to be a resource in the form of another perspective that the students could use as they explored topics for their papers. For the students in Sweden, the students in the United States were meant to be a resource for learning how to use Second Life, polishing their English skills, and providing a peer review of a presentation. From the perspective of the American students, having to teach their international partners how to use Second Life was sometimes a barrier they had to overcome before they could move on to exploring and interacting to complete their

assignments, as mentioned above. In addition, the weight of the different assignment goals may have influenced the nature of interactions. While the students in the United States were required to use Second Life to complete assignments for a grade, its use was a secondary goal for the Swedish students. The students in Sweden had a primary goal of getting feedback on an English presentation, so frequency of meeting with the students in the United States and exploring the Second Life environment might not have been as important as it was for the students in the United States. Additional examination of the experience from the students in Sweden would provide more insight into this issue, which is discussed below in recommendations for future research.

More consideration needs to be given to the requirement of using tools such as Second Life to complete assignments versus the use of the tool to enhance student learning experiences. For example, in Alison's case, different attitudes about the use of Second Life appeared in the materials required by the professor and in the information collected by the surveys and interview. The contrast in attitudes between the data sources may indicate that Alison felt pressure to present a positive attitude about Second Life due to her grade being dependent on its use. If this is the case, making the use of Second Life mandatory may impede future development of the course design because the professor is relying on feedback from students who perceive too much risk in reporting honest attitudes.

Another theme for discussion is related to two of the students mentioning self-identity or other-identity with avatars in Second Life. Yee, Bailenson, and Ducheneaut (2009) refer to the phenomenon of the Proteus effect – people relate avatar appearance to

expected behavior and attitudes. Research studying the relationships of avatar appearance in virtual worlds and self-identity to people using the avatars has some implications for international interactions. Yee et al., (2009) found that height and attractiveness of avatars predicted performance in an online game. They also found that aggressive behavior of avatars in virtual worlds transferred to face-to-face interactions (Yee et al., 2009). Bailenson, Blascovich, and Guandagno (2008) found that people who interacted with avatars that looked similar to themselves decreased interpersonal distance in the virtual world by twice as much compared to people who interacted with avatars that looked like unfamiliar strangers (Bailenson et al., 2008). The people also rated avatars that looked similar to themselves as more likable and attractive, and they were more willing to exhibit embarrassing behavior in the virtual world in front of self-similar avatars compared to unfamiliar avatars (Bailenson et al., 2008). In an exercise study, Fox and Bailenson (2009) found that people exercised more when an avatar that looked like them gained or lost weight according to the person's physical activity. Peña, Hancock, and Merola (2009) found that people who used avatars portraying stereotypes of villains displayed more negative thoughts in a 3-D virtual world game. The implications of this research suggest that avatar identity may be something for others to consider when they plan international interactions in 3-D virtual worlds in terms of how it might shape the interactions of the participants.

Finally, it was noted that one student used racially-biased language when referring to something he had learned about Hinduism. He wrote that he corrected a misconception, "I thought people who believe in that religion believe in black

magic...and white magic, which is good magic” (Donald, personal communication, December 8, 2010). Sociolinguists such as Dittmar, Lucy, and Wardhaugh discuss the reciprocal relationship of language and society (as cited in Lees, 2014). Just as people shape the way that language is used, language also influences the perceptions of people. Specifically, the use of the terms “white” and “black” in non-racial contexts carry positive and negative connotations. During subsequent use of the terms in a racial context, those negative and positive connotations can carry over. These positive and negative associations have been discussed since the 1960s by scholars such as Williams (1966), and racial bias in language is still an important research topic today. For example, Smith-McLallen, Johnson, Dovidio, and Pearson (2006) discuss these ideas in their study of the role of color bias on implicit race bias.

There are two different ways that the issue of racial bias in language might apply to an English composition course. The first application could be direct instruction on avoiding racial bias in compositions. Part of teaching English composition involves the use of proper terminology and awareness of academic language. A second, less direct application might be to use the concept of racial bias in language as an exercise in reflection about American culture and the self-identification of culture that is emphasized by Hunter et al. (2006). These two applications could be used independently or together during the English composition course.

