

USING WEB 2.0 TOOLS IN A FOREIGN LANGUAGE CLASSROOM: MOTIVATING  
STUDENTS THROUGH VIRTUAL SOCIAL INTERACTION TO IMPROVE READING  
AND WRITING SKILLS

by

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ABSTRACT

Learning a foreign language in a classroom environment can be frustrating to all involved. Presently, teachers use tedious writing assignments in order for students to practice what has been taught in class. These homework assignments are repetitive and lack the sense of realism youth seeks today. The review of the literature will show different studies completed that looked for ways to explain how today's students learn foreign languages and how these students can be assisted in this process.

The study described in this dissertation looked into a highly popular Web 2.0 tool as a way to improve students' motivation as well as putting into practice what has been learned in class in a more realistic environment. The introduction of a social network site in a foreign language classroom was investigated to see if the virtual social interaction students experienced helped them improve their reading comprehension and writing skills in the new language.

Unfortunately, when testing for differences in reading comprehension and writing skills amongst research participants, results from a post-test, as compared against a pre-test, found no statistical difference in improvement at the end of the study period. Even post-hoc comparisons conducted taking gender into consideration, showed no statistical intra-group differences in these essential foreign language skills similar to the results previously obtained. Furthermore, an

online questionnaire participant's completed revealed no difference in motivation amongst groups to further their foreign language education above the required courses.

However, classroom observations and follow-up interviews with participants and the instructor discovered that, in terms of students' motivation to learn the new language, gender was a factor when using this Web-based tool in a classroom environment. The conclusion reached is that males were more motivated to learn the language if they are engaged in Web 2.0 tools as compared to females who also wrote via the social network site. As such, further investigation is needed in respect to how students could use social network sites to further their foreign language skills and if another Web 2.0 could do a better job of offering a realistic social interaction in a foreign language classroom.

**INDEX WORDS:** Foreign Language Education, Motivation, Social Constructivism, Social Network Sites

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## CHAPTER I

### INTRODUCTION

#### **Background**

Teaching foreign languages to young adults is not an easy task since students tend to lose the ability to learn new languages as they get older (Chun, 1998; Eskenazi, 1999). One of the biggest problems instructors face is how to keep the students motivated to learn this new language, especially when they live in an environment where the chances of using what has been learned outside the classroom are slim to none. Instructors teaching foreign languages in a classroom environment alone confront enormous, perhaps insurmountable, challenges in helping students learn a second language. Some of the obvious limitations to teaching language in a traditional classroom environment include: limited exposure to the target language, limited opportunities for producing the new language, exposure to inaccurate, nonnative language as produced by fellow students, limited opportunities for authentic communication in the target language in a wide range of physical and sociolinguistic settings, and the limited language ability and cultural knowledge of many nonnative second language instructors, who provide learners with a less than ideal model of the new language and its associated culture (Cziko, 2004).

In order to mitigate these problems, researchers throughout the years have explored the topic of using different types of technologies in foreign language education to facilitate students' learning (Warschauer & Healey, 1998; Lafford & Lafford, 2005; van Deusen-Scholl, Frei, & Dixon, 2005). The potential impact of computers in education was recognized well before the widespread adoption of the technology itself (Watson, Lee, & Reigeluth, 2007). Computers in

the classroom provide educational opportunities that expand beyond traditional learning environments (Inan & Lowther, 2007). Computers, especially those that are Internet-enabled, provide learners with the opportunity to search, discover, and utilize information according to their needs, thus promoting student-centered learning. Some educators with a constructivist orientation to learning maintain that computers provide students with the ability to create self-learning activities, which may be more effective in the long run than the instructor-controlled dissemination of information (Jonassen, 1996).

In a foreign language classroom, computer-assisted language learning (CALL) has shifted from structural CALL in the 1970s and 1980s, with an emphasis on drill and practice, to communicative CALL in the 1980s and 1990s, with an emphasis on communicative tasks facilitated through CALL materials, to integrative CALL, with an emphasis on the authentic discourse approach, in the 21st century. Today, language instructors are using new technology to assist them in the classroom in order to provide every student that “outside the classroom” experience they deserve (Warschauer & Healey, 1998). As such, the foreign language classroom is being transformed into an extended learning environment where student roles are increasingly autonomous and instructor roles are more and more those of a facilitator and mediator. This transformation in roles is permitting better social interaction between foreign language students and native language speakers, without having to travel abroad for that experience. Unfortunately, however, experience shows that this technology is currently being implemented without a clear understanding of its benefits. This is why further research in the realm of Web 2.0 tools in a foreign language classroom is needed.

The U.S. military is not exempt from this dilemma. As with any multinational organization, the military works hand-in-hand with those in foreign countries where English is

not regularly spoken, so they have to find ways to teach foreign languages to their troops.

Though hard to believe, this is not a new problem. In 1979, the President's Commission of Foreign Languages and International Studies found that:

“Americans' scandalous incompetence in foreign languages explains our dangerously inadequate understanding of world affairs. Our schools graduate a large majority of students whose knowledge and vision stop at the American shoreline, whose approach to international affairs is provincial, whose heads have been filled with astonishing misinformation...The United States requires far more reliable capacities to communicate.”

Unfortunately, this fact, which still holds true today, is seen as a threat to National Security. The 2001 attacks in New York and Washington, and the resulting war against terrorism, primarily in certain Arab countries, demonstrated that military personnel with foreign language and cultural knowledge are highly sought after.

As such, in 2006, then Air Force Chief of Staff, General T. Michael Moseley directed language training, e.g., Spanish, French, Arabic, and Mandarin Chinese, as well as regional studies for all students attending upper level military training. A year later, he further wrote in a memo to the deputy chief of staff for manpower and personnel that “our Air Force needs Airmen who can influence the outcomes of U.S., allied, and coalition operations anywhere in the world” (Paige, 2007, p. 1) by developing foreign language and culture skills to meet the Air Force and Department of Defense mission. That same year, Air Force Secretary Michael Wynne, called every Airman an “Ambassador.” In a letter to individual Airmen, the Secretary noted that he was “committed to boosting your regional, cultural, and language skills to make you a more capable Ambassador so that you can help build lasting long-term relationships with our allies and coalition partners” (Wayne, 2007, p. 1). This topic has become so important in today's military

that basic language training and regional studies are currently included in the pre-deployment training Airmen receive before going into a war zone.

All this talk about learning foreign languages and being culturally aware of others led to a directive that every cadet graduating from the United States Air Force Academy (USAFA), an accredited college for the undergraduate education of commissioned officers for the United States Air Force, is required to take four semesters of a foreign language in residence; however, the heavy load of some technical majors, such as engineering and computer science, only allows students to fit two foreign language courses into their academic schedule. Unfortunately, since four semesters of foreign language, or two in some cases, is not enough, students are encouraged to further their education and receive a minor in the target language. As such, depending on the language students are learning, between 25% and 50% of those who decide to continue their language education are chosen to participate in a four to six weeks language immersion trip. As good as that number is when compared to other undergraduate institutions with similar programs there are still many students who do not get this precious opportunity. As one of the subjects surveyed during the pilot study said:

“I am passionate about learning the language; therefore I may have been more open to new perspectives and views than others. Since I have already experienced immersion in Brazil, though, I feel like class and the online social networking can only be considered secondary to the experience of communicating face-to-face with Brazilians on their turf.”

However, since it is impossible to give every cadet the opportunity to travel abroad as part of an immersion program, using social network sites as a complement to the traditional foreign language classroom will “help improve [my] exposure to the culture and the people,” as another subject argued.

Multimedia experiences enabled by Web 2.0 tools have the capability to stretch the instructor's curriculum beyond the traditional walls of the classroom and to integrate much needed sociolinguistic authenticity into the school's programs (Adair-Hauck, Willingham-McLain, & Youngs, 1999). Even from a socio-cultural point of view, language learning cannot be viewed as an immediate product of the individual; rather, it is the process by which learners engage in co-constructing their foreign language knowledge (Lee, 2004). Lee suggests that the socio-cultural approach in language learning is a developmental process whereby individuals use the language as a cognitive tool for socialization and also use social interaction as a tool for cognitive growth. Furthermore, social interaction is more than the action of one person delivering information to another; rather, it shapes and constructs learning through collaborative effort and scaffolding in expert and novice interaction (Kington, 2001). As in any type of learning environment, learners, through social engagement, collaboratively work with each other to achieve a high level of performance (Donato, 2000; Kern & Warschauer, 2000); this theoretical thinking can be applied to a foreign language classroom and is the foothold for this research.

This research was focused on enhancing the learning opportunities for second language learners by combining effective pedagogical strategies with cutting-edge technology. Moreover, the research was guided by a constructionist theoretical framework. Constructionist learning could best be said to occur in the instance when a learner is engaged in the construction of something external or at least sharable (Harel & Papert, 1991). More specifically, the research followed Vygotsky's social constructivist theory which states that ideas are constructed through the interaction each learner has with the instructor, other students, and the environment (Powell & Kalina, 2009). For example, a language learner could use a social network site to engage in a



dialogue in the target language which could be shared and critiqued by others. This social constructivism principle is inspired by constructivist theories of learning that propose that learning is an active process wherein learners are actively constructing mental models and theories of the world around them (Jonassen, Peck, & Wilson, 1999).

### **Statement of the Problem**

As previously stated, every cadet that graduates from USAFA has been introduced to one of eight languages, i.e., Arabic, Chinese, French, German, Japanese, Portuguese, Spanish, or Russian; however, due to the heavy course load USAFA requires, most students are not intrinsically motivated enough to further their foreign language education beyond the required four semesters. Motivating students to learn a new language can be frustrating. Although instructors are doing a good job of motivating them in the eyes of some students, for the most part, students need other types of external motivation to help them become intrinsically motivated. One subject in the pilot study maintained that:

“...the Portuguese department did a great job in changing my views about learning a foreign language. By showing us what we can do with the language and the benefits of knowing the language, we are able to become motivated to learn.”

Sadly, such statements are few and far between. If students in a traditional second language classroom were really motivated to learn a new language, when asked how many subjects are planning to continue their foreign language education past the required courses, the numbers of those answering in the affirmative would be different. The survey of the pilot study shows that 73% of the subjects in the experimental group are planning on taking at least one 300 level course vs. 45% of the subjects in the control group. These numbers might just be coincidence; however, experience shows students' motivation has a lot to do with this and that

using innovative technology tools in the classroom has a lot to do with the increase in motivation (Warschauer & Healey, 1998).

In other words, the central problem this research is trying to tackle is motivating USAFA cadets to further their foreign language education above and beyond the requirements set by the institution. Dörnyei and Csizér (1998) said that “without sufficient motivation, even individuals with the most remarkable abilities cannot accomplish long-term goals, and neither are appropriate curricula and good teaching enough to ensure student achievement” (p. 203). In order to increase motivation, students need to practice the language skills they are learning in class in a more realistic setting than simply reading a book and writing sentences for homework (Dörnyei & Csizér, 1998). Using social network sites to communicate with native speakers will provide that experience (Mika, 2007).

### **Purpose of the Study**

In her research, Lee (2004) talked about how networked collaborative interaction, similar to the first pilot study (discussed in detail in chapter 3), promoted lively exchanges among learners within a social context, a setting that facilitates the development of their communicative competence. The purpose of the current study is to identify whether students engaging in lively exchanges with native speakers in a manner outside a formal learning setting can improve their reading comprehension and writing skills, thus increasing their motivation to learn the new language. It is believed that personal exchanges among learners of different languages, as long as that exchange is meaningful, will develop the students’ communicative competence as well as would a specific project-based learning activity, commonly related with social constructivism.

Gu (2003) reported that classes with a social setting in China have provided students with authentic interaction with a variety of audiences, increased their levels of input and output in the

target language, and enhanced motivation, engagement, and willingness to learn collaboratively. Could it be that the social interaction students experienced increased their motivation to learn the target language?

In the past decade, researchers have shifted their attention from psycholinguistic approaches to the social-cognitive perspective that emphasizes language development through meaningful social interaction (e.g., Donato, 2000; Ohta, 2000; Pavlenko & Lantolf, 2000; Swain & Lapkin, 1998; Warschauer, 2009). They maintain that interactive negotiation through individual input and output modifications, as happens in a classroom, does not provide sufficient conditions for acquisition and mastery of a foreign language. Rather, language learning goes beyond "what" the individual produces and focuses on "how" the individual interacts with others in a social setting. Furthermore, researchers of second and foreign language learning have emphasized that motivation is one of the main factors in foreign language learning success and plays an important role in predicting the success of target language acquisition in general (Rueda & Chen, 2005).

Based on this, the present research will further analyze if any meaningful social interaction, not only a project-oriented one, could be achieved through a computer-based interaction such that improvement in students' motivation to learn a new language, as well as their language skills and proficiency, can be detected. Consequently, the review of the literature is aimed at exploring how three theories – communication, social constructivism, and motivation – can blend together to achieve this goal.

## **Research Questions, Hypotheses, and Measures**

*Question 1.0:* How can the social interaction offered through a computer-mediated method be used to help students improve their writing skills and reading comprehension proficiency in second language acquisition?

*Hypothesis 1.1:* Students who read and write sentences in the social network site to communicate their thoughts and feelings about the subject at hand will see a higher improvement in their reading comprehension and writing skills than those writing sentences as part of a traditional homework assignment.

*Analysis 1.0:* A quantitative analysis will be conducted. This analysis will examine the difference in the average scores on a pre-test and post-test of the experimental group and compare them to those of the control group.

*Question 2.0:* How can the social interaction offered through a computer-mediated method motivate students to learn a foreign language?

*Hypothesis 2.1:* Subjects participating in social interactions will be more motivated to expand their foreign language knowledge above and beyond what has been taught in class and will choose to extend their language education beyond the required courses at a higher rate than those subjects who do not participate in social interactions.

*Analysis 2.0:* A quantitative analysis will be conducted. Subjects will be asked to complete a survey and take part in an interview relating their experience in the foreign language classroom and how the social interaction motivated them to explore the new language. Furthermore, conversations with the instructor should provide insight into any changes in the students' behavior inside the classroom based on her experience.

## **Rationale and Significance**

Learning a foreign language is not an easy task by any means, no matter one's age or educational level, but it is even harder for students at an undergraduate level since as one gets older, the brain starts losing its ability to assimilate new languages (Chun, 1998; Eskenazi, 1999). According to Meltzoff, Kuhl, Movellan, and Sejnowski (2009), "In humans, a sensitive period exists between birth and seven years of age when language is learned effortlessly; after puberty, new language learning is more difficult, and native language levels are rarely achieved" (p. 287). In order to help these young adults acquire a second language, undergraduate institutions for years have offered students the chance to study abroad in order to improve their language skills by means of social interaction with native speakers.

