

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Introduction**

This section states the focus of and impetus for the current study which is based on the premise that motivation is a major and essential element for successful foreign language learning and that virtual world building might be able to enhance that motivational experience. The rationality for the current investigation highlights the researcher's personal perspectives, insights and teaching experience. The study's purposes and research questions are stated, as well as its limitations, assumptions, and ethical issues.

### **1.2 Background**

Motivation is considered to be one of the main factors in determining students' successful development in a second or foreign language (Oxford & Shearin, 1994). While there is no universal consensus regarding a definition of motivation for foreign language learning (L2), Oxford and Shearin said that motivation is a desire to achieve the goal of learning the language, combined with positive attitudes and effortful behavior toward achieving that goal. These researchers made an even bolder assertion when they stated, "Motivation determines the extent of active, personal involvement in L2 learning. Conversely, unmotivated students are insufficiently involved and therefore unable to develop their potential L2 skills" (p. 12). In other words, if there is no motivation there can be no learning. In the current study, the question is not whether motivation is important or not, but rather a question of how to promote motivation.

Deci, Vallerand, Pelletier and Ryan (1991) maintained that it is the responsibility of teachers and the school to provide the atmosphere in which motivation can flourish. "Ideal school systems are ones that succeed in promoting in students a genuine enthusiasm for learning

and accomplishment and a sense of volitional involvement in the educational enterprise" (p. 325). Deci et al. reflected that this enthusiasm for learning and feeling of involvement was determined by and arose out of student motivation. They discussed the benefits of motivation which included developing students who stayed in school, achieved conceptual understanding and were well adjusted.

As this study concerns Taiwanese university students' motivational and educational experiences, a conscious attempt was made to locate and include studies that had focused on the Asian educational experience. In a study of Taiwanese teacher motivational strategies, Cheng and Dornyei (2007) stated that motivation was a major component of successful second language learning (L2), and stated the need for more research regarding strategies in motivating language learners. They specifically referred to two underutilized motivational teaching strategies in Taiwan. These motivational "trouble spots" were: (1) making learning tasks stimulating and, (2) familiarizing learners with L2-related culture. The current study relates to both of these, as well as other, motivational concerns.

Norris-Holt (2001) wrote about English as a Foreign Language (EFL) environment from the perspective of teachers teaching in Japan. She mentioned the frustration that teachers often felt as a result of facing students who displayed a general lack of interest and commitment toward learning English. Her suggestion for dealing with this lack of student motivation was for teachers to create interesting lessons and to encourage students to become active participants in their own learning. She stipulated that this might entail that the teacher use unorthodox strategies that are not often used by other teachers in mainstream subject areas. My interest in stimulating student attention and providing them with motivating learning environments started with my first exposure to Taiwanese college students.

Before my first day of teaching a course in English conversation, I was handed a conversation textbook by our department chairperson, and was told that my students would follow my teaching instructions. I had my doubts that a class of more than forty students would enjoy reading a textbook together and performing its prescribed activities. However, I dutifully prepared for the class, and later entered the classroom armed with this new textbook and its suggested activities.

After pretending to be interested in the textbook material for a couple of lessons, it became obvious that my students weren't interested in using English to "order food from a menu" or talk about "cultural differences between themselves and American students", even though these topics were fully explained in their textbook. Although my students did express dissatisfaction with the textbook, they did not have any concrete suggestions as to what they wanted to learn or how they wanted to practice English conversation.

Since that first course, I have tried various subject topics, such as music, dating, and television. I have experimented with several teaching methods ranging from peer-teaching to video production. All of these pedagogic endeavors were focused on trying to increase the motivation of my students to learn English, and actually use it in everyday activities.

An important, yet unforeseen, educational problem occurred during the Severe Acute Respiratory Syndrome (SARS) epidemic in 2003. In my English conversation classes, students are given responsibility for understanding specific sections of their total class material, and then they are required to teach these portions to their fellow classmates. I was concerned that this face-to-face contact might be putting them at risk of infection, and went on to try a simple online experimental class that used 3D virtual worlds as a substitute for our regular classroom (Fulton, 2006).

Although the survey results of that investigation indicated the students felt the online experience was not as useful as their in class face-to-face interactions, they reported the online experience to be both interesting and fun, and expressed an interest in the further use of this method.

In the 1990's, designers and investigators of 3D virtual worlds expressed a hope that, in the future, more powerful computer systems and faster Internet delivery pathways would remove some of the limitations of using virtual worlds for education and business purposes (Dede, 1995). I feel this time has arrived. Nowadays, computer use in the school and at home is commonplace in most industrialized cities around the world. Students' online relationships with one another range from instant messaging to image sharing, and their use of digital entertainment, such as videos and online gaming ensure that the topics to be investigated by this study are both timely and important.