### **Future Research**

Future research might examine how changes to the course design might promote deeper student interactions and encourage student cultural self-reflection. In addition,

other projects might mediate scheduling conflicts to alleviate time management issues. This study examined only the perspectives of the American students, and the project would be more fully described by including the perspectives of the students in Sweden. Another aspect to examine is the influence of avatar identity on interactions between people from different countries.

Future research might also consider other emerging technologies that may continue to provide rich learning environments. At the time that the data were collected for this study, Second Life was an emerging technology. As of the time of this report, educators are still using Second Life and other 3-D virtual environments, but there are advancements that may give educators new options. One advancement is the development of graphic processing software. This progression may resolve slow processing times and lag that plague current virtual environments. One such development is the Curio Browser, which uses new graphic processing technology called Unity. The Curio Browser was recently released by a company called Virtual World Web, and allows traditional websites to be created as 3-D virtual environments. Users can experience websites as they would a video game. On January 2, 2014, the company provided public access to a demo virtual world (Virtual World Web, 2014).

Other virtual reality technologies are evolving quickly and becoming more lifelike and immersive. Wearable technologies are beginning to appear on the market. Access to high-speed wireless Internet and the availability of mobile devices frees people from computer screens and keyboards, and real-life experiences can be enhanced by

experiences on mobile screens. It would be interesting to explore how this technology can offer opportunities to interact with others and build global competence skills.

To summarize, questions that can guide future research might include:

1. How is the student's cultural self-awareness related to the nature of an international interaction?
2. How would a structured task between students and their international partners impact the interactions?
3. How would implementing a schedule template affect the frequency of meetings?
4. How might different avatar appearances shape international interactions in a virtual environment?
5. What are ways that emerging technologies such as virtual reality or augmented reality can be applied to developing global competence?

### **Educational Significance**

This study's primary research question was to investigate the nature of international interactions in a 3-D virtual environment. Analysis of survey data, student interviews, student blogs, and student papers suggested that the interactions focused on completing the assignment goal of exploring the Second Life environment, and there was some evidence that exchange of cultural information and awareness-raising occurred.

Several areas were discussed that have implications for future research and practice. The first area related to the students' global competence development. Students may benefit from some added structure that would help them accomplish their goals and encourage reflection about the experience. One way to do this would be to help students

define their own cultural values through a diagnostic writing task, which would be followed by a class discussion. Next, providing structure to the interaction with their partners may help shift the focus to not only explore Second Life, but also to elicit perspectives and information from their partners. Second, educators should be mindful of the time management of projects. The students in the United States had to spend a lot of time to arrange meetings with their partners, and they often had trouble negotiating a time. They had to rely on timely responses and interest of their partners in order to meet their own course goals. Future projects might consider matching partners based on schedule availability or setting pre-arranged times for the meetings. Another recurring conflict during the projects included technology issues in Second Life, such as slow processing times, computer crashes, and lag. Overall, student satisfaction with Second Life was low, with four of the six students reporting that they did not like using Second Life for the class. Another consideration is the compatibility of goals in relation to the distribution of responsibility. The interactions might have been influenced by the different goals that the two groups of students had. This might have also contributed to a different distribution of responsibility between the students.

There are additional concerns when using Second Life as a mandatory component of the class. Educators should consider the role of technology in the student grades in terms of being mandatory or supportive. Although one student reported not liking the platform in the post-survey and interview, she presented a positive attitude about it in the blogs and papers that were read by the professor. This suggests that instructors may want to consider how much of a role they wish technology to play in their students' grades,

especially for courses that are required by the university curriculum. They should also think about the possibility of these roles influencing the perceived student attitudes about the tools if they are conducting research on their own classes.

This research contributed to the general body of knowledge about internationalizing university courses, and the findings in this study can help others design courses that may provide opportunities for people around the world to interact and learn from each other. As universities internationalize their programs and as more faculty become involved in internationalizing their courses, it is important to use information from projects such as the one in this study to inform future developments and to help make the process of internationalization smoother and more effective. These strategies should continue to be studied as new technologies and new opportunities for international interactions emerge.