In a classroom environment alone, it is hard to master a new language because, in most instances, the material presented in class is not authentic. Students learn new vocabulary, proper sentence structures, and even some basic verbal communication skills – all essential aspects of becoming fluent in a new language – but if they do not feel that what they have learned can be used in their daily life, learning will not leave the classroom. One main question arises: how can instructors encourage these adult students to improve their skills in the new language without the expense of travel abroad? This research is aimed at answering that question by using technology as a conduit through which students can achieve a type of social interaction similar to those students studying abroad, and thus help them advance in their quest to learn a foreign language.

Language is a social phenomenon, and, thus, language learning occurs through social interactions involving instructors and more capable peers (Tharp & Gallimore, 1988; Vygotsky, 1978; Wertsch, 1979). At times, however, this contact is not genuine. With the current advances in technology, the social phenomenon that is language learning can be facilitated with the use of

computers. This type of social interaction can be achieved as students communicate and interact with individuals their same age in another part of the world in real-time where the target language is spoken. Such virtual chats provide enhanced opportunities for authentic language use among native and non-native speakers on an unprecedented scale in terms of the numbers of users and the geographical distances involved (Chen & Hsu, 2008). Although this type of social interaction cannot be achieved in a classroom environment alone, it can be enabled through constructivist pedagogy and advanced telecommunications technology.

Results from the pilot study showed that this research was moving in the right direction. When asked if the virtual social interaction offered as part of the pilot study was successful in improving their writing skill and reading comprehension in the foreign language, 82% of the respondents replied positively and, as one subject commented, “it helps to see what the native speaker says on the other side, and to develop your own individual thoughts and see them through. It helps to build contextual interpretation abilities [i.e., in the target language].”

### **Summary**

This study is an investigation of the effects of replacing traditional homework assignments with virtual conversations on a social network site in a foreign language classroom. In this introduction, a background of the problem at hand was presented as well as why it is so important to learn foreign languages in today’s military. A problem was noted – the lack of students’ motivation to learn a new language – and different hypotheses were presented on how this can be mitigated. To conclude the chapter, a number of limitations to the study were presented and how these limitations can be minimized to ensure the study’s success.

My research in the field of Learning, Design, & Technology, more specifically the use of technology in language education, will help Academy cadets improve their foreign language

skills while at the same time motivate them to further their education in the target language, making the Air Force less dependent on contractors to serve as translators. Contributions from my research will immediately impact the way USAFA's Department of Foreign Languages conducts its primary mission.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### **Introduction**

This study addresses the use of social network sites in foreign language classrooms. To do this, three different theories are analyzed in order to understand the phenomenon that is language learning. Figure 1 illustrates how communication, social constructivist, and motivation theories will be considered essential elements of using Web 2.0 tools in foreign language education. Furthermore, research involving the use of technology to improve students' reading comprehension and writing skills also receives a closer look, as well as those studies that emphasize an increase in students' motivation. In general, this review suggests that further research is needed in regard to using social network sites in foreign language education.

Most of the studies considered in this literature review have been found using the GALILEO and GIL databases available from The University of Georgia library. Additional studies were found using the Google Scholar search engines. The following search terms were used to find this literature: Second Language, Language Acquisition, Social Constructivism, Technology, Teaching and Education, Social Network Sites, Communication Theory, and Motivation (intrinsic and extrinsic).



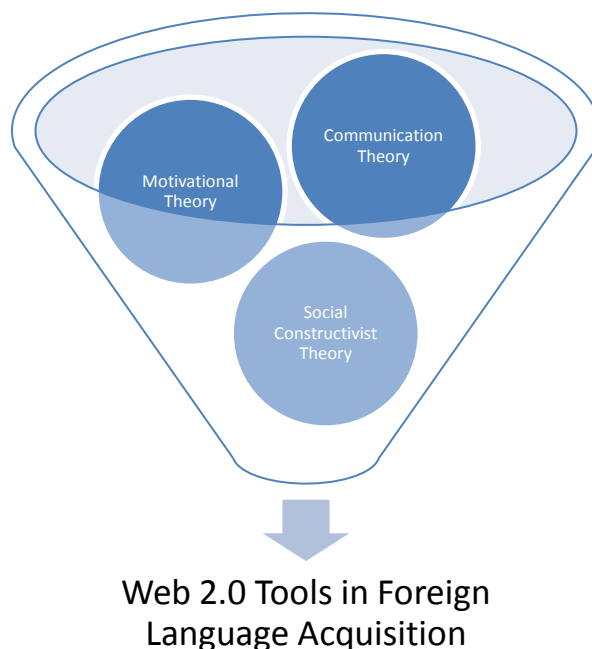


Figure 1. Visual overview of the literature

### **Communication Theory**

Communication as we know it has existed since the beginning of time. It covers a great deal of human (and animal) activity. Everything from reading to writing, listening to speaking, as well as viewing and creating images, amongst other examples, are all acts of communication (Lanham, 2003). The process of communication has been the subject of study for thousands of years, during which time the process has come to be appreciated with increasing complexity. Though there are many definitions for communication, research into how messages are communicated started in 1927. Harold Lasswell (1971) in his book *Propaganda Technique in the World War* best defined communication as “who says what to whom in what channel with what effect” (p. 117). Since then, four models of communications have come to light exemplifying how people communicate.

A political scientist by trade, Lasswell was mainly concerned with mass communication and propaganda. As such, his model considered a variety of factors thought to determine the

impact of a communication (Roy, 2009). Being concerned with the mass media, Lasswell was particularly interested with the messages that were present in the media and the channel used to convey that message. This relates to an area of study known as content research, or how things are represented. Based on Lasswell's definition, researchers argue that communication stands deeply rooted in human behaviors and the structures of society, and that thinking of it while excluding social and behavioral events is extremely difficult (Goffman, 1959; Lanham, 2003).

A few years later, researchers Shannon and Weaver (1949) conceived a second communication model. Their model was focused on information theory, and, in particular, the transmission and reception of messages (Croft, 2004). The most important part of Shannon and Weaver's model is the fact that the message must go through "noise," or a source of interference, and how this interference can produce a misunderstanding in even the simplest of communications. Croft pointed out that although Shannon first drafted a model geared strictly for telecommunications such as radio and television, Weaver found that some of the elements could be easily generalized into our daily lives. Together, they called it the "transmission model of communication."

As pointed out, these first two models were created by individuals interested in communication as an element of some other field of study; however, the next two communication models were created by researchers interested in studying communication as an independent discipline.

By 1954, Wilbur Schramm had developed some basic models of communications. His model was a derivation of the previous transmission model of communication. Littlejohn and Foss (2008) argued that Schramm was thought to be the first researcher to emphasize the process of encoding and decoding the message. He envisioned this process as a two-way communication

between the sender and receiver, a precursor of the concept of feedback. Another concept introduced by Schramm was the field of experience (Schramm, 1963). Being more concerned with the study of human behavior in the communication process, Schramm examined how an individual's beliefs, values, experience, and learned meaning could affect the way the receiver decodes the signal being transmitted, and whether the message will be accepted over all other competing messages.

Last but not least, Berlo (1960) took a different approach to constructing a model. Rather than attempting to identify elements of interest and relationships between those elements, he created what he called "a model of the ingredients of communication" (p. 23), which represents a behavioral approach to understanding communication. All elements of the communication process are considered, from the unique socio-cultural backgrounds of the persons involved to the various factors that can disrupt proper reception of the message (Littlejohn & Foss, 2008). Littlejohn and Foss acknowledges that Berlo approaches communication as a dynamic series of events that is constantly changing and shifting, without beginning or end. Berlo (1960) noted that the challenge is to analyze communication in separate and observable chunks, small moments in a never-ending stream of information. Berlo's model accounts for a variety of human variables that are present in person-to-person communication. Whereas the Shannon and Weaver model is best used for the transmission of a straightforward message in which both parties have a similar knowledge base, the Berlo model may be more appropriate when one is attempting to convey an emotionally complex message. In a nutshell, Berlo's Source-Model-Channel-Receiver model analyzes the components of message transmission, describes those factors that prevent accurate message delivery and reception, recognizes the dynamic nature of interpersonal communication, and considers the purpose of communication itself (Berlo, 1960).

Today, communication theorists argue that Web 2.0 is all about empowering individuals. The web is not only for people to find specific items, but to allow them to make things, distribute it worldwide, and find out what others think about it instantly (Baran & Davis, 2009). Baran and Davis described a “mass media system that operates in a social world where individuals and audiences can create and disseminate their own content and relish making their own meaning” (p. 36). In other words, it is hard to explain, understand, and control a communication process in which individuals and audience can produce their own effects.

It is easy to see that all living entities, beings, and creatures communicate through movement, sounds, reaction, languages, and the same. Although there are different communication theories that could potentially explain each one of these methods, the one most closely related to this research is the social constructionist view. The constructionist view considers communication to be the product of two or more individuals sharing and creating meaning (Lanham, 2003). It further assumes that ideas are constructed or invented through the social process of communication. This constructionist view is a more realistic view of communication because it involves the interaction of human beings and the free sharing of thoughts and ideas. Researchers in the field of foreign language education, however, believe that social constructivism better explains how students learn foreign languages (Vygotsky, 1962; Powell & Kalina, 2009; Sthapornnanon, Sakulbumrungsil, Theeraroungchaisri, & Watcharadamrongkun, 2009).

Thus, based on earlier studies, this research was guided by a social constructivist theoretical framework which can better explain the process of how individuals learn a foreign language. Social constructivist learning could best be said to emphasize the critical importance of culture and the importance of social context for cognitive development (Vygotsky, 1978). For

example, a language learner could use technology to produce a dialogue in the target language which could be shared and critiqued by others in the educational community or outside of it. This social constructivist principle describes a way of knowing the manner in which students or learners construct their new understanding and knowledge during the process of social interaction with others (Sthapornnanon et al., 2009; Wink & Putney, 2006; Kim, 2008).

An essential element in this research has been to design a course in which students would complete a “real world” experience in the target language and use different language technology tools already available to assist them in the process, potentially increasing their proficiency in the new language and improving their skill in every aspect of it. The principles of constructivist pedagogy, also related to social constructivism, emphasize the way students learn “with” instead of “from” computers (Jonassen & Reeves, 1996; Taylor, 1980). Advocates of this pedagogy do not want to use computers to displace the instructor’s role in education, but rather view it as a way to assist instructors in supporting the learning processes of their students. More and more instructors are using computers as a tool in language education, but there is still a great need for additional research and development in this area, especially regarding the use of social network sites. The question now is, “How is social constructivism present in the interactions students experience through social network sites?”

### **Social Constructivism**

Before diving inside the concept of social constructivism, it is important to emphasize the difference between Piaget’s constructivism and Vygotsky’s “social” side of it. Powell and Kalina (2009) simplified the concepts by saying that in cognitive constructivism, ideas are constructed in individuals through a personal process, as opposed to social constructivism where ideas are constructed through the interaction each learner has with the instructor and other students.

However, in social constructivism there is a higher emphasis placed on an active, involved instructor. While they are fundamentally different, both theories of learning will construct learning elements for students to easily grasp. Ultimately, the initiative behind both theories is that ideas are constructed from personal experiences that have meaning for the student.

Constructivism is a cognitive theory that recognizes the importance of the human mind in making sense of the material with which it is presented (Atherton, 2010). While in other learning theories it was assumed that the role of the learner was primarily to assimilate whatever the instructor presented, constructivism suggests that the learner is much more actively involved in a joint activity with the instructor of constructing new meanings (Daniels, 1996).

Learning is a social phenomenon and, as previously mentioned, it encompasses the people that directly affect the learner, including instructors, friends, students, administrators, and subjects in all manners of activity. This takes into account the social nature of both the local processes in collaborative learning and in the discussion of wider social collaboration within a given subject. Most researchers that identify themselves with social constructivism trace their ideas back to Vygotsky (e.g., 1978), a pioneering theorist in psychology who focused on the roles that society played in the development of an individual. Vygotsky (1962) observed that when children were tested on tasks on their own, they rarely did as well as when they were working in collaboration with an adult. This does not mean that the adult was teaching them how to perform the task, but that the social process of engaging with an adult enabled them to refine their thinking or their performance to make it more effective.

Based on this, Cobb (1994) examines whether learning is located in the individual's mind or in social action, and argues that both perspectives should be considered together, as one is as useful as the other. What is seen from one perspective as the reasoning of a collection of

individuals mutually adapting to each other's actions can be seen in another as the norms and practices of a classroom community (Cobb, 1994). As such, teaching strategies using social constructivism as a referent include teaching in contexts that might be personally meaningful to students, negotiating meanings with students, holding class discussion, collaborating in small-groups, and valuing meaningful activity over correct answers (Dougiamas, 1998; Wood, Cobb, & Yackel, 1995). Constructivism-related strategies such as the instructor's use of multiple epistemologies to maintain a balance between instructor guidance and student-initiated exploration are starting to be used more often in science and mathematics classrooms, but have, perhaps not surprisingly, been common for a longer time in humanities subjects such as social studies and communication (Atherton, 2010).

In a way, effective teaching methods create an environment where students are free to create concepts and structures to place in their memory for further retrieval. Also, the components of a constructivist environment should provide means for students to have real world experiences or meaningful practices (Powell et al., 2009; Dantas-Whitney, 2002). Furthermore, Buraphadeja & Dawson (2008) proposed that in course planning, instructors taking on a constructivist paradigm may have a greater degree of comfort with social construction of meaning; that is, instead of focusing on one right answer or an instructionally correct view, instructors should promote democratic dialogue or some sort of information sharing, which is what students do when communicating in social network sites. From Vygotsky's (1962) theory, four principles can be applied in foreign language classrooms (Figure 2).

- Learning and development is a social, collaborative activity.
- The Zone of Proximal Development can serve as a guide for curricular and lesson planning.
- School learning should occur in a meaningful context and not be separated from learning and knowledge children develop in the "real world."
- Out-of-school experiences should be related to the child's school experience.

Figure 2. Vygotsky's principles in foreign language classrooms

Following this train of thought, it can be said that social constructivism focuses on an individual's learning that takes place as a result of their interactions in a group, and that such learning occurs when students share background information and participate in the give and take of collaborative and cooperative activities (Sthapornnannon et al., 2009). Vygotsky (1962), the psychologist credited with the creation of social constructivism, even argued that the interaction with and help students received from more knowledgeable peers, could encourage development of a more profound understanding than the learner's individual capacity. In other words, social constructivism is based on the social interactions of a student within the classroom, along with a personal critical thinking process. As such, using social network sites in a classroom environment should provide a realistic environment where students can interact with native speakers in order to expand their cognitive knowledge. The fact that children develop in social settings should be the key factor in using technology to connect rather than separate students from one another.