Osberg (1997) believed that motivational and learning deficiencies could be overcome by the use of virtual environments. She said that in a virtual world, the knowledge construction process is made concrete by providing students the ability to create and experience their own representations, or to manipulate the representations of others in a meaningful fashion. Osberg's own research found that virtual reality was a kind of constructivist-learning tool, which assisted students in making deep, meaningful knowledge constructions in a visual, auditory and interactive environment.

My personal interest in virtual worlds goes back a long time, and was no doubt influenced by my interest in science fiction in general and "cyberpunk" specifically. Two books that started my interest in virtual worlds were *Neuromancer* by William Gibson, and *Snow Crash*

by Neil Stephenson (Gibson, 1984; Stephenson, 1992). For both of these authors, virtual worlds provided an environment that went far beyond the boundaries and constraints of reality.

While much of the action in both novels occurs in virtual worlds, the worlds that each author creates are quite different. Gibson constructed a virtual world that he referred to as "Cyberspace". It is an abstract environment where the user interacts with information, artificial entities, and hostile viruses in a fanciful 3D world. "Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding" (Gibson, 1984, p. 51).

Whereas in Stephenson's virtual world the "Metaverse", the user has a digital body, an avatar, and interacts with others in a surreal version of normal reality. "Hiro is approaching the Street. It is the Broadway, the Champs Elysees of the Metaverse... It does not really exist. But right now, millions of people are walking up and down it" (Stephenson, 1992, p. 24).

Although I took an introductory course in computer programming as an undergraduate student, I didn't discover any practical use for computers until I was in graduate school studying fine art. My main area of expertise and investigation was ceramic sculpture, and even though I enjoyed working with this material, I discovered there were many problems and disadvantages of using such an unwieldy, heavy and fragile medium involving the production, transport, and storage of such large and easily broken objects. After I left the United States in 1988 to live in Taiwan, I started using computers to design art sculptures similar to the kind I had previously used ceramics to create. I was especially interested in creating three-dimensional art objects, not only for the practical reasons of transport and storage, but also for the conceptual issues, ironies, and ambiguities surrounding the building of "virtual objects".

The language I used for building these objects is called virtual reality markup language (VRML), a computer scripting language analogous to using hyper text markup language (HTML) to write web pages. VRML has gone through several modifications and standards. VRML 1.0 was introduced in 1995 and was used to create static 3D worlds that did not move and could not interact with the user. In 1996, VRML 2.0 (sometimes called VRML97) was presented and could be used to create 3D worlds that had sound, animation, allowed for the use of prototyped objects, and added support for other languages like JAVA and JavaScript. Many current VRML browsers can read standard VRML 2.0 code as well as VRML's successor- X3D which allows multiple data encodings and new graphics features.

About the same time I started creating virtual objects, I became acquainted with an online virtual community called Alpha World. It was a free, as in "no cost", virtual space where users could explore, build houses and objects, and socialize with other users. While I didn't spend much time chatting with other users, I did enjoy looking at and walking through their architectural achievements, as well as spending a lot of time building some of my own. By the time Alpha World changed its name to Active Worlds and became a commercial venture, I had begun teaching English to Taiwanese college students at a nearby technical college and ceased being an active member of the virtual community.

In summary, due to my knowledge of and interest in both teaching English and virtual worlds, the current study takes a novel first step towards combining these two areas with the hope that together they might be able to provide some motivational synergy for students studying English as a foreign language. The process and outcomes of this study, hopefully, bring to light some information regarding motivational aspects of education and virtual worlds that are current

and pervasive, and provide practical material regarding student and teacher interactions that will assist in the design of future virtual world language activities and systems.

### 1.3 Purposes of the Study

1. To investigate the relationship of virtual world construction and object building, and communication activities to EFL university student motivation in a language learning environment.
2. To understand student experiences and concerns regarding virtual world construction, object building, and communication activities in a language learning environment.
3. To provide information regarding using virtual worlds design tools, and communication activities in the learning and practice of English for non-native speakers from both learner and teacher perspectives.

### 1.4 Research Questions

1. Can building and using virtual worlds increase university students' motivation toward learning English?
2. Can virtual worlds provide an effective and appropriate environment to encourage EFL students to communicate in English?
3. What are student attitudes regarding the technical and social aspects of using virtual worlds in a conversation class setting?
4. What are teacher perspectives and experiences regarding using virtual worlds and building tools toward motivating student interest in English?