## APPENDIX A: SURVEYS AND INTERVIEW QUESTIONS

### **Pre-Survey**

1. Please enter your Second Life avatar name. Your avatar name will be used to match the information from other surveys. This survey is confidential and your name or avatar name will not be reported in the results.

### **Demographics**

1. Sex (Male Female)
2. Nationality (Citizenship. If you have more than one citizenship, please list the one you consider your primary nationality.)
3. Race/Ethnicity (Caucasian/White, Hispanic/Latino, Asian/Pacific Islander, Native American, Black/African-American, Multiracial, Other)
4. Age (years)
5. Level in university (Freshman, Sophomore, Junior, Senior, Graduate)
6. What is your major?

### **Comfort with Technology**

1. Do you own a computer at home that you use for academic courses?
2. Do you have high-speed Internet access at home?
3. Have you ever used Second Life outside of this class?
4. Would you prefer a course that required the use of a lot of technology but that met online or a course that used no technology and met face-to-face in a classroom on campus? (a lot of technology and online; no technology and in a campus classroom.)
5. How comfortable are you with using the following  
(Response set=1-Very uncomfortable, 2-A little uncomfortable, 3-Fairly comfortable, 4-Very comfortable)
  - Email
  - Discussion Groups or Blogs
  - Social Networking Sites (Facebook or MySpace)
  - Twitter
  - Second Life or other similar virtual environments
  - Online databases for research
  - Search engines (Google, Yahoo)
  - Wikipedia
  - Blackboard

## Previous International Experience

1. Which, if any, of the following experiences have you had?  
(Check all that apply.)
  - a. I have traveled outside the United States.
  - b. I have studied or worked outside the United States.
  - c. I have lived outside the United States for more than one year.
  - d. I have friends or family members who I keep in touch with and who live outside the United States.
  - e. I have friends or family members from other countries around me who I regularly speak and meet with.
  - f. I have worked on a project (for class or work) with a person who was from a different country.
  - g. I have had discussions online with people from different countries.
  
2. Which of the following statements most closely represents you?
  - a. I have studied at least one language other than English but I would not feel comfortable speaking any language besides English.
  - b. I have studied at least one language other than English. I feel comfortable enough to get by in another language, but I am only fluent in English.
  - c. I have studied at least one language other than English and I'm fluent in at least one other language.

## Global Competence

1. Read the following statements and select the answer that best describes how you feel.  
(Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
  - a. When I hear about current events, I can usually think of historical events that are related.
  - b. I can usually correctly locate cities and countries on a world map without much effort.
  - c. I keep up with world events and what is happening around the world.
  
2. Which of the following appeal to you? (Check all that apply.)
  - a. Attending an international festival
  - b. Hearing lectures or reading about experiences in other countries
  - c. Studying abroad or working in a country that speaks English
  - d. Studying abroad or working in a country where English is not widely spoken
  - e. Taking a vacation in a different country
  - f. Learning a new language
  - g. Taking classes that focus on different countries or world events
  - h. None of the above

3. Read the following statements and mark the answer that best describes how you feel. (Response set= 1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
- Time spent in class learning about other countries, cultures, or global issues takes time away from learning the content of the course.
  - Learning about other countries, cultures, and global issues is a useful, but not a necessary component of my education.
  - The experience of American students at university can be improved by having international students and professors on campus
  - All undergraduates should have a study abroad experience at some point during their academic career.
  - All undergraduates should be required to take courses covering international topics.
  - It is the responsibility of the university to help students become globally aware and learn about other countries, cultures, and global issues
4. Compared to your interest when you meet new people from your own culture, how interested are you in meeting and interacting with someone from another culture?
- Not at all interested
  - Somewhat interested, but only if their English is very good
  - Interested, but it's no different than meeting people from my own culture.
  - Interested. I might be able to learn something new.
  - Very interested. I want to know as much as possible about them and their culture.
5. Read the following statements and mark the answer that best describes how you feel. (Response set=1-Strongly disagree, 2-More disagree than agree, 3-More agree than disagree, 4-Strongly agree)
- There isn't really such a thing as culture shock.
  - Cities everywhere in the world are all basically the same.
  - People in the United States value life at a higher standard than other places in the world.
  - People who live in Sweden tend to be more sophisticated than Americans.
  - Some values are universal to all humans.
  - Technology is making the world culturally homogenous.
  - It's better to have a lot of different ideas and perspectives to solve problems more effectively.
  - We should be aware of cultural differences before we travel to new places.
  - Knowing of others' cultural differences, we sometimes have to behave differently than we would with someone from our own culture.
  - When solving problems with someone from a different culture, you sometimes have to change the way you think about things.