Social constructivism is a highly effective philosophical perspective from which all students can benefit, since both collaboration and social interaction are incorporated (Powell & Kalina, 2009). Sthapornnannon et al. (2009) talked about how the social constructivism theory places the emphasis on students rather than instructors, although they hold a significant place in the students' language acquisition, as previously mentioned. They claim that students learn best



when they actively construct their own understanding through social interaction with their peers. This concept could also explain why foreign language students learn better when putting the classroom knowledge into action; by understanding that the material the instructor presents in class directly relates to the way they will communicate outside the classroom, students will want to explore further to increase their ability to communicate with others.

As stated previously, communication is a social phenomenon. In order to grasp the new language, students need to think critically so they will walk away with personal meaning that was constructed on their own (Powell & Kalina, 2009). These researchers pointed out that social interaction is important to effective language usage and the development of efficient communication in the classroom, which directly translates to communication outside of it as well. As Eskey (1997) observed, “people do not learn languages and then use them, but that people learn languages by using them” (p. 133); this, in a nutshell, is the basic concept of social constructivism in language education. Now that the way social constructivism could apply to this research has been presented, let’s explain how social interaction actually motivates students to further their education in a foreign language.

### **Motivating Foreign Language Students**

Education, or more importantly, how people learn, is a complex endeavor. It is hard to say how many renowned psychologists from around the world have spent countless hours investigating how people learn or acquire knowledge in every aspect of their lives throughout history. However, a common theme among different areas, e.g., math, science, and language, is motivation. There are several definitions for this concept, but Schunk (2008) best defines it as “the process of instigating and sustaining goal-directed activities” (p. 522). When goals are set early in the learning process, individuals will do a better job assimilating the new material as

well as keeping that information in long-term memory for future retrieval. Table 1 depicts a model of motivated learning. First introduced by Schunk in 1995, it is a cognitive model that views motivation as arising largely from thoughts and beliefs. The three phases represented in the table are convenient ways to think about the changing role of motivation during learning (Schunk, 2008).

This table is an effective way to see how students pass through various stages of motivation when learning a new subject; however, it is important to understand different theories that may affect their motivation. Let's briefly take a look at three historical perspectives on motivation: drive theory, conditioning theory, and cognitive evaluation theory.

Table 1

Model of motivated learning (Schunk, 2008)

<b>Pre-task</b>	<b>During Task</b>	<b>Post-task</b>
Goals	Instructional variables	Attributions
Expectations	Instructor	Goals
Self-efficacy	Feedback	Expectation
Outcomes	Materials	Affects
	Equipment	
Values	Contextual variables	Values
Affects	Peers	Needs
	Environment	Social support
Needs	Personal variables	
	Knowledge construction	
Social support	Skill acquisition	
	Self-regulation	
	Choice of activities	
	Effort	
	Persistence	

Drive theory can be defined as internal forces that seek to maintain homeostatic body balance (Woodworth, 1918). When a person is deprived of an essential element, this activates a

drive, or motivates the person to respond in a certain way until it is obtained. Most of the research that tested this theory was conducted in the first half of the last century (Schunk, 2008) by depriving rats of food and assessing how they reacted in a maze. However, in 1943, Hull broadened the drive concept by postulating that physiological deficits were primary needs that instigated drives to reduce the needs; it was the motivational force that energized people into action.

Weiner's (1992) writings generated additional research in the area of human's immediate physiological needs. Still, the drive theory is not an ideal explanation for much of human motivation since needs do not always trigger drives to fulfill them. Drive theory may explain some behaviors directed toward immediate goals but may not be conducive for long-term goals. Basically, this theory does not offer an adequate explanation for academic motivation (Weiner, 1992).

On the other hand, conditioning theory explains motivation in terms of responses elicited by some type of stimulus or emitted in the presence of this stimulus (Schunk, 2008). In the classical model, the motivational properties of the unconditioned stimulus are passed to the condition stimulus through repeated pairing; conditioning occurs when the conditioned stimulus brings out a conditioned response in the absence of the unconditioned stimulus (Schunk, 1995). This is a passive view of motivation since it claims that once conditioning occurs, the conditioned response is elicited when the conditioning stimulus is presented.

In operant conditioning, motivated behavior is an increased rate of responding, or a greater likelihood that a response will occur in the presence of a stimulus (Skinner, 1953). It basically states that the student is productive because of prior reinforcement for productive work

and because the current environment offers effective reinforcements. Following this claim, Bandura (1986) asserts that people engage in activities because they believe they will be reinforced and value that reinforcement. Nevertheless, by omitting cognitive elements, conditioning theories offer an incomplete account of human motivation.

The cognitive evaluation theory suggests that there are actually two motivation systems that correlate to human motivation: intrinsic and extrinsic motivators. Intrinsic motivators (e.g., achievement, responsibility, competence) are motivators that come from the actual performance of the task or job, or simply stated, the intrinsic interest of the work. Extrinsic motivators (e.g., pay, promotion, feedback, working conditions) are motivators that come from a person's environment, but are controlled by others. Either of the two may be a more powerful motivator for a given individual depending on the situation, but the importance of intrinsic motivation for learning is underscored by research showing that interest in learning relates positively to cognitive processing and achievement (Alexander & Murphy, 1998; Schiefele, 1996).

It can be said that intrinsically motivated individuals perform for their own achievement and satisfaction in order to achieve pre-established goals. If they come to believe that they are doing some job because of the pay or grade or some other extrinsic reason, they begin to lose motivation (Deci, 1975). Additionally, Deci believes that the presence of powerful extrinsic motivators can actually reduce a person's intrinsic motivation, particularly if the extrinsic motivators are perceived by the person to be a means of control by others. In other words, an instructor who is always dangling a reward or punishment will turn off the intrinsically motivated students.

These theories could be applied to motivation in any domain. In regard to language learning, motivation has been defined as the “target language learner’s orientation with regard to the goal of learning a second or foreign language” (Rueda & Chen, 2005).

As such, in foreign language learning, students who set personally meaningful and attainable goals have a better chance of learning the new language and reaching their personal goals. However, learning a new language, especially as people get older, is easier said than done. Psychologists believe that as a person gets older, their ability to easily assimilate a foreign language diminishes (Chun, 1998; Eskenazi, 1999). Unfortunately, as implied by Dörnyei and Csizér (1998), “without sufficient motivation, even individuals with the most remarkable abilities cannot accomplish long-term goals, and neither are appropriate curricula and good teaching enough to ensure student achievement” (p. 203). Moreover, these researchers argue that for the great majority of foreign language learners the ‘you can get it if you really want to’ (Dörnyei & Csizér, 1998) principle is true, since high motivation can make up for considerable deficiencies both in one’s language aptitude and learning conditions. However, Gardner and Lambert (1972) maintain that second language learners’ feelings about a foreign language and its cultural values and living styles (attitudes), and their individual reasons for learning the language (motivation) are related to overall learning success and achievement with learning that foreign language.

Foreign language learning researchers have emphasized that motivation is one of the main factors in foreign language learning success, and it plays an important role in predicting the success of target language acquisition in general (Rueda & Chen, 2005). Investigators have also taken on the task of understanding different motivational strategies that could help students in their learning process. Gardner (1985), one of the most vocal proponents of motivation in

language learning, proposed that the learner's attitude toward the target language and the culture of the target-language-speaking community plays a crucial role in language learning motivation; this concept is known as intrinsic motivation. As presented above, researchers indicate that intrinsic motivation stems from innate psychological needs for competence and self-determination versus extrinsic motivation which results from instrumental goals such as earning a reward or avoiding punishment (Deci and Ryan, 1985; Li, 2006; Masgoret and Gardner, 2006).

Unfortunately, a 'one strategy fixes all' type of mentality will not work for everyone. Some studies have suggested that motivational beliefs about foreign language acquisition vary from culture to culture (Bernat, 2004; Iyengar & Lepper, 1999; Watkins & Ismail, 1994). As such, Rueda and Chen (2005) undertook a project in order to understand the motivational factors impacting Asian heritage and non-Asian heritage learners of Chinese language in order to help instructors design a curriculum that meets students' needs while, at the same time, promoting their learning of the target language. Rueda and Chen investigated whether the use of the already developed intrinsic and extrinsic motivation constructs could explain motivational processes in language acquisition (Dickinson, 1995). The results of the investigation clearly showed that interest in their own heritage was the primary intrinsic reason that motivated Asian students to learn Chinese. On the other hand, non-Asian students viewed foreign language education as a part of self-fulfillment at college; although they were intrinsically motivated to learn the language, the real purpose was to satisfy an external need. Two main implications arise from Rueda and Chen's research which foreign language instructors should take into account; different ethnic groups differ in the types of motivational beliefs, and foreign language learners expect to be able to communicate with native speakers of the target language after they take the language classes.

It is clear that intrinsic motivation or motivation within the individual itself, occupies an important role when individuals are learning a foreign language; however, a way to motivate students has not been presented. Li (2006) suggests that, until recently, most of this research has taken a social-psychological approach, in which the links between motivation and social attitudes are considered important. Li indicated that motivation consists of three components: motivational intensity, desire to learn the language, and attitudes toward learning the language.

The interview data presented in Li's (2006) experiment suggests an intrinsic motivation. The learners wanted to improve their English either to enhance communication with speakers of the language or to deepen their understanding of the country and its culture so that they could integrate and adapt to the society, as well as succeed in the immersion program, which was the center of their lives at the moment. The major perception from the experiment's learning environment was that students were learning English in real life, that the learning environment was more facilitative of improvement of their aural understanding and speaking, the need to adapt was more realistic, and that the language learning was less systematic. In sum, these were the main reasons why students felt motivated to learn the new language. Although the experience explained in Li's project was that of students in an immersion program, a similar experience through a virtual social interaction should have similar effects on reading and writing aspects of language acquisition.

In recent research, Engin (2009) pointed out that it is understood that, as with learning any subject, second language learners must pay attention and learn actively in order to integrate knowledge. Learners' motivation determines how ready and eager they are to get more information and to increase their ability to understand, write, and speak the second language. Therefore, Engin concluded that intrinsic motivation is likely to be more effective than extrinsic

motivation for students learning a foreign language; in other words, for the current research, students had to be presented with an activity that will encourage them to actively participate in the virtual social interaction without any other enticement.

Many of the researchers cited in this paper agree that motivation that comes from within the individual is more important than any other, even more so when students have set attainable goals. As previously mentioned, instructors should encourage students to establish personal goals, depending on the type of orientation they want to achieve. The question that needs to be explored in more detail is how Web 2.0 tools, especially social network sites, provide the social interaction that would assist students in the acquisition of a foreign language.

### **Web 2.0 Tools in Foreign Language Classrooms**

Social interaction plays a fundamental role in the process of cognitive development. In contrast to Jean Piaget's understanding of child development whereby development always precedes learning, Vygotsky felt social learning precedes development. He affirmed that every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological) (Vygotsky, 1978). Vygotsky focused on the connections between people and the socio-cultural context in which they act and interact in shared experiences (Crawford, 1996). According to Vygotsky, humans use tools that develop from a culture, such as speech and writing, to mediate their social environments. Initially, children develop these tools to serve solely as social functions, ways to communicate needs. However, Vygotsky believed that the internalization of these tools led to higher thinking skills. Accordingly, it is believed social network sites can provide the tools needed to achieve this higher thinking.



Prensky (2001a) points out that “today’s students have not just changed incrementally from those of the past, nor simply changed their slang, clothes, body adornments, or styles, as has happened between generations previously” (p. 1). A dramatic disconnect between generations has taken place as a result of the arrival and rapid dissemination of digital technology in the last decades of the 20th century and beyond. Today’s students, or the Net Generation as it has been called, are the first to have grown up with this new technology which has now become part of their lives. Because of their consistent interaction with this technology, educators cannot expect students to learn the same way student’s learned ten years ago; Web 2.0 tools need to be incorporated in the classroom in order for them to learn (Prensky, 2001a).

Researchers have pointed out that Net Generation students are excited about finding Web 2.0 technologies in their classrooms (Motteram & Sharma, 2009; Pereira 2009), and that they are willing to engage in different kinds of learning. To bring this topic home, Motteram and Sharma (2009) discussed an article written by Warschauer (2006) describing the way learners in what have traditionally been termed English as a Foreign Language countries, who in the past would have had little or no access to the language being learned, now have the potential for considerable access mediated by various Web-based technologies. This has been a result of the growth of Web 2.0 technologies like blogs, wikis, and, more recently, the proliferation of social network sites. Motteram and Sharma presented a great example of how the social interaction through a Web-based tool, specifically, blogs, helped students improve their second language skills. They tell the story of a group of Iranian medical students who discovered Warschauer’s personal blog about his son, who had some type of medical condition. These students then contacted Warschauer to discuss his son’s condition with him and were able to make contact with someone in another country and have a real dialogue in English about a topic that was of

interest to them. What Motteram and Sharma learned from this story was that students learning a language in an immersion program are not the only ones who have access to the target language, but rather, with different Web 2.0 tools (i.e., blogs) any learner can get a real world experience without leaving the classroom.

Bernaus and Gardner (2008) further noticed that classroom activities involving communication and active participation using authentic materials in the language classes versus simply following the textbook, increased students' motivation to learn the new language. That observation notwithstanding, students also favored direct correction of grammar errors by the instructor in order to improve their language skills. Bernaus and Gardner continued to report that the use of technology in the classroom was correlated with an improvement in attitudes and motivation toward the learning situation, increasing the likelihood of students learning the new language.

So far, it is been clear that foreign language acquisition is more likely if language can be tried out in meaningful ways rather than simply when students learn the rules of the new language, which might not directly translate to the students being able to use it in communicative interaction. Lam (2000) pointed out that there has been an "inability of several instructors to see the connection between computers and language teaching, a perspective that would not likely occur in other subjects such as math or science" (p. 410). Although Lam conducted his research a decade ago, personal experience shows that in many cases that statement stills holds true today. Language learners need to be given the opportunity to demonstrate their ability to proficiently create the target language either in a face-to-face environment or through a Web-based tool. Not only is this beneficial for the student, it also helps in terms of motivation. The products of learners given an authentic audience for their assignments, beyond simply the instructor, are

likely to demonstrate positive qualitative discrepancies as compared to learners who simply complete their work for their instructor, particularly with the provision of feedback (Chinnery, 2008).

However, the usefulness of Web 2.0 in a foreign language classroom has not been clearly presented. Kern (1995) conducted an experiment which shows that students participate more in a synchronous computer-mediated communication (SCMC) environment than they do in a large group, face-to-face classroom setting when the topic of discussion was the same. Kern conducted his study with a second semester French class during a discussion of a hot topic. The data collected showed that, in the SCMC environment, the total number of student messages was 172, instructor messages were zero, and each student averaged 12.3 messages for the period. In comparison, an oral discussion by the same students on the same topic in a face-to-face environment produced 95 student turns to talk and 116 instructor turns, resulting in an average student production of 5.3 turns. In sum, the SCMC treatment produced between two and three times more turns per student and a higher total number of sentences and words compared to the large-group's oral discussion. Needless to say, the computer-mediated method afforded students the freedom to express themselves without the worry of being ridiculed. All these numbers refer to the amount of participation, but do not address whether the quality of the product improved.