## 1.5 Limitations, Assumptions and Importance

### *Limitations*

1. *Limited population.* The study population was not randomly selected but was composed of university students who were willing and able to participate in the study. While this does not make results of the study able to be automatically applied to all classrooms and all populations, it ensured that a stable and consistent population was involved, and made sure that in-depth methods of instruction and assessment were possible.
2. *Limited data.* Self assessment through pretest and posttest surveys was one data collection method used, and has been used in many EFL language learning settings in other studies. In addition, teacher observations and student interviews were conducted to provide additional perspectives to the information obtained by the survey instruments.
3. *Limited time.* The study involved students in a ten-week program of virtual world design and communication tasks. This timeframe provided a reasonable amount of time for students to learn software operation, participate in communication activities and produce creative student-centered work. However, it was not certain that this was an adequate amount of time to affect students' motivation toward language learning.
4. *Virtual worlds were limited to the current system and software used.* Because this is a starting point in the study of virtual worlds and language learning, it was logical to use worlds that were controllable in terms of access and functions from the perspectives of security and economy. In future studies, different virtual world



environments and participants could be used to further investigate results of the current study.

#### *Assumptions*

1. It was assumed that the participants would be truthful in answering their surveys and in their participation in their interviews. Students were able to discuss the meaning of the words and ideas used in their surveys before they actually filled them out. Although students were encouraged to speak in English during their interviews, using occasional Chinese words or terms was allowed into the interview if it helped them to explain their feelings and concerns.
2. It was also assumed that the hardware and software would function on the computers to be used as student workstations and on the virtual world server. The software discussed in the study had been extensively tested on various computers both on and off campus and functioned appropriately on all tested machines. If the computer to be used as a server failed, back up computers and alternative back up operating systems were configured and secured in order to be able to replace the original server and system.
3. A final assumption was that students would make an effort to complete the required design and communication tasks and would attend the in-class training sessions. If a student missed a training session, he or she would be allowed to attend a make-up class to learn and practice the skills needed for that lesson. If a student missed too many training sessions, the teacher had the option to not allow that particular student to continue to participate in the study and that student would be required to perform alternative activities to receive course credit. The teacher would determine the

definition of missing "too many" training sessions by observing if the student was unable to keep up with the other students regarding his or her classroom and outside assigned tasks.

### *Importance*

In general, part of the importance of this study relied on its uniqueness; what information or perspectives it provided that other studies had not.

1. This study was a starting point. While many schools and universities have started to incorporate aspects of virtual worlds into their curriculums, there have been very few research studies done regarding the motivational effects of using virtual worlds.
2. In this study, there was a focus on second language learners and world building. In other studies, world building was a peripheral issue or not addressed at all. While students may have selected an avatar or constructed an object, creativity was not a central component of the research. In the present study, creativity and the creation of virtual avatars, objects and worlds was the primary vehicle used to motivate students and to provide focus for the collaborative and communicative activities in which they participated.
3. Motivation was the emphasis in this study. While other studies have dealt with motivation as a factor in language learning, the present study specifically endeavored to study the relationship between student-built worlds and motivation in second language learners. In other words, this study provided information regarding whether student-built virtual worlds and communication with other participants within these worlds were able to provide motivation for students towards English language learning.

## 1. 6 Research Ethics

At the beginning of the conversation course, I invited students to participate in the research study. They were given an option to participate or not, and that their participation, or lack of it, would not affect their grades in this course (See Appendix A). At any point in the study, if they did not or could not participate in the study, their teacher would give them alternative activities (unrelated to the study) to complete in order to fulfill their course requirements.

No physical or mental harm came to the students as a result of participation in the study. The activities that the students were required to perform were not more dangerous or stressful than other educational activities such as doing homework and test preparation. In addition, because these conversation activities were performed in secure, private worlds hosted on a school computer system, students did not have to worry about the dangers of interacting with strangers.

In fact, there may have been benefits for the students who chose to participate in the study. Participants obtained training and skills in using 3D software and gained practical experience in using a cutting-edge educational platform. As mentioned earlier, many schools are starting to utilize virtual worlds, but there has been little research into their use in educational settings. Therefore, the students involved in this project were pioneers in using student-created worlds for communication purposes.

All student identities have been and will be kept anonymous, only I have access to the original survey instruments, and those documents will be kept in a locked filing cabinet for two years following the acceptance of my doctoral dissertation. After that time, they will be shredded and destroyed. In addition, all recorded interviews were immediately erased and deleted after

they had been transcribed by me. The transcriptions themselves will be kept in a locked filing cabinet, then shredded and destroyed two years after the acceptance of my doctoral dissertation. Any reference to particular students involved in the study was accomplished through the use of pseudonyms and any possible identifying information that could be used to link to a specific student was modified or omitted.