- k. When I make a decision, I usually think about it from multiple cultural perspectives.
- l. As long as you know the rules and how to behave, anywhere can feel like home.

### **Post-Survey**

1. Please enter your Second Life avatar name. Your avatar name will be used to match the information from other surveys. This survey is confidential and your name or avatar name will not be reported in the results.

### **Attitude about Second Life**

Please answer the following questions about your experience in Second Life:

1. The orientation in Second Life adequately prepared me for the activities required for my class (Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
2. Technical difficulties that I experienced prevented me from completing assignments or joining in the scheduled activities in Second Life. (Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
3. What technical obstacles did you face while trying to use Second Life for your course? (Select all that apply: Computer crashes, Difficulty with installation or running Second Life, Problems with my sound or microphone, Loss of connectivity or connectivity too slow, Other, None)
4. I liked using Second Life for this English Composition course. (Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
5. Was your avatar verbally or physically harassed or assaulted? (0;1-3;4-6;7-9; 10+)
6. I will continue to log into Second Life even after the class is finished. (Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
7. My experience with Second Life was positive overall. (Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
8. Please write other comments about your experience in Second Life.

## Global Competence

1. Read the following statements and select the answer that best describes how you feel. (Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
  - a. When I hear about current events, I can usually think of historical events that are related.
  - b. I can usually correctly locate cities and countries on a world map without much effort.
  - c. I keep up with world events and what is happening around the world.
  
2. Which of the following appeal to you? (Check all that apply.)
  - a. Attending an international festival
  - b. Hearing lectures on experiences in other countries
  - c. Studying abroad or working in a country that speaks English
  - d. Studying abroad or working in a country where English is not widely spoken
  - e. Taking a vacation in a different country
  - f. Learning a new language
  - g. Taking classes that focus on different countries or world events
  - h. None of the above
  
3. Read the following statements and mark the answer that best describes how you feel. (Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
  - a. Time spent in class learning about other countries, cultures, or global issues takes time away from learning the content of the course.
  - b. Learning about other countries, cultures, and global issues is a useful, but not a necessary component of my education.
  - c. The experience of American students at university can be improved by having international students and professors on campus
  - d. All undergraduates should have a study abroad experience at some point during their academic career.
  - e. All undergraduates should be required to take courses covering international topics.
  - f. It is the responsibility of the university to help students become globally aware and learn about other countries, cultures, and global issues
  
4. Compared to your interest when you meet new people from your own culture, how interested are you in meeting and interacting with someone from another culture?
  - a. Not at all interested
  - b. Somewhat interested, but only if their English is very good
  - c. Interested, but it's no different than meeting people from my own culture.
  - d. Interested. I might be able to learn something new.

- e. Very interested. I want to know as much as possible about them and their culture.
5. Read the following statements and mark the answer that best describes how you feel. (Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)
- There isn't really such a thing as culture shock.
  - Cities everywhere in the world are all basically the same.
  - People in the United States value life at a higher standard than other places in the world.
  - People who live in Sweden tend to be more sophisticated than Americans.
  - Some values are universal to all humans.
  - Technology is making the world culturally homogenous.
  - It's better to have a lot of different ideas and perspectives to solve problems more effectively.
  - We should be aware of cultural differences before we travel to new places.
  - Knowing of others' cultural differences, we sometimes have to behave differently than we would with someone from our own culture.
  - When solving problems with someone from a different culture, you sometimes have to change the way you think about things.
  - When I make a decision, I usually think about it from multiple cultural perspectives.
  - As long as you know the rules and how to behave, anywhere can feel like home.
6. Did you learn anything new about any of the following about your international partner's country as a result of your international interaction in Second Life? (Select all that apply.)
- Geography
  - Cultural aspects of your international partner's country (For example, art, music, customs, holidays)
  - Language
  - Politics
  - History
  - Religions
  - Current Events/News
  - Other \_\_\_\_\_
7. My experience interaction with the international students in SL was positive overall (Response set=1-Strongly disagree, 2-Somewhat disagree, 3-Somewhat agree, 4-Strongly agree)