Kern further analyzed the data and found out that “students’ language output was at an overall greater level of sophistication in terms of the variety of discourse functions expressed” (p. 470). The results of this research prove that, students’ motivation to learn the new language increased with the use of technology, which directly translated in improvement of their language skills.

These findings are supported by Chun's (1994) study of first and second-semester German students. Differing from Kern's experiment, these German students participated in online discussions of topics of their own choosing, in addition to regular coursework, as part of their class assignments. Chun noticed that students' participation in these discussions was higher than their participation in class and that students provided feedback and asked questions to each other at a higher rate without requiring the instructor's encouragement. Chun concluded that this Web 2.0 tool promoted increased syntax complexity in non-traditional classroom written work over the course of the school year: specifically, a greater ratio of complex sentences possessing coherent thoughts and the use of cohesive linguistic references and expressions.

Today, rather than focusing on language per se in relative isolation from its use in interpersonal interaction, the emphasis is on the use of Web 2.0 tools (e.g., social network sites, blogs, wikis) to support dialogue, debate, collaborative research, and social interaction between students (Thorne & Payne, 2005). Embedding the learning of a foreign language in the larger context of significant relationship development has demonstrated considerable positive effects, especially in the area of pragmatics, or ways in which context contributes to meaning; in language education this is accomplished through social interaction. It is obvious that the lives of college students, like the ones targeted in this study, are critically mediated by participation in digital communities such as Facebook, blog networks, instant messages, and voice and text messaging over cell phones (Thorne & Payne, 2005); this is the time to use the same technology to help students learn a foreign language.

Belz and Kinginger (2003), following the belief that in language education "classroom discourse is highly conventionalized in ways that severely constrain both the quantity and the quality of learners' participation" (p. 592), conducted an experiment whereby they tracked usage

over time in both email and SCMC sessions of foreign language German students. They found that after critical moments where students used the improper form of “you” (in many languages there is a formal and an informal way of addressing people) within exchanges with expert speaker age peers, the American subjects began to systemically modify their language skills. Additionally, the American students had opportunities to observe appropriate pronoun use by native speakers across synchronous and asynchronous computer-mediated communication modalities that helped them modify the way they addressed one another.

Although these experiments highlighted some of the benefits of Web 2.0 tools in foreign language education, none used social network sites. Accordingly, this research will try to bring a realistic social interaction into a foreign language classroom through the use of a social network site. Boyd and Ellison (2007) best defined these sites as a web-based service that allows individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system. The history of these sites can be traced back to 1997 (Boyd & Ellison, 2007) where most of them started as a simple tool to help people connect with and send messages to others; however, there has been a lack of research in the use of these sites in a foreign language classroom. This might be, as Ellison, Steinfield, and Lampe (2007) suggested, because social network sites are mainly used to maintain existing offline relationships or solidify offline connections, as opposed to meeting new people.

Further investigations focused on the way that technologies enable the traditional classroom to be connected to the real world (Motteram & Sharma, 2009). Then, they related the learner’s motivation and the fact that learners can increasingly choose what they can focus on in class in order to directly apply it to how students engage with others, either face-to-face or

through the use of digital artifacts. Unfortunately, a lot of time and money has been put into the development of software that was supposed to make a difference in the language classroom, but in many cases, all that was created was a set of exercises similar to the ones found in books, only now available on a computer. Why not do something different with the technology already available? As previously presented, the brains of today's learners, also known as the Net Generation, are wired differently because they have grown up with technology right at their fingertips. They expect, even demand, a constant stream of new media to stay alert and focused (Prensky, 2001a; Motteram & Sharma, 2009; Tapscott, 2008). Using social network sites brings this stream of media to the students' lives – and could bring it to the classroom environment as well.

As recently as 2009, Harrison and Thomas examined how one example of social software had a direct impact on foreign language teaching and learning in Japan by allowing both instructors and learners to build and participate in multimedia, collaborative learning environments that were able to promote active and creative language learning. They found that the language learning that took place in these social network sites was attributed to the creation and sharing of user profiles, friends, instant messaging, blogging, and comments, as well as photos and videos; a typical virtual social interaction as experienced by many on a daily basis. What makes social network sites unique is not that they enable users to articulate their thoughts in a straightforward matter, but rather that they allow students to indirectly practice their communications skills. That is why Harrison and Thomas (2009) pointed out that social networking has been recognized as a Web 2.0 technology with the potential to be used for structured language learning purposes.

## Summary of Review

As previously presented, individuals learning second languages in formal educational contexts struggle to master the new language because in a typical classroom environment they do not get the amount of practice needed to attain fluency. Researchers such as Meschyan and Hernandez (2002) suggested that students learning a new language at any point in their lives pass through some of the same stages as do children learning their native language. For example, they learn better when interacting with what is going on around them in the target language and associating what they are learning with previous personal experiences. However, in a classroom environment it is very difficult, if not virtually impossible, to provide a “real world” experience unless some type of innovative technological tools are used.

Consequently, this review touched on three different theories that could be combined to help students learn a foreign language using technology as a medium (Figure 1). The communication theory taught us different ways to transfer information from the sender to the receiver in order for that information to be received and processed properly. Second, the social constructivist theory explained that learning is a social phenomenon and educators should look for ways to provide that social interaction to students. Finally, the motivation theory described how students who are intrinsically motivated tend to have an easier time learning a new language.

The review of the literature concluded by presenting how foreign language students improved their communication skills while participating in different Web 2.0 tools (i.e., blogs, wikis, web-applications). However, the present study addressed whether using social network

sites as they are traditionally used, i.e., as a way to stay in contact with friends and family, could actually assist students to improve their foreign language skills.



## CHAPTER III

### METHODOLOGY

#### **Introduction**

Web 2.0 tools in a foreign language classroom offer a great way to motivate students to learn a new language while at the same time improving different aspects of the language skills; however, a comprehensive study on the use of social network sites in foreign language classrooms was needed. The study described in this chapter addresses the issue of using this Web 2.0 tool in a more social environment rather than as a means to complete a project, and how virtual socialization will impact the students' learning. The chapter is arranged in the following sections: research design and site, subjects, data collection and analysis, research assumptions, and limitations. The conclusions of the pilot studies are discussed as well.

#### **Research Design**

This study was conducted using a mixed-research approach (Teddlie & Tasshakori, 2006). This type of research is a form of mixed methods in that quantitative and qualitative data are collected during the experiment. Although the research was quantitative in nature, open ended questions in the survey served to complement the statistical data. Greene (2007) pointed out that complementing the data “serves to elaborate, enhance, deepen, and broaden the overall interpretations and inferences from the study” (p. 101). As such, for this experiment, quantitative objectives, data collection methods, and analysis played a dominant role. Employing a pre-test post-test quasi-experimental design, this study examined the effects of a virtual social interaction

through Orkut (a social network site) and the students foreign language skills (reading comprehension and writing skills) on criterion measures. Prior ability levels for both groups were balanced since the experiment was conducted using first year foreign language students who have no prior knowledge. Other criteria such as gender and socioeconomic status were considered in order to validate the findings.

Since I worked hand-in-hand with the instructor to improve the students' foreign language skills, the instructor kept her eyes opened for any changes in the subjects' behavior due to the virtual social interaction but did not keep any notes. In addition, after the post-test was given, subjects completed a survey and interview (Appendix A). Also the instructor and class TA were interviewed (Appendix B) in order to gather an insight into the quantitative results. In this study, the purpose of the open-ended questions and interviews was to complement and better explain the potential results from the quantitative method. Madey (1982) best exemplified this concept when he pointed out that exploratory qualitative questions and interviews can serve either to confirm or to rationalize the quantitative data.

In order to minimize experimenter biases, both groups were treated the same way. Only one instructor was involved in the experiment ensuring both groups got the same material in class and that every subject will receive the same amount of instructor support. While the researcher could not prevent the instructor from having bias against one student versus another, this helped minimize any group biases.

It is imperative to point out that this research project was not intended to be an additional burden on anyone, especially those whom the research was trying to help. This is why the researcher met with a foreign language instructor and discussed every aspect of the project as well as the instructor's needs before creating and implementing anything. The interviews were

mainly meant to bring light on any difficulties students or instructors faced during the project's execution, and how, in their opinion, difficulties could have been reduced while maximizing the benefits of the innovation. Also, the investigator wanted to find out how this virtual social interaction motivated students to further their foreign language learning similar to other methods presented in the literature. Finally, since technology is an ever changing tool, the researcher was interested in discovering other tools students believe might help them in the process of learning a foreign language which might then be implemented in subsequent studies.

As such, a visual representation of the study (Figure 3) shows that the experiment is primarily quantitative in nature. Teddie and Tashakkori (2006) described this typology as one in which mainly qualitative questions and data collection and analysis techniques are used. Since the quantitative data holds a central point in determining the experiment's success, the results of this data and the open-ended questions and interviews will be mixed during the data interpretation stage in order to corroborate or help explain the quantitative results as previously described (Greene, Caracelli, & Graham, 1998).



Figure 3. Visual representation of study

Restating the research questions at this juncture is essential in order to understand why the researcher decided to analyze the data in the proposed way; later in the chapter, it will be showed which survey question relates to each one of these research questions. Once again, the two main questions this research will answer are:

- How can the social interaction offered through a computer-mediated method be used to help students improve their writing skills and reading comprehension proficiency in second language acquisition?
- How can the social interaction offered through a computer-mediated method motivate students to learn a foreign language?

### **The Pilot Studies**

This research followed a mixed-research design as previously stated. Two pilot studies have been conducted, and changes made to the overall experimental design are based on findings from these two previous iterations. The first study was conducted in the fall semester, 2009. For that episode, the instructor and I decided that using email in a “pen pal” type of manner would have helped students improve their reading comprehension and writing skills in the target language. In conjunction, it was decided that using emails was the easiest way to help students since the use of “pen pals” has been proven many times before; basically, I wanted to see its success as part of a course curriculum. Finally, it was determined that, for the social interaction to be successful, students had to send at least ten emails to their native language counterparts.

Unfortunately, the findings from this pilot study were not up to par with expectations; none of the subjects transmitted the required emails due to different circumstances, mainly time constraints. The average student took over 20 minutes composing each email, which in the overall scheme of things, is difficult at USAFA, due in part to the student academic, military, and athletic loads. The fact that the experiment was conducted outside of a controlled environment precluded the control of the student’s overall workload; however, since the results of the investigation were meant to directly improve second language education, dealing with this situation at that moment assisted students as well as educators to overcome them in the future. Table 2 shows the average score for both groups on each test and improvement at the end of the study period and the difference in scores.

Table 2

Average test scores and differences for first pilot study

Group	Pre-test	Post-test	Improvement
Experimental group	59.44 %	73.11 %	13.67
Control group	55.83 %	74 %	18.17
Difference	3.61	-.89	-4.5

Table 2 could be misleading because it shows that students in the experimental group on average improved 13.67%, close to five percentage points less than those in the control group; however, it could be argued that the virtual social interaction offered in this part of the experiment actually helped the students improve their foreign language skills. Notwithstanding, a closer look at the results from the post-test shows that students who wrote five e-mails or more demonstrated an improvement of 17.8% from the pre-test to the post-test while the cadets who sent fewer than two e-mails only displayed a minimal 8.5% improvement. Even though these numbers are still below those showed by the control group, they are a better gauge of the validity of the test. When asked, the instructor declared that “it was clear which students followed the experiment’s guidelines more closely because their understanding of the new language, participation in class, writing skills, and overall motivation toward the end of the semester was much better and consistent.” Even students applauded the freedom of choosing the topic of their email conversations because overall, as one student commented, it “helped improve *my* reading and writing skills.” From the beginning, it was clear to the instructor and me that constraining students to a specific topic would not have been conducive to a true social interaction since the conversation would not have been open and sincere.

However, in order to test the investigation's validity of the first pilot study, a test of the homogeneity of the slope was conducted (Table 3). The independent variable, groups, included two levels - control group and experimental group. The dependent variable was the score students achieved in the test given after the treatment period, and the covariate was the score students established in the pre-test based on their prior knowledge. A preliminary analysis evaluating the homogeneity-of-slope assumption indicated that the relationship between the covariate and the dependent variable did not differ significantly as a function of the independent variable.

Table 3

Test of homogeneity of slope for first pilot study

Source	<i>df</i>	MS	<i>F</i>	Sig.
Intercept	1	1594.830	5.707	.036
Group	1	2.285	.008	.930
Pre	1	524.024	1.875	.198
Group*Pre	1	.180	.001	.980
Error	11	279.455		

The means of the results from the post-test adjusted for initial differences were not ordered as expected across the two groups. The control group had the largest adjusted mean ( $M = 75.01$ ), and the group of students who completed the social interaction had the smallest adjusted mean ( $M = 72.44$ ). A further evaluation of the differences among the adjusted means show that the adjusted means for both groups did not differ significantly.

In spite of this, numbers can be unrepresentative; yes, the control group experienced a slightly higher improvement from one test to the next, but students in the control group argued that they wished they had had the opportunity to interact with a native speaker as the cadets in the experimental group did. These students, as well as the instructors, understood that a meaningful social interaction with a native speaker, something difficult to obtain in a normal classroom, is essential when learning a new language. As such, I conducted a follow-up survey and interview to find out what instructor and students thought about their virtual interaction.

When asked, all but one student surveyed felt that as future US Air Force officers, it is important to learn a foreign language at the Air Force Academy since “military personnel work hand in hand with international forces on a daily basis” and “knowing our allies’ language and culture will only strengthen relations.” But, is the social interaction subjects experienced as part of this experiment enough to help student improve their language skills? As Jeon-Ellis, Debski, and Wigglesworth (2005) stated “progress in language learning depends on success in the efforts made by students to participate in social activities that are carried out in the target language” (p. 123); in other words, if the Air Force Academy students were really interested in learning the new language, as shown by those who stayed close to the prescribed guidelines, any interaction, as minimal as it might have been, was fruitful.

In addition, some cadets stated that this class, especially the social interaction encountered by those in the experimental group, improved their views about the importance of learning a new language; unfortunately, due to time constraints and additional workload, about 75% of the students assessed were not planning on taking any further courses above the current level. This number, as high as it appears, is representative of the overall population since cadets at USAFA are only required to complete four semesters of foreign languages and fewer than

25% of them choose to complete upper level language courses. Further inquiry revealed that all students, those in the control as well as the experimental groups, believed implementing some type of web-based tool in a second language classroom to provide a “real” social interaction with native speakers would only increase their motivation to learn that language, and would make the class more appealing and entertaining.