## 1. 7 Key Terms

Definitions adopted by researchers are often not uniform, so the following key terms are provided to establish viewpoint reference and foundation for the current study.

*Virtual Worlds.* Bartle (2004) defined virtual worlds as persistent, computer-moderated environments and can allow multiple individuals to interact simultaneously. He added that this illusionary environment is persuasive because it uses familiar concepts such as object, place and inhabitant. In 2006, Bartle made an even more succinct definition when he said that “Virtual worlds are places where the imaginary meets the real” (p.1).

Book (2006) stated six features which all virtual worlds have in common: (1) Shared Space, (2) Graphical User Interface, (3) Immediacy, (4) Interactivity, (5) Persistence, and (6) Socialization/Community. Some of the features which are similar to Bartle’s ideas are that a virtual world must have a space where participants interact in an interactive, real-time manner, and that virtual worlds are persistent in the sense that the places and objects exist regardless of whether participants are currently interacting in the world or not. Book’s features add some ideas to Bartle’s definition in that she includes the need for a graphical user interface, which can be either two or three dimensional, and the ability to facilitate in-world social groups. In both of these virtual world viewpoints the individual participation occurs through the use of a virtual

character called an avatar which Castronova (2003) says is a physical representative of self in the virtual environment.

In the current study, virtual worlds contain the aforementioned concepts by Bartle, Book and Castronova and are defined as three dimensional computer simulated environments which allow multiple users to interactively participate in real-time using avatars as representations of self and via a graphical interface. In addition, these virtual worlds are persistent and can facilitate goal oriented social behavior and communication.

*Motivation.* Schiefele (2001) defined motivation as “the intention to perform a specific activity” (p.167). He also said that in educational contexts, “interest” is a key component of motivation and one that teachers, parents and students often mention when referring to motivational phenomena. In the present study, the specific activity is the practice and learning of English as a foreign language. Gardner (1985) developed the socio-educational model of second language acquisition and said that the motivational component of learning refers to an individual's attitudes, desires, and effort to learn the second language. This specific orientation towards language learning can also be found in Oxford and Shearin's (1994) definition of motivation as being a desire to achieve the goal of learning the language, combined with positive attitudes and effortful behavior toward achieving that goal.

The current study uses the concepts contained in Gardner's and Oxford and Shearin's research and defines motivation as the attitudes, desires and effortful behavior used toward the goal of learning the second language.

*Constructivist Learning.* Constructivism as theorized and investigated by Vygotsky (1978) said that an individual's cognitive skills and thinking patterns are determined by social interactions and not primarily by innate factors. In addition, through these social interactions

learners develop their own understanding of the way the world works rather than having it delivered to them in an already organized form (Eggen & Kauchak, 1996). Within this social context, Jonassen (n.d.) said that meaningful student learning will occur in constructivist learning environment learning environments which are: (1) active - students shouldn't just learn about something, they should do it, (2) constructive- students need to construct their own meanings, (3) collaborative - sharing information and collective problems solving is more effective than working things out by oneself, (4) intentional - students need to actively accomplish a specific goal, (5) complex - the world is not a reliable and easily understood place, therefore simplifying educational problems does a disservice to student learning, (6) contextual - students need to do more than memorize abstract rules; they need to work on real problems, (7) conversational - when students talk to others they can receive alternative viewpoints, and (8) reflective - explaining the processes students go through to solve a problem helps them to better understand those processes. The current study uses Jonassen's characteristics of a constructivist learning environment to illustrate the kind of social interactions that learners use to develop their own understanding of the way the world works. In other words, these characteristics embody the strategies that learners use to accomplish meaningful learning in a constructivist learning environment.

*English as a Foreign Language.* Strictly speaking, English as a Second Language (ESL) is the term used in countries such as Singapore where the native language is not English, but English is commonly used for government or instruction purposes. English as a Foreign Language (EFL) is the term used in countries such as Japan where the native language is not English, and English is learned for academic or educational purposes of communicating with foreigners or reading English texts (Phillipson, 1992). Phillipson said that the dividing line

between ESL and EFL often fluctuates and that the distinction between the two is usually confusing in social and educational issues. In the current study, there is no distinction made between English as a Foreign Language (EFL) and English as a Second Language (ESL) as they both relate to the study and of use of English by speakers whose native language is not English.

### 1.8 Summary

In summary, this study provided students with a series of virtual world building and conversation activities which were performed both inside and outside of the classroom, measured and examined student motivation, and discovered student and teacher concerns regarding student-built virtual worlds, constructivist learning environments and motivation in a second language learning setting.