8. What other methods besides Second Life, if any, did you use to interact with your international peers? (For example: e-mail, chat program such as Google chat or Microsoft Messenger, Facebook, and others)
9. I will stay in touch with one or more of my international peers. (Response set=1- Definitely not, 2-Probably not, 3-Probably, 4-Definitely)
10. I am more interested in traveling to another country after this international interaction in Second Life (Yes/No).
11. I am more interested in learning more about my international peer's culture and country after having this experience (Yes/No).
12. Please write any other comments about your experience interacting with the international students.

#### **Interview Guide for Professor**

1. How did you choose Second Life for your class?
2. Where did you get the idea to collaborate with international students?
3. How did you select the person who you have been collaborating with?
4. How would you describe your course design?
5. When you were planning the activities for your students to interact with another class in second life, what were your goals for them?
6. What observations do you make about your students who participate in the collaborative experience as compared to their classmates who choose other assignments?

#### **Interview Guide for Students**

1. What did you think of this course?
2. What did you think about the technology you used for this course (For example: Blackboard, Blogs, Second Life.)
3. Can you describe any problems that you had with technology?
4. Why did you choose the assignments to interact with the students in Sweden?
5. Do you think the assignment took more effort or time than the other assignments?
6. Was anything different about this assignment than other assignments with classmates in Second Life?
7. Before you started the assignment, what expectations did you have about working with an international student?
8. When you met with your partner, what did you think about the interactions overall?
9. What are some examples of discussions and activities that you did with your international partner?

10. Were there any times that you felt communication barriers? If so, how did you react or handle the situation?
11. What are some discoveries or something unexpected that happened while participating in the assignment? Do you think you learned anything from your interaction?
12. Where was your partner from? Did you learn anything new about \_\_\_\_\_(country)?
13. Did you use other ways of interacting with your partner during the assignment? If so, what other ways did you use?
14. Will you keep in touch with your partner?
15. Have you ever thought about traveling outside the US? Do you think this interaction might have increased your interest?
16. Do you think it's important in general to learn about other countries and cultures? Is it something that should be part of a university education?

## APPENDIX B: INFORMED CONSENT

Hello! My name is Naomi Baldwin and I am a doctoral student at UMKC. I am studying online interactions, and I would like to know about this semester's online interactions during your English Composition course. Dr. Carter has linked a survey from your Second Life assignment for you to complete. You'll have access to a survey to complete at the beginning of the assignment and at the end of the assignment.

I would really appreciate it if you could complete the survey and give me some feedback about the experience you had during this course. Participation in this project is voluntary. The survey should take about five to ten minutes of your time. The information that you submit is not connected with your name, so feel free to be honest and open.

Participation in this survey is not required. You will not be penalized if you choose not to participate in the survey, and you are not required to complete the survey if you begin it.

If you are in another class that will give you extra credit for participating in research studies on campus, please let me know and I will provide you with a participation voucher.

If you have other questions about this research or if you would like to know the results of this study, please contact me at [naomibaldwin@hotmail.com](mailto:naomibaldwin@hotmail.com) If you have other questions about your rights as a participant in this study, you may contact the Institutional Compliance Official in the Office of Sponsored Programs at 660-543-4264.

Thank you for your time!  
Naomi

APPENDIX C: HUMAN SUBJECTS APPROVAL LETTER - UCM



Human Subjects Protection Program  
Ward Edwards 1800  
Warrensburg, MO 64093  
Office 660-543-4621  
FAX 660-543-4778  
[www.ucmo.edu](http://www.ucmo.edu)

2/11/2010

Naomi Baldwin  
Ward Edwards 1200  
UCM

Dear Ms. Naomi Baldwin,

Your research project, 'A Case Study of the Internationalization of a Midwestern University English Composition Course Occurring in a 3-D Virtual Environment', was approved by the Human Subjects Review Committee on 2/11/2010.