Furthermore, through the survey, student recommended an extensive list of Web 2.0 tools, other than email, that could be used for the experiment. Two tools, however, were recommended above the rest: live chats and social networks. Discussions with the instructor brought to light that live video conferencing (Skype), although great for improving oral and aural skills, might be too advanced for the students in the level at which the study was conducted. On the other hand, a social network tool could be easily applied in the classroom and would reduce the amount of time needed by each student to compose messages. Therefore, it was decided that students will use the social network site Orkut (Figure 4). Powered by Google, but similar to Facebook, this social network site is very popular amongst Brazilian youth, and highly used in their daily life. Therefore, it was decided that for the second pilot study students would use a social network site as the tool to befriend native speakers (the instructor helped with this), and follow up virtual conversations as they normally would in social network sites. Lastly, another aspect that surfaced after the first pilot study was how the social interaction helped improve students’ motivation which, in turn, became a driving force in students wanting to learn the new language.



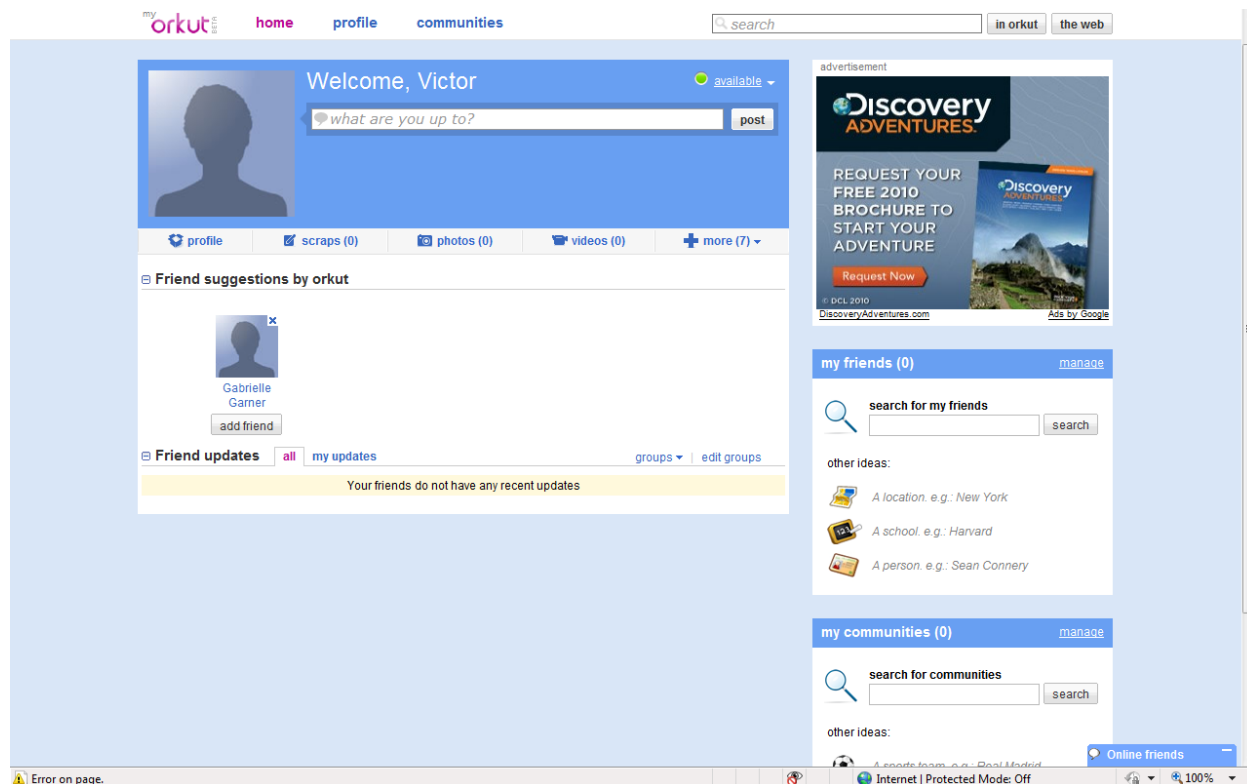


Figure 4. Orkut social network site

For the second pilot study, conducted in spring, 2010, students were not required to write a set amount of messages, but were still given the opportunity to choose their topic of interest. Every subject completed their regular homework assignments. In addition, those taking part in the experimental group held conversations with their virtual friends in Portuguese. Findings from this study suggest that no subjects had an improvement from the pre-test to the post-test (Table 4) and that there was no difference between the two groups.

Table 4

Average test scores and differences for second pilot study

Group	Pre-test	Post-test	Difference
Experimental group	49.66 %	35.16 %	-13.86
Control group	39.44 %	26.66 %	-13.77
Difference	10.22	8.5	.09

Later it will be shown that students in the experimental group spent more time outside the classroom practicing the target language. Although this could be deceiving, as they were required to spend more time on task, it seems that students are more motivated to practice the new language when using it in a social network site rather than simply doing homework. In addition, the survey and interviews proved that the students' motivation to participate in class increased. As one student expressed, "I was more encouraged to learn Portuguese because I wanted a better/faster understanding of the conversations I was holding on Orkut," or as another commented, "Orkut makes the language more interesting; you want to learn more to be able to talk more with the people." It was clear that the motivation was there, though the test results did not show any improvement or difference between groups.

The main problem seen in this study was that students did not spend as much time as desired in Orkut because, in their opinion, it was not structured. Based on these findings a major change was implemented in the final study. Each subject was required to spend certain amount of time in the social network site and was required to write certain amount of sentences per week. Also, participation was mandatory as subjects received a grade based on their participation, context, and grammar.

## Research Site

For this study, USAFA's Language Learning Center, a state-of-the-art language computer lab, was used as a multimedia center. The center allowed students access to tools which assisted them in completing their language project. The project had a "real world" connotation since subjects were able to use what they learn outside the confinement of the classroom. Many foreign language students are not motivated to learn the new language simply because they feel that what is learned in class has no application in a conversation outside the class. The social network site, Orkut, was used to create a virtual interaction outside the classroom where students could apply their learned knowledge, and where they felt that learning a foreign language was not a waste of time, thus motivating them to continue on their personal quests. However, in a normal foreign language classroom, students do not spend the necessary time practicing the new language outside the classroom. Figure 5 shows the amount of time students spent completing their language assignment outside the classroom. As personally reported, almost half of the students participating in the research practiced the target language less than 30 minutes for every class period; this could be attributed to lack of motivation.

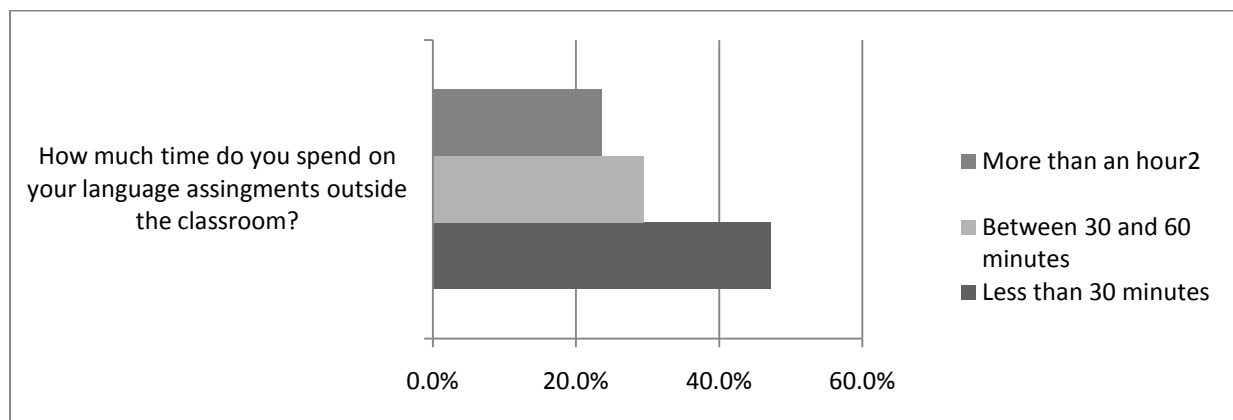


Figure 5. Percentage of practice time outside the classroom

However these same students, which regularly argue they did not have time to complete their homework or practice the new language outside the classroom, stated that almost 65% of them spent at least an hour daily in one of the many social network sites available today (Figure 6).

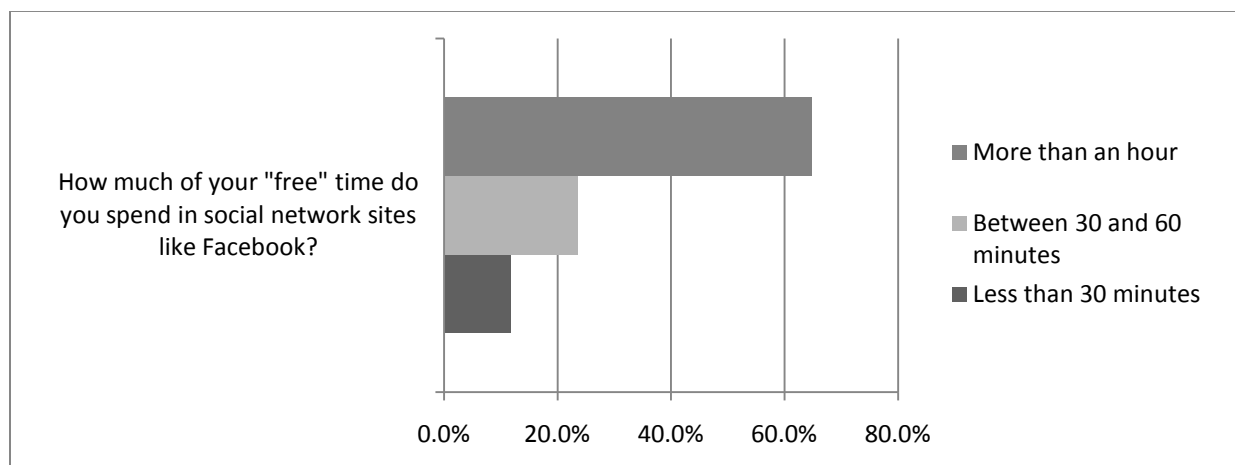


Figure 6. Percentage of students' free time usage

When designing this research, specific facts were taken into consideration for deciding which Web 2.0 tool to use. Since students were truly motivated to use so much of their time outside the classroom conversing on a social network site, why should we not ask them to use a fraction of that time on a Portuguese speaking site? The payoff was evident and could be simplified with what some students said; one expressed, "I was more encouraged to learn Portuguese because I wanted a better/faster understanding of the conversations I was holding on Orkut." Another commented, "Orkut made the language more interesting; you want to learn more to be able to talk more with the people." The numbers do not lie; Figure 7 shows how 70% of the students in the experimental group were more motivated to practice the target language for more than 30 minutes per class period simply by using Orkut.

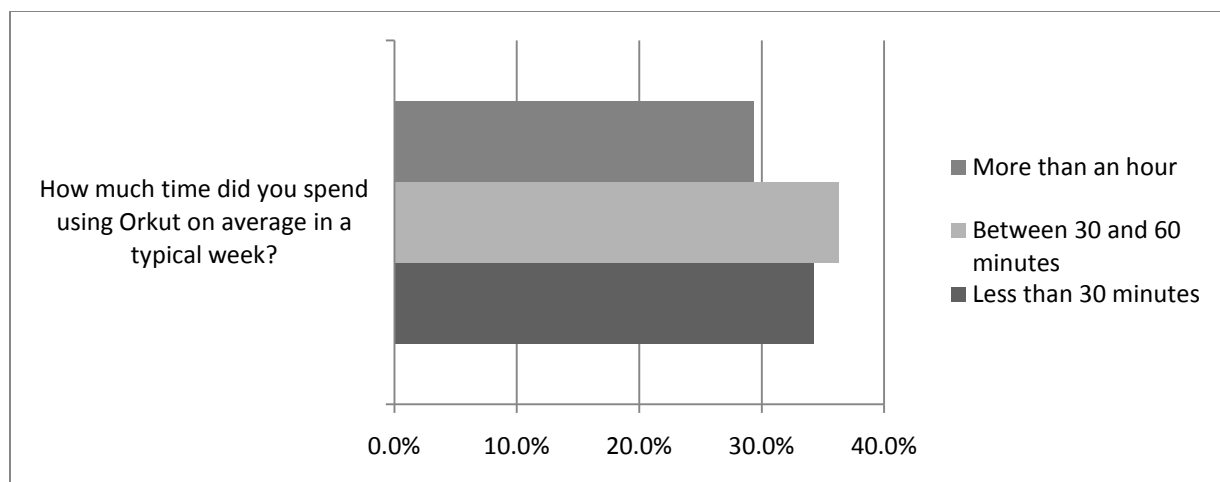


Figure 7. Percentage of time practicing the language in Orkut

## Subjects

Although the pilot studies were conducted using intermediate (200) level foreign language students, subjects in the current study were 100 level USAFA cadets. This change was due to overall changes in the department of Foreign Languages. As a department, it was decided that students at the 100 level would learn grammar and at the 200 level students would concentrate more on oral proficiency. USAFA foreign language cadets utilize the language learning center to enhance their learning experience. Furthermore, in some cases, cadets were provided time during their laboratory time to participate in their social interaction without affecting their scheduled instruction or requiring additional time to complete it. However, in other cases, students were required to communicate with their virtual friends as homework assignments. The language learning center enabled learners to utilize the Internet, audio, and/or video, to complete their projects. In this study, the proposed “real world” interaction was a partnership between a USAFA cadet and a target language speaker of similar age whereby topics of their choosing were discussed once they had been approved by the instructor.

The plan was to have no more than 40 students taking part in this phase, divided into two classes (depending on class enrollment, which averages 18 students); a control group and an experimental group were to be chosen randomly by class period, and all students in the particular class period were part of that group. This study met all human subject requirements set by the U.S. Air Force Academy and the University of Georgia (see Appendix C).

The experimental group attended their regular language classes as scheduled and complete assignments as prescribed in the syllabus; however, throughout the semester they were required to maintain a virtual conversation through Orkut, a social network site, using language technologies currently available. The control group did not have to participate in this virtual social interaction but had to attend class and complete assignments as prescribed.

Unfortunately, due to the time requirements each USAFA cadet has in order to comply with their academic, military and athletic requirements, the amount of time each instructor has is limited (Figure 8). In order to ensure subjects in one group did not spend more time practicing the language than those in the other group (i.e., six hours in a two-week period), these virtual conversations replaced some homework assignments for the students in the experimental group (Figure 9).