Please note that you are required to notify the committee in writing of any changes in your research project and that you may not implement changes without prior approval of the committee. You must also notify the committee in writing of any change in the nature or the status of the risks of participating in this research project.

Should any adverse events occur in the course of your research (such as harm to a research participant), you must notify the committee in writing immediately. In the case of any adverse event, you are required to stop the research immediately unless stopping the research would cause more harm to the participants than continuing with it.

At the conclusion of your project, you will need to submit a completed Project Status Form to this office. You must also submit the Project Status Form if you wish to continue your research project beyond its initial expiration date.

If you have any questions, please feel free to contact me at the number above.

Sincerely,

Wendy Geiger, Ph.D.  
Associate Dean of The Graduate School  
[geiger@ucmo.edu](mailto:geiger@ucmo.edu)

cc: Bryan Carter

Equal Education and Employment Opportunity

APPENDIX D: HUMAN SUBJECTS APPROVAL FORM – UCM

**IRB Authorization Agreement**

**Name of Institution or Organization Providing IRB Review (Institution A):**  
University of Central Missouri

IRB Registration #: None Federalwide Assurance (FWA) # (if any): none

**Name of Institution Relying on the Designated IRB (Institution B):**  
University of Missouri – Kansas City

OHRP Federalwide Assurance (FWA) #: 05427

The Officials signing below agree that the University of Missouri – Kansas City may rely on the designated IRB for review and continuing oversight of its human subject research described below: *(check one)*

This agreement applies to all human subject research covered by Institution B's FWA.

This agreement is limited to the following specific protocol(s):

Name of Research Project: A Case Study of the Internationalization of a Midwestern University English Composition Course Occurring in a 3-D Virtual Environment

Name of Principal Investigator: Naomi Baldwin

Sponsor or Funding Agency: Not Funded

Award Number, if any: \_\_\_\_\_

Other (describe):  
\_\_\_\_\_  
\_\_\_\_\_

The review and continuing oversight performed by the designated IRB will meet the human subjects protection requirements of Institution B's OHRP – approved FWA. The IRB at Institution A will follow written procedures for reporting its findings and actions to appropriate officials at Institution B. Relevant minutes of IRB meetings will be made available to Institution B upon request. Institution B remains responsible for ensuring compliance with the IRB's determinations and with the terms of its OHRP – approved Assurance. This document must be kept on file at both institutions and provided to OHRP upon request.

Wendy L. Geiger  
Signature of Signatory Official (Institution A)

April 22, 2010  
Date

Wendy L. Geiger  
Print Full Name

Associate Dean of the Graduate School  
Institutional Title

\_\_\_\_\_  
Signature of Signatory Official (Institution B)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Full Name

\_\_\_\_\_  
Institutional Title

## APPENDIX E: HUMAN SUBJECTS REQUEST FOR APPROVAL – UMKC

RE: Your study

To see messages related to this one, [group messages by conversation](#).



Sheila Anderman 3/29/11

To: Naomi Baldwin

From: **Anderman, Sheila H.** (andermansh@umkc.edu) You moved this message to its current location.

Sent: Tue 3/29/11 4:08 PM

To: Naomi Baldwin (naomibaldwin@hotmail.com)

Naomi –

This is to notify you that the UMKC Social Sciences Institutional Review Board is relying on the University of Central Missouri as the IRB of Record for Research Protocol entitled, "A case study of the internationalization of a midwestern university English composition course occurring in a 3-D virtual environment".

They will be responsible for review and continuing review oversight of its human subjects research.

If you have any further questions, please don't hesitate to contact me.

Thank you.