<b>3 Credit course without laboratory</b>	<b>3 Credit course with laboratory</b>
<ul style="list-style-type: none"> <li>➤ Meets every other day (M or T days)</li> <li>➤ Class period of 53 minutes</li> <li>➤ No more than 67 minutes of homework every other day</li> <li>➤ Total of 120 minutes of school work per meeting day</li> </ul>	<ul style="list-style-type: none"> <li>➤ Meets for class every M day</li> <li>➤ Meets for laboratory every T day</li> <li>➤ Class period of 53 minutes each</li> <li>➤ No more than 14 minutes of homework every other day</li> <li>➤ Total of 120 minutes of school work per meeting day</li> </ul>

Figure 8. USAFA's time allotment per class

The independent variable was the “real world” experience and consisted of two levels. The first was using the different language technologies available to cadets as a mode to introduce social interaction to students in order to complete the experiment. The second was going through the semester without any additional experience. The dependent variable was the difference in scores between a multiple choice, open-ended pre-test administered to each student at the beginning of the project, and a similar test administered at the end of the semester (Appendix D).

<b>Control Group</b>	<b>Experimental Group</b>
<ul style="list-style-type: none"> <li>➤ 53 minutes/class, 5 classes = 265 minutes</li> <li>➤ 53 minutes/lab, 5 classes = 265 minutes</li> <li>➤ 14 minutes for homework, 5 days = 70 minutes</li> <li>➤ Total time on task = 600 minutes</li> </ul>	<ul style="list-style-type: none"> <li>➤ 53 minutes/class, 5 classes = 265 minutes</li> <li>➤ 53 minutes/lab, 5 classes = 265 minutes</li> <li>➤ 14 minutes for homework, 3 days = 42 minutes</li> <li>➤ 14 minutes for social interaction in Orkut, 2 days = 28 minutes</li> <li>➤ Total time on task = 600 minutes</li> </ul>

Figure 9. Proposed time on task (two week period)

Then again, a pre-test post-test quasi experiment will not measure the students’ whole learning experience, which is why motivation was be evaluated through a survey and interviews. Li (2006) indicated that motivation consists of three components: motivational intensity, desire to learn the language, and attitudes toward learning the language. As such, for this experiment the researcher wanted to find out if this seemingly simple virtual social interaction could help students meet these three motivational components and push them to continue learning the new language. The basic argument for the proposition of the higher-order construct of integrative motive is that attainment of proficiency in a second language usually entails long-term effort on the part of the learner and motivation needs affective support (Gardner & MacIntyre, 1993a).

Although these types of virtual exchanges in a language classroom are new, similar interactions, as presented in the review of the literature, have been done as experiments or class projects for many years. However, they have not been done as part of course curriculum, nor has their effect on the social aspect of language learning been investigated. In the pilot studies, students participating in the project did not have outside motivation or incentive (i.e., extra credit) for participating in the exchange with their counterparts, other than expanding the social network today's youth care so much about. This social networking was what inspired me and the collaborating instructor to join forces and look for ways to utilize technology in a foreign language classroom so that students would become more involved and eager to improve their language skills. As such, for this study the instructor agreed to give students "homework points" to insure their involvement would be on par with the participation level for which both researcher and instructor were looking.

### **Instruments**

Subjects were tested twice, at the beginning and end of the semester, using a multiple-choice, open-ended test in the target language (Appendix D). Both tests consisted of 11 items and all the questions answered the first research question. The multiple-choice questions consisted of four possible choices labeled A, B, C, and D. Subjects were instructed to select only one answer for each question by circling the letter corresponding to the best response, and to answer all 10 questions since their answers tested reading comprehension. The open-ended question tested the subjects' writing proficiency in the target language and assessed their writing skills in Portuguese at the moment the test was administered. The test was developed with the assistance of three Portuguese language instructors and tested using students from different language levels. The results from these practice tests showed that students could consistently



complete questions related to their knowledge and learning level as expected, but those who did not possess the specific skill level could not guess the correct answers.

These questions were a representation of the material subjects learned in their 131 level course, which is the first language class cadets are required to take. The format for both tests was decided upon in order to test any difference in prior knowledge between the two groups and to see how far the social interaction would have taken the subjects in the experimental group when compared to those in the control group.

These tests are comparable to those given to students before and after they participate in a language immersion program, and, likewise, their intent was to test the knowledge acquired during the learning period. It is important to point out that the actual test given to the subjects was in the target language, in this case, Portuguese, as shown in Appendix C. Furthermore, after the post-test, subjects were given a survey to measure their motivation towards the target language and their learning environment. Figure 10 points out which survey questions help answer each of the research questions. This survey was created in order to legitimize (Onwuegbuzie & Johnson, 2006) the quantitative data with the information gather from the open ended questions. As Onwuegbuzie and Johnson (2006) argued that legitimation should strive to generate practical, believable theory because the results of the experiment answer important questions and help provide workable solutions. Finally, no less than 15% of the subjects will be randomly selected and interviewed to address any gaps in the investigation and to clarify any details that might have arisen from the survey.

Control Group	Experimental Group
<ul style="list-style-type: none"> <li>➤ Research question one               <ul style="list-style-type: none"> <li>❖ Question 8</li> <li>❖ Question 9</li> <li>❖ Question 10</li> </ul> </li> <li>➤ Research question two               <ul style="list-style-type: none"> <li>❖ Question 5</li> <li>❖ Question 6</li> <li>❖ Question 7</li> <li>❖ Question 11</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➤ Research question one               <ul style="list-style-type: none"> <li>❖ Question 8</li> <li>❖ Question 9</li> <li>❖ Question 10</li> <li>❖ Question 11</li> <li>❖ Question 12</li> <li>❖ Question 14</li> <li>❖ Question 15</li> </ul> </li> <li>➤ Research question two               <ul style="list-style-type: none"> <li>❖ Question 5</li> <li>❖ Question 6</li> <li>❖ Question 7</li> <li>❖ Question 13</li> </ul> </li> </ul>

Figure 10. Relation between survey and research questions

### Data Collection

The pre-test was administered during the third week of class, after USAFA's add and drop period, while the post-test was included as a section of the final exam. In the two pilot studies, students complained that having to take an additional test at the end of the semester was "too stressful," even though the test did not affect their class standing. As such, the instructor noted that "some students did not take this test seriously and were just circling the answer without reading the question," affecting the test score and the overall results of the experiment. The instructor agreed to include the 11 questions in the final exam and not to tell the students which questions were part of the experiment; this ensured that students did their best to answer the questions correctly, providing a more realistic outcome.

The multiple choice questions were scored based on the correct answer, while the open-ended question was scored on a five-point rubric scale (Appendix E). In order to stay neutral during the data collection process, the instructor administered both tests to the control and experimental groups, and, with the help of two other Portuguese instructors, graded them. The

open-ended question scores reported, which was further analyzed, was the averages of the scores given by all three instructors; in this way the validity of this subjective scoring method was maintained. Since self-confidence in writing ability, as well as an increase in creativity or in reading comprehension, is inescapably subjective and not straightforward data, a quasi-experimental one-way ANCOVA study was conducted.

Once the subjects complete the post-test, they received a link where they could complete a short online survey regarding their experience (Appendix A). This survey should have taken no more than 15 minutes to complete since it has been proven that the longer the survey, the greater the chance subjects would not complete it. As part of the survey, students who liked to further participate in the interview process identified themselves and were interviewed before analyzing the survey (see Appendix A for protocol).

### **Data Analysis**

The data was analyzed in different ways; SPSS was used to evaluate the results of the tests and compare differences in the mean of the pre-test and post-test. As previously mentioned, the result of this quantitative data was analyzed using a quasi-experimental one-way ANCOVA. A one-way analysis of covariance evaluated the null hypothesis that the population means were equal across groups (Green & Salkind, 2008). In other words, the test was conducted to assess whether the difference in the means of the post-test from the pre-test were significant among the two groups. The quantitative data was used to inform if a variation in the results between the control and experimental groups was statistically significant which might have indicated that the social interaction in the experimental group assisted cadets in their second language acquisition. This data would have verified, as the review of the literature showed, that students who read and wrote short sentences throughout the semester in an authentic environment would be able to

write and understand more complex sentences at the end of the study period (Tsou, Wang, & Tzeng, 2006).

On the other hand, evaluation of the open-ended questions in the surveys and interviews would have brought to light whether both instructor and subjects believed this type of real world project, where virtual social interaction was present between a native language speaker and a second language student, as the study aimed to achieve, increased the subjects' motivation to learn the new language – without feeling an extra burden in their already hectic lives, as the literature argued. The information gathered from these two protocols would not be coded into quantitative data, but rather was to be reviewed along two major themes: motivation to learn the new language, and how the interaction helped students improve their language skills. It was expected this information would help in interpreting the results of the quantitative data. A major advantage of a mixed-research is that it enables researchers simultaneously to ask confirmatory and exploratory questions, and, thereby, to verify and generate theory in the same study (Teddlie & Tasshakori, 2006). Furthermore, as the review of the literature presented, social interaction in language learning is essential (Powell & Kalina, 2009); the analysis of the research data should corroborate if online social interaction (e.g., emails and chats) as a part of regular language classes was enough to improve the learner's writing skills and reading comprehension in the foreign language.

The investigator was prepared to see a minimal statistical difference, if any at all, between the control and experimental groups based on the results from the pre-tests and post-tests, as long as subjects' motivation in learning a foreign language improved through the semester, a factor no test would be able to identify, and which is only recognizable by a language instructor and the subjects' personal response. In other words, the quantitative data might not

show any change in students' learning, but the information gathered from the open-ended questions and interviews might have indicated there was.

### **Research Assumptions**

This research project had two main assumptions in par with the two research questions. The first assumption, related to the first question, was that exchanging traditional homework assignments with assignments that require a genuine online conversation would improve the students' reading comprehension and writing skills in the target language. When learning how to write, students have had to create sentences in order to apply the new vocabulary and sentence structure they have learned in class; these types of exercises were normally completed as homework assignments. However, the assumption was that by writing meaningful, short messages to a "real person", subject would pay more attention to what they are doing, hence improving their writing and reading skills.

The second assumption, related to the second question, was that a virtual social interaction, as experienced in this experiment, would increase the students' motivation to learn the target language. Interviews following the project's pilot studies revealed that students were motivated to engage in this kind of interaction and were more willing to participate in class in order to better communicate with their virtual friends. Now the researcher wanted to know if this motivation toward learning the new language remained in the classroom, or if it actually motivated subjects to further their foreign language education.

### **Limitations**

As with any educational research, the researcher expected this study to have some limitations. First, the way that subjects were chosen might not be considered a random sampling. Only two language courses were randomly selected to participate in the research in order to keep

disruption to the course to a minimum while the research was conducted; this raised the problem of sample size. However, with an average of 250 students enrolled in the Intermediate Language course, a sample size of 36 students represents about 15 percent of the population, providing the researcher with a 95% confidence level that any findings were representative of the entire population. This confidence level should offer enough population validity (Onwuegbuzie & Johnson, 2006) in order to legitimate the results of the experiment.

The second foreseeable limitation in this study was time on task. The researcher understands that the students at the US Air Force Academy possess laptops and have the ability to use a state of the art language learning center where they could spend as much time as needed to complete their project. Unfortunately, the same could not be said about their counterparts in Brazil. How much social interaction did subjects experience if they only adhere to the minimal requirements? As Jeon-Ellis et al. (2005) stated, “progress in language learning depends on success in the efforts made by students to participate in social activities that are carried out in the target language” (p. 123); in other words, if the AF Academy students only met the minimum requirements, or their counterparts did not have the technology or the desire to complete their part of the project, the social interaction the researcher anticipated might not have happened. There are two problems here that the researcher needed to address -- technology and motivation. The technology problem could have been mitigated if a partnership was created with a Brazilian higher education institution or university that has a computer laboratory similar to that at USAFA, wherein students could have uninterrupted access to the internet; this would have insured that USAFA students and their foreign partners could maintain the social interaction anticipated for the project. On the other hand, initially encouraging Brazilian students to participate prove to be straightforward; many were eager to participate because they would

befriend a student from a university in the United States. Unfortunately, in order to keep that motivation alive, the researcher and instructors in both educational institutions had to award some type of credits or points in a specific course; only the students that complete the project got them.

To mitigate this limitation, the instructor agreed to substitute some homework assignments with time to participate in the interaction. The survey from the pilot studied reflected that, on average, although students spent less than 30 minutes working on their foreign language homework, they used up over an hour at social network sites during the same time period. By replacing traditional homework assignments with required time to participate in the social interaction, students could potentially had used between 30 to 60 minutes for their foreign language assignment (Figure 7).

Another limitation as offered by Teddlie and Tasshakori (2006) was that concurrent, mixed-research are difficult for novice researchers, or researchers working alone, since, in general, it requires considerable expertise to examine, simultaneously and separately, the same phenomenon using two different approaches – due, in part, to the fact that the simultaneous analysis of all data sources, and the integration of those results into a coherent set of findings and inferences, is difficult. Fortunately, the researcher's expertise in the topic at hand helped alleviate any problems when integrating the data.

The last limitation the researcher envisioned related to the lack of nonverbal cues, always present in traditional social interactions, but which students missed in a computer-based one. Fortunately, the episodes proposed in this project only target the enhancement in the writing and reading comprehension on a second language; 82% of the respondents to the survey in the pilot

studies agreed that the virtual social interaction presented through the social network site was successful in helping them improve their writing skill and reading comprehension in the foreign language (Figure 11). Nevertheless, I will continue the study after completing the dissertation to include the oral and aural aspects of language learning, but in upper level courses. Different programs are currently available where students in both countries can communicate using videoconference technology (e.g. Skype); sadly, at this point the United States Air Force Academy prohibits the use of these Web 2.0 tools because of security issues related to these sites. As such, the researcher needs to find a workaround before tackling this next step.

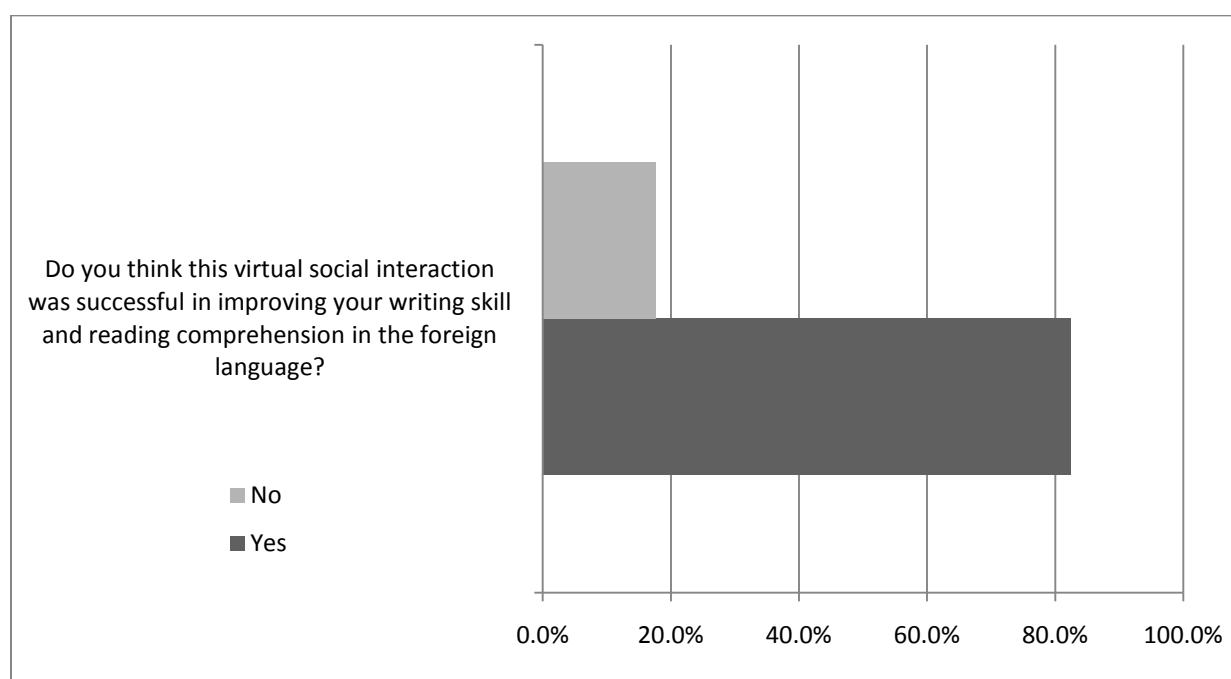


Figure 11. Perceived improvement in communications skills

## Summary

The proposed methodology of the study was presented throughout this chapter. It included information regarding the research design and site, subjects, data collection and



analysis, and research assumptions. It also presented the findings of the pilot studies and how they affected the current research plan. Lastly, the chapter's specifics into how the researcher expected this research to improve the students' foreign language skills, as well as their motivation to learn the new language, were offered. Web 2.0 tools are here to stay; we, as educators, should find better ways to use them in the classroom to help facilitate learning.

## CHAPTER IV

### RESULTS AND DISCUSSION

#### **Introduction**

This study investigated how the use of Social Network Sites could assist students learning a foreign language. The experiment was designed with the purpose of comparing two things: the traditional way students practice new language through homework versus practicing through the social network site Orkut, as well as to see the difference in students' motivation between the two methods. This chapter presents the results of the study in addition to discussing the findings beginning with an explanation of how each group practiced the new language outside the classroom. Following the summary, data is presented which addresses the two major questions of the study. These questions are: 1) can the social interaction offered through a computer-mediated method be used to help students improve their writing skills and reading comprehension proficiency in second language acquisition, and, 2) can the social interaction offered through a computer-mediated method motivate students to learn a foreign language?

#### **Practicing the Language**

Practicing a foreign language in one's community is the hardest part of learning it. The reason is simple; most people outside the classroom do not know the foreign language which, unfortunately, makes it hard for students to practice. In a traditional foreign language classroom, as was the case for the control group, students write paragraphs on different topics throughout the semester in order to practice what they are learning in class. These paragraphs are written in

present, past, or future tense depending on the topic and the level of learning at that particular time.

More specifically, subjects in the control group were required to create a portfolio consisting on a total of 15 paragraphs on different topics in order to receive a grade of up to 100 points. The assignment was very straight forward; subjects got their topic for homework and had to turn in their paragraphs on one of three precise dates throughout the semester. Each paragraph had to have at least ten sentences and subjects were encouraged to be creative, pay attention to grammar, and to not use online translators. Table 5 summarizes the scores of the pre-test and post-tests for the control group. It is important to point out that the subjects with no score were not present for one of the tests and, as such, no scores were reported, however, they did take part in the rest of the investigation.

On the other hand, the experimental group did not have to write 15 paragraphs for homework but, in its place, they had to engage in conversations amongst themselves and other Brazilians during the same time period. These subjects had to first set up an Orkut account and join the “Uma Viagem ao Brasil” or the “One Travels to Brazil” group created by the instructor. Here they had to check and reply in the target language to different current event topics at least once a week with a minimum of three lines. In addition, throughout the semester, they had to engage in conversations with at least five Brazilians. These conversations, with at least one of these Brazilian per week, were required to have ten lines. Finally, they needed to have an additional ten lines of conversation in the target language with anyone, Brazilians or peers, each week. All this may seem like a lot, however, it ensures that each group practiced the language outside the classroom the same amount of time. As with the control group, Table 6 summarizes the scores of the pre-test and post-tests for each subject.

Table 5

Results of Pre and Post-tests for control group

Subject	Pre-test Multiple Choice	Pre-test Essay	Post-test Multiple Choice	Post-test Essay
1	4	0	4	1.5
2				
3				
4	6	1.5	5	2.5
5	6	2	3	3.5
6	3	5	6	3.5
7	2	3	3	2
8	4	4.5	5	3.5
9	2	4	5	2.5
10	5	1	6	3.5
11	9	2.5	7	5
12	7	4	6	4
13	6	2	5	2.5
14	5	2.5	3	2.5
15				
16	6	5	7	3.5
17	5	3.5	4	3.5
18	4	3	8	4.5
Average	4.9333	2.9	5.1333	3.2

At first sight, the averages presented in Tables 5 and 6 look very similar; as such, a deeper statistical analysis was needed to see if the experimental method helped the students improve their reading comprehension, writing skills, and motivation towards the new language.

Table 6

Results of Pre and Post-tests for experimental group

Subject	Pre-test Multiple Choice	Pre-test Essay	Post-test Multiple Choice	Post-test Essay
1	7	3.5	7	4.5
2	5	5	6	4
3	5	3	6	3.5
4				
5	6	2.5	4	2.5
6	4	3	5	3.5
7	6	4.5	8	4.5
8	3	3.5	4	2.5
9	6	3.5	5	3.5
10	5	1.5	4	2.5
11	5	3	7	3.5
12	6	3.5	5	4
13	3	3.5	5	2.5
14	2	4	6	3
15	3	3.5	3	3
16	3	2	4	3
17	4	2.5	4	3.5
18	5	3	3	4
Average	4.5882	3.2352	5.0588	3.3823

**Questions, Findings, and Discussion**

Although groups were selected at random by class period, its composition was very similar. Both groups had 18 subjects and had the same instructor in order to maintain equality of the instruction. They consisted mainly of college freshmen but some were from other college levels; however, for every single one of them, this was their first Portuguese language course. Since collegiate athletes are required to travel so much, and thus miss class more frequently, we asked the subjects to self identify as such. Amazingly the distribution was pretty even, in the control group 12 out of 18 subjects were collegiate athletes while in the experimental group 11 out of 18 claimed the same. The only visible difference between the groups was the number of females; in the experimental group there were eight female subjects while the control group only

had four. As such, not only will comparisons be made between groups, but each gender will be looked at individually to ensure the overall numbers were not skewed.

It is imperative to clarify that only one instructor was used for both groups in order to maintain consistency. This instructor was a native Brazilian instructor with over 20 years of experience in language education. She has worked at the AF Academy as a foreign language instructor for four years teaching both basic and intermediate Portuguese language courses and at the time of the experiment, she was the course director for the Portuguese 131 course. As such, she brought to class not only her educational experience, but also a rich cultural background other non-native instructors in the department could have not provided.

As mentioned above, two main questions were addressed in this study. The questions were: 1) can the social interaction offered through a computer-mediated method be used to help students improve their writing skills and reading comprehension proficiency in second language acquisition, and, 2) can the social interaction offered through a computer-mediated method motivate students to learn a foreign language? Findings regarding these questions are organized in three sections: 1) improvement in reading comprehension, 2) advancement in writing skills, and 3) motivation to further their language education. However, as previously mentioned, all findings will be further analyzed for any difference in gender.

#### *Improvement in reading comprehension*

The first problem analyses any improvement in reading comprehension at the end of the semester. Table 7 shows the mean and standard deviation for each group as a whole after the treatment. The ANCOVA conducted on these means shows no significant differences ( $F(1, 29)$

= .003;  $p > .01$ ) for the interaction (Table 8). It is important to point out that every ANCOVA conducted for this research used the pre-test as the covariate.

Table 7

Means and Standard Deviations of reading comprehension questions

Group	Mean	Std. Deviation	N
Experimental	5.0588	1.4349	17
Control	5.1333	1.5523	15
Total	5.0938	1.4670	32

Table 8

ANCOVA summary table of reading comprehension questions

Source	<i>df</i>	MS	<i>F</i>	Sig.
Intercept	1	42.938	21.019	.000
Pre-Test	1	7.433	3.639	.066
Group	1	.007	.003	.953
Error	29	2.043		

Finding 1. No differences were found between treatments with regard to improvement in reading comprehension; in other words, the null hypothesis cannot be rejected.

Discussion: An analysis was conducted to see if exposing subjects to a realistic conversation outside the confinements of class could improve their reading comprehension. Mean test results for both groups were very similar. Although subjects in the experimental group did learn the language in a more realistic environment, when prompted to read and answer comprehension questions, they used the knowledge learned in class. As such, the statistical analysis failed to reject the null hypothesis of differences in populations.

The hypothesis that having conversations with someone outside the classroom in the target language would help students was based on the assumption that the independent variable

would increase knowledge. Unfortunately, due to the statistically non-significant differences, the assumption could not be accepted. However, class observations tend to differ a bit. As the instructor pointed out, subjects in the experimental group were more exposed to reading which translated to them asking more questions in class and expanding their vocabulary although they did not know how to apply that knowledge in class activities.

*Improvement in reading comprehension with regards to gender*

Since there was a stark difference in the groups with regards to gender, a follow-up test was conducted to evaluate the mean differences among the groups. No significant difference ( $F(1, 27) = .411; p > .01$ ) was seen at the end of the investigation. Table 9 presents the means and standard deviation when gender was taken into consideration while Table 10 summarizes the ANCOVA conducted.

Table 9

Means and Standard Deviations of reading comprehension questions based on gender

Group	Gender	Mean	Std. Deviation	N
Experimental	Female	4.7500	1.6691	8
	Male	5.3333	1.2247	9
	Total	5.0588	1.4349	17
Control	Female	5.3333	.5774	3
	Male	5.0833	1.7299	12
	Total	5.1333	1.5523	15
Total	Female	4.9091	1.4460	11
	Male	5.1905	1.5040	21
	Total	5.0938	1.4670	32



Table 10

ANCOVA summary table of reading comprehension questions based on gender

Source	<i>df</i>	MS	<i>F</i>	Sig.
Intercept	1	42.620	19.869	.000
Pre-Test	1	7.168	3.342	.079
Group	1	.018	.009	.927
Gender	1	.146	.068	.796
Group*Gender	1	.881	.411	.527
Error	27	2.145		

Finding 2. When gender was taken into consideration, no differences were found between treatments with regards to improvement in reading comprehension. The null hypothesis was that there would be no intra-group difference between the results previously obtained and when taking gender into consideration. This null hypothesis was not rejected.

Discussion: Some language researchers argue that gender is a factor in foreign language acquisition (Sunderland, 2000; Young and Oxford, 1997; Oxford, 1993; Bacon, 1992), however, statistical analysis of the test means based on gender did not support this argument. Mean test results for both genders were very similar. As such, the statistical analysis failed to reject the null hypothesis of any difference in populations based on the subject's gender.

*Advancement in writing skills*

The second analysis determined if there were any improvements in writing skills at the end of the semester. Table 11 shows the mean and standard deviation for each group as a whole after the treatment. Also, an ANCOVA conducted on these means showed no significant differences ( $F(1, 27) = .106; p > .01$ ) for the interaction (Table 12).

Table 11

Means and Standard Deviations of the writing skills question

Group	Mean	Std. Deviation	N
Experimental	3.3824	.6738	17
Control	3.2000	.9411	15
Total	3.2969	.8018	32

Table 12

ANCOVA summary table of the writing skills question

Source	<i>df</i>	MS	<i>F</i>	Sig.
Intercept	1	22.847	40.552	.000
Pre-Test	1	3.326	5.903	.022
Group	1	.060	.106	.747
Error	27	.563		

Finding 3. The analysis of improvement in writing skills failed to demonstrate a significant difference between groups. The null hypothesis cannot be rejected.

Discussion: As with reading comprehension, an analysis was conducted to see if exposing subjects to a realistic conversation outside the confinements of class could improve the subjects' writing skills. Equally, mean test results for both groups were very similar. The statistical analysis failed to reject the null hypothesis of any difference in populations.

In the same matter, the hypothesis that having conversations with someone outside the classroom in the target language would help students was based on the assumption that the independent variable would increase knowledge. Unfortunately, due to the statistically non-significant differences, the assumption could not be accepted. When asked her opinion about these results, the instructor understood that the fact that the subjects were first year students had a lot to do with the similarity in the test scores. She argued that in the sense of grammar,

grammatical mistakes and spelling, subjects still needed help as would any first year student, but in the sense of content and expressing ideas subjects in the experimental group showed definite improvement from the pre-test to the post-test especially when compared to subjects in the control group.

*Advancement in writing skills with regards to gender*

In the same manner, due to the substantial difference in gender between groups, a post hoc test was conducted to evaluate the mean differences among the groups when gender was taken into consideration. As with reading comprehension, no significant difference ( $F(1, 27) = .646; p > .01$ ) was observed at the end of the investigation. Table 13 presents the means and standard deviation when gender was taken into consideration while Table 14 summarizes the ANCOVA conducted.

Table 13

Means and Standard Deviations of the writing skills question based on gender

Group	Gender	Mean	Std. Deviation	N
Experimental	Female	3.4375	.6232	8
	Male	3.3333	.7500	9
	Total	3.3824	.6738	17
Control	Female	2.8333	.5773	3
	Male	3.2917	1.0103	12
	Total	3.2000	.9411	15
Total	Female	3.2727	.6467	11
	Male	3.3095	.8871	21
	Total	3.2969	.8018	32

Table 14

ANCOVA summary table of the writing skills question based on gender

Source	<i>df</i>	MS	<i>F</i>	Sig.
Intercept	1	21.125	35.946	.000
Pre-Test	1	3.246	5.524	.026
Group	1	.294	.499	.486
Gender	1	.212	.360	.554
Group*Gender	1	.380	.646	.428
Error	27	.588		

Finding 4. When gender was taken into consideration, no differences were found between treatments with regards to improvement in writing skills. The null hypothesis was that there would be no intra-group difference between the results previously obtained and when taking gender into consideration. Just like with reading comprehension, this null hypothesis was not rejected.

Discussion: The statistical analysis of test score based on gender for improvement in writing skills showed no difference. Mean test results for both genders were very similar. As with the reading comprehension findings, gender was not an issue when learning a new language. Young and Oxford (1997) explained that foreign language learners, no matter their gender, use the same strategies to learn the new language. As such, when applying what was learned, the results should be very similar. The statistical analysis failed to reject the null hypothesis of any difference in populations based on the subject's gender.