Sheila Anderman, CIP, CIM  
Research Protections Program Manager

UMKC Social Sciences

Institutional Review Board

## APPENDIX F: ACKNOWLEDGEMENT LETTER PROFESSOR IN SWEDEN

	<b>Linnéuniversitetet</b>
	Kalmar Växjö
Kalmar 2Mar , 2010	To Whom It may Concern
<p>Please accept this as a letter of acknowledgement of Naomi Baldwin's research project entitled, "A Case Study of the Internationalization of a Midwestern University English Composition Course Occurring in a 3-D Virtual Environment". As required by the Institutional Review Board of the University of Missouri Kansas City, I am providing this letter to support her petition for research approval at UMKC. I am familiar with her project, and that she will be studying American students who will interact with students enrolled in my course at Linnaeus University.</p>	
<p>According to our university policy, there is no additional paperwork to be filed at Linnaeus University to approve her study. Please accept this letter to accompany her application for research approval at UMKC.</p>	
Sincerely,	
	
David Richardson SOL	david.richardson@lnu.se Lnu.se Adress Linnéuniversitetet, 391 82, KALMAR

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## VITA

Naomi Jayne Baldwin was born in Independence, Missouri on June 9, 1977. She spent her late elementary through high school years in the rural area of Holden, Missouri, where she attended public schools. After graduating as valedictorian in 1995, she attended the University of Central Missouri on a University Scholar scholarship where she declared a major in psychology and a minor in chemistry.

During her undergraduate education, she also participated in the McNair Scholars program and the Honors Program. She conducted an undergraduate research project on glucose levels and memory processes as part of the McNair program, and the results were later published in *Psychological Reports*. Her interests in learning processes and using online resources to enhance course materials were used to complete an undergraduate honors project in which she collaborated with a chemistry professor to create a course website. The website offered supplementary materials relevant to the course curriculum and a game platform to practice vocabulary and course concepts.

She graduated summa cum laude with her Bachelor's degree in 2001, and she continued her educational interests by pursuing a Master's degree in Educational Technology. She also began working full time for the University of Central Missouri as a web designer. As part of her duties, she programmed an online course enrollment and administration site for the Maastricht Center for Transatlantic Studies, a consortium of universities in North America and Europe. The creation of the site led to her first opportunity to travel abroad as she visited Maastricht, The Netherlands in 2001. At the end of her Master's program, she returned to Maastricht in 2003, where she participated

in an internship and co-taught a digital video course. The students in the course created a video story to express their experiences of studying abroad in The Netherlands. The project was later presented at a professional conference, NAFSA: Association of International Educators.

Shortly before graduating with her Master's degree, Naomi transferred to the Office of International Programs, where she maintained the center's website, worked with the national database of international students, recruited international students, and helped organize international student orientations. During her service with the Office of International Programs, she participated in a staff exchange in Sweden and traveled to several different countries in Asia and Europe.

While working in international education, Naomi began the coursework for an Interdisciplinary Ph.D. at the University of Missouri-Kansas City in 2005, where she studied curriculum and instructional leadership and educational leadership, policy, and foundations. Her research interests had grown to include international education, and her dissertation focused on this topic while expanding her other interests in education and online technologies. During her program, she co-presented the pilot project for her research at AERA: American Educational Research Association in 2006.

After completing her coursework, Naomi moved to South Korea to build her classroom instruction skills and to expand on her international experience. She has been living in South Korea since 2009 where she began teaching English to elementary students and adults at an English village. She later taught semester-long courses in public speaking, English composition, and TOEFL preparation to college students while serving

as the Assistant Lead Coordinator for the camp. In this role, she coordinated weekly schedules for 50 teachers, organized bi-annual professional training workshops, and led new teacher orientation.

In 2012, she began teaching at Yonsei University, Wonju as a non-tenured professor. Later she also served as the Curriculum Coordinator, and she currently serves as the Administration Coordinator. As part of her duties, Naomi teaches English listening, speaking, and writing skills and is the lead coordinator of a faculty of 12. She contributes to the day-to-day functions of the department by serving as the primary communication between the administration and the faculty, organizing special programs, working with course schedules, developing curricular guidelines and assessments, and providing guidance for standardized record-keeping. She has consultation meetings daily with the Assistant Dean of the International Education Center, during which she reviews proposals for international programs, memorandums of understanding with international institutions, and correspondence with representatives at foreign embassies in South Korea. Naomi feels at home in many different countries and hopes to use her experience in both teaching and administration to contribute to the internationalization of higher education.