To summarize the questions of improvement in reading comprehension and writing skills, no evidence was found to support the hypotheses that a real social interaction received through a social network site would further the subject's language skills when compared to a traditional method.

### *Motivation to further their language education*

The second question under investigation was motivation amongst subjects. Motivation was measured using two methods, a survey taken by all subjects and interviews conducted at the completion of the experiment. Furthermore, the instructor, based on her years of experience, provided some insight into the subjects' behavior and attitude throughout the semester during her interviews at the midway point and the end of the semester. Figure 12 examines the subjects' motivation to further their foreign language education at the end of the course.

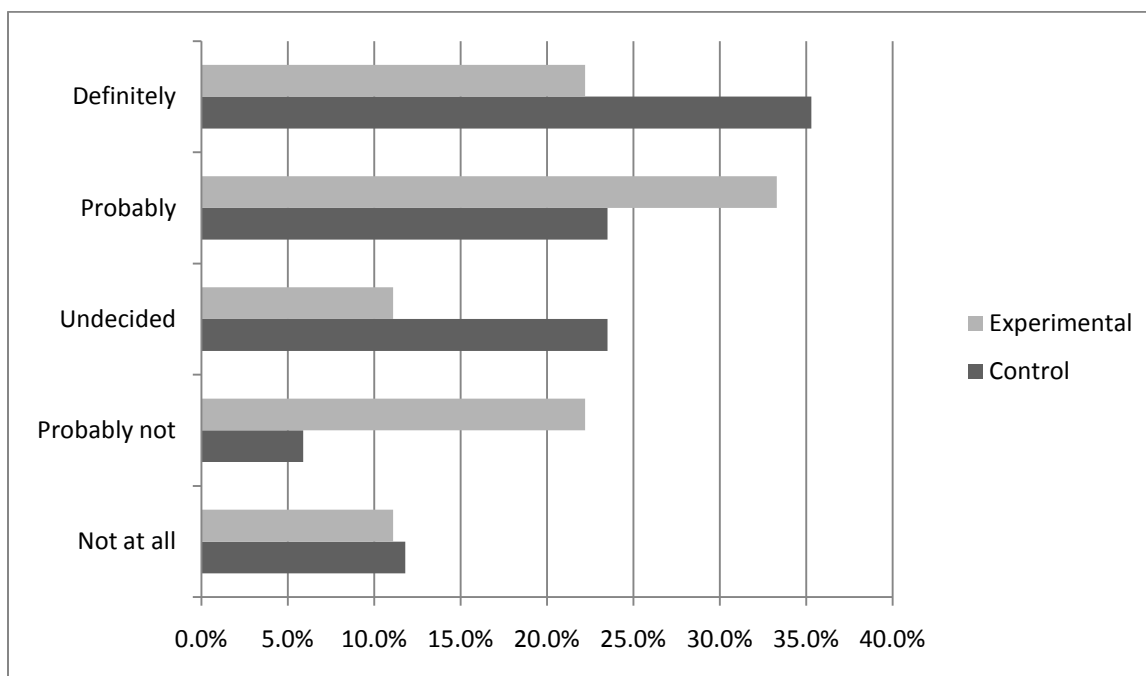


Figure 12. Individual motivation to further foreign language education

**Finding 5.** Roughly the same amount of subjects, 59% for the control and 56% for the experimental group, said in the survey that they were planning on furthering their foreign language education based on their experience from this class. As such, no differences were found between treatments with regard to motivation to further their language education. No reliable difference in motivation to further their language education was observed between groups.

Discussion: A big surprise finding was that of subjects' motivation to learn the new language. An analysis was conducted to see if subjects were more motivated to learn a foreign language if the language was used in a realistic context. Results from the survey showed that at the end of the semester, subjects in both groups expressed the same desire to further their foreign language education beyond that required by the institution. As such, the null hypothesis of population difference in motivation cannot be rejected.

Gardner (1985) suggested that student's motivation to learn a foreign language is reciprocal to wanting to learn about the culture. In this experiment the fact that the instructor is a native Brazilian, one who brought her personal experiences to class, was a big factor in subjects from both groups wanting to continue learning the language. This was more evident when a male student in the control group exclaimed that he was more motivated to learn a new language because he "found the teaching style to be very enjoyable." It is hard to tell if non-native instructors could have the same impact on their students, but a female subject in the same group mentioned that the instructor made her "very interested in her culture and lifestyle and she (*the subject*) would like to learn a lot more about it."

*Motivation to further their language education with regards to gender*

Following the same concept of taking gender into consideration due to the marked difference between groups, a follow-up analysis was conducted. Figures 13 and 14 present the same information as the previous Figure 12 but taking gender into account.

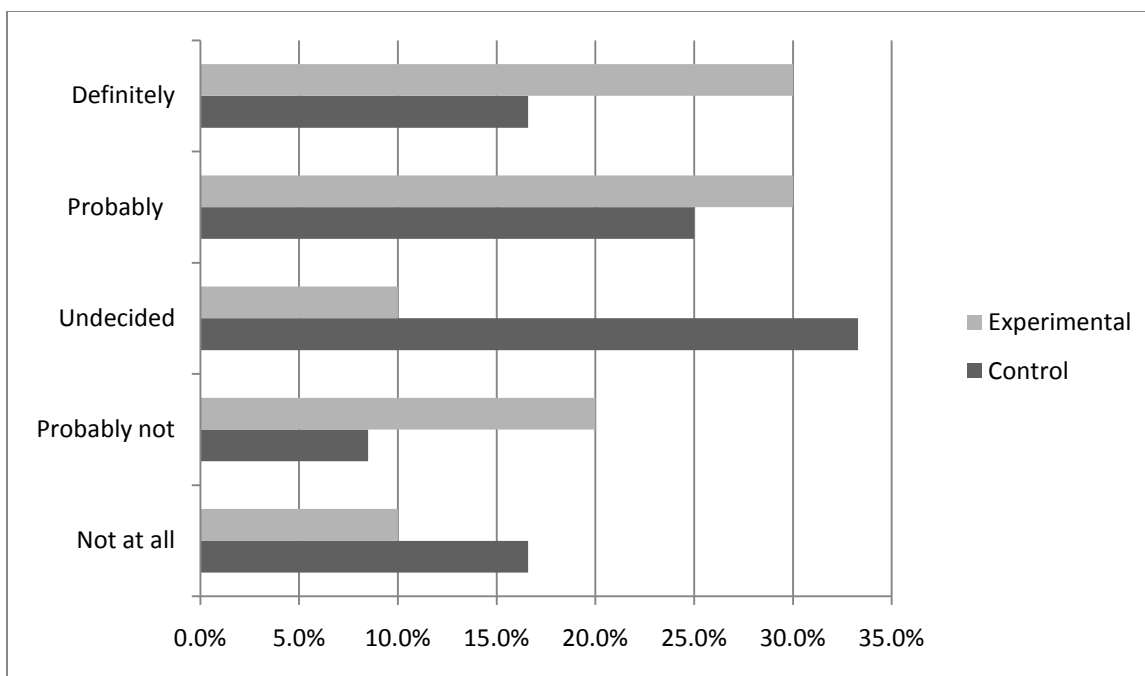


Figure 13. Individual motivation to further foreign language education for males

Finding 6. When gender was taken into consideration, a difference was found between treatments with regard to motivation to further their language education. The null hypothesis was that there would be no intra-group differences between the results previously obtained and when taking gender into consideration. Since a difference was evident when gender was taken into consideration, the null hypothesis was rejected.

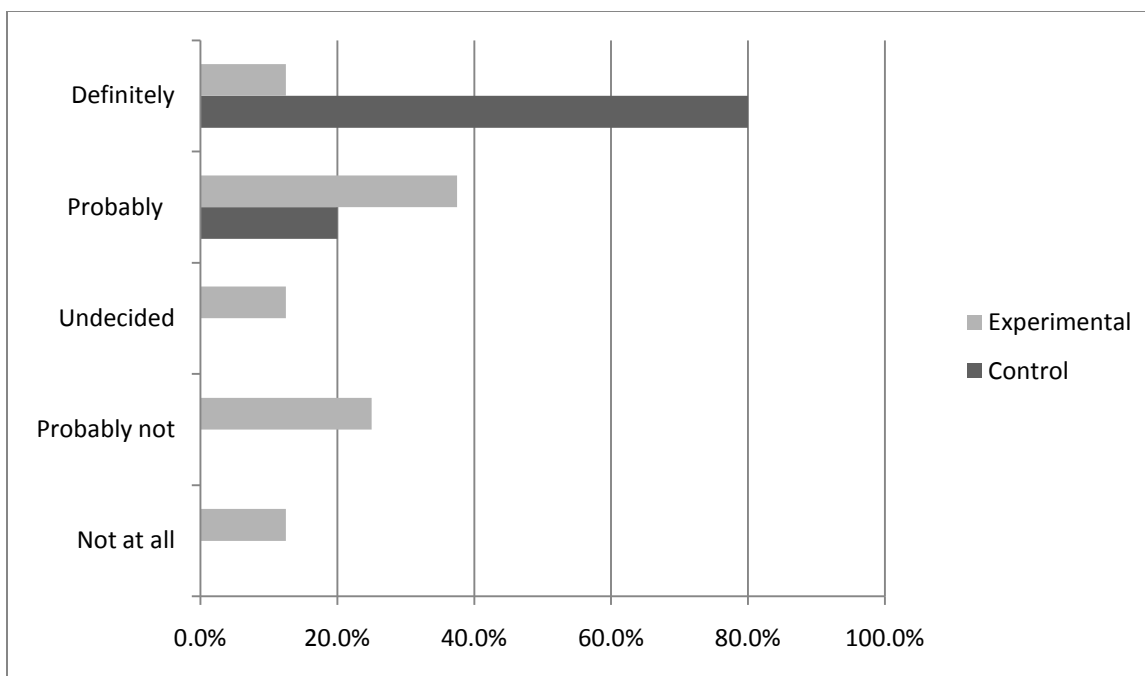


Figure 14. Individual motivation to further foreign language education for females

Discussion: It was clear that the motivation to learn a foreign language differed when taking gender into consideration. While 100% of female subjects in the control group mentioned they planned on taking additional courses, only 42% of the males felt the same way. On the other hand, the experimental group had opposite results; 50% of females were planning on taking additional language courses above those required whereas an astonishing 60% of the males agreed with the statement at the end of the experiment. These findings were not surprising since researchers have found a difference in motivation between genders to learn a new language. Koul, Roy, Kaewkuekool, and Ploisawaschai (2009) pointed out that females have a more positive integrated orientation towards learning a second language and higher language self-concept than their male counterparts. However, when socio-cultural aspects of learning a new



language come into play, Koul et al. observed that females were significantly less oriented than males to learn the language which could explain the phenomenon seen in this experiment.

By introducing the virtual social interaction into the classroom, it was envisioned that subjects would show a higher motivation to learn the target language; however, this socio-cultural experience affected males more than females in par with Koul et al. (2009) observations. Researchers have noticed that in foreign language education, females are more intrinsically motivated than males (Mori and Gobel, 2006). Since the social network site offered subjects an external motivation to learn the language, males attained higher motivational benefits out of it. A female in the experimental group mentioned that “Orkut was more of a task than an exciting way to learn.” This sentiment was repeated by most females in the group in the open-ended questions. However, male comments in these questions were a bit different. Some comments made include: “using Orkut positively affected my motivation, because it made practicing the language fun”, “Orkut influenced me positively. I enjoyed using what I have learned in class to be able to have real conversations with people who only speak Portuguese”, and “it affected me in a positive way because it was a realistic resource.”

This motivation was reflected in the time subjects spent practicing the new language outside the classroom. Going back to Figure 9, this research was aimed at providing subjects in the experimental group with 28 minutes of realistic social interaction in the target language, which was minimal in the overall scheme of things. However, Figure 15 shows that almost twice as many subjects in the experimental group spend more than an hour practicing the language through homework. This could only be attributed to an increase in motivation due to their participation in Orkut.

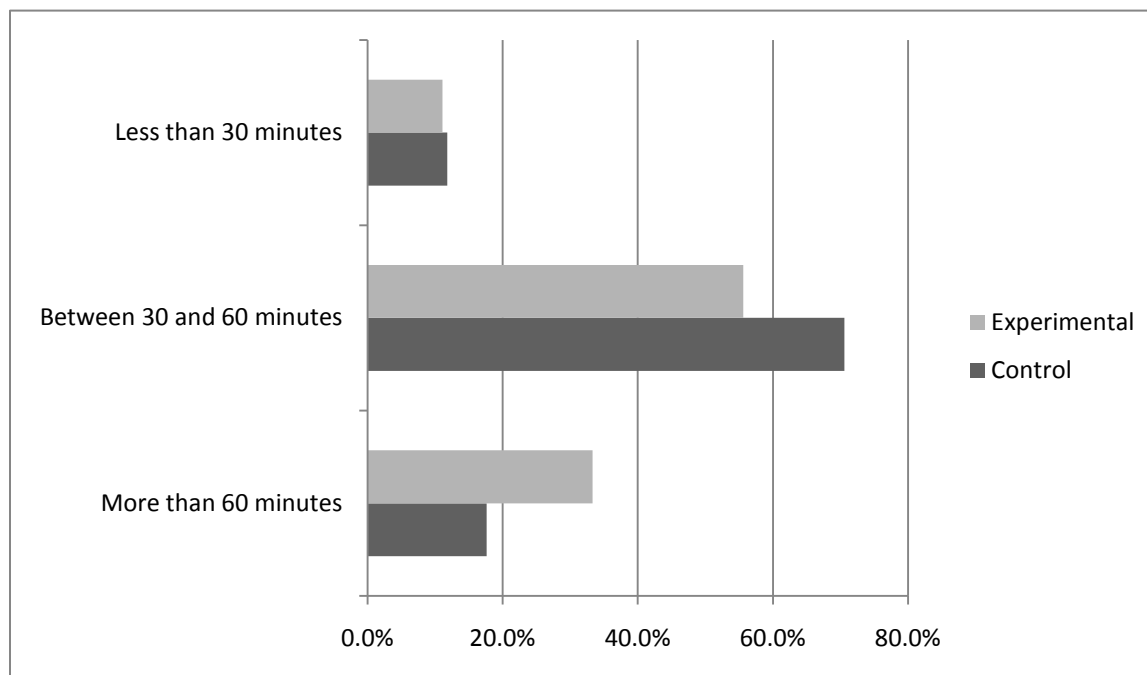


Figure 15. Time spend on language assignment outside the classroom

Looking deeper, Figure 16 shows that subjects in the experimental group, regardless of gender, practiced the new language outside the classroom more than their counterparts in the control group. About five percent of males and over 40% of females practice more on a regular basis. They attributed this phenomenon to their experience in this social network site. As such, the null hypothesis of no intra-group differences in motivation is rejected.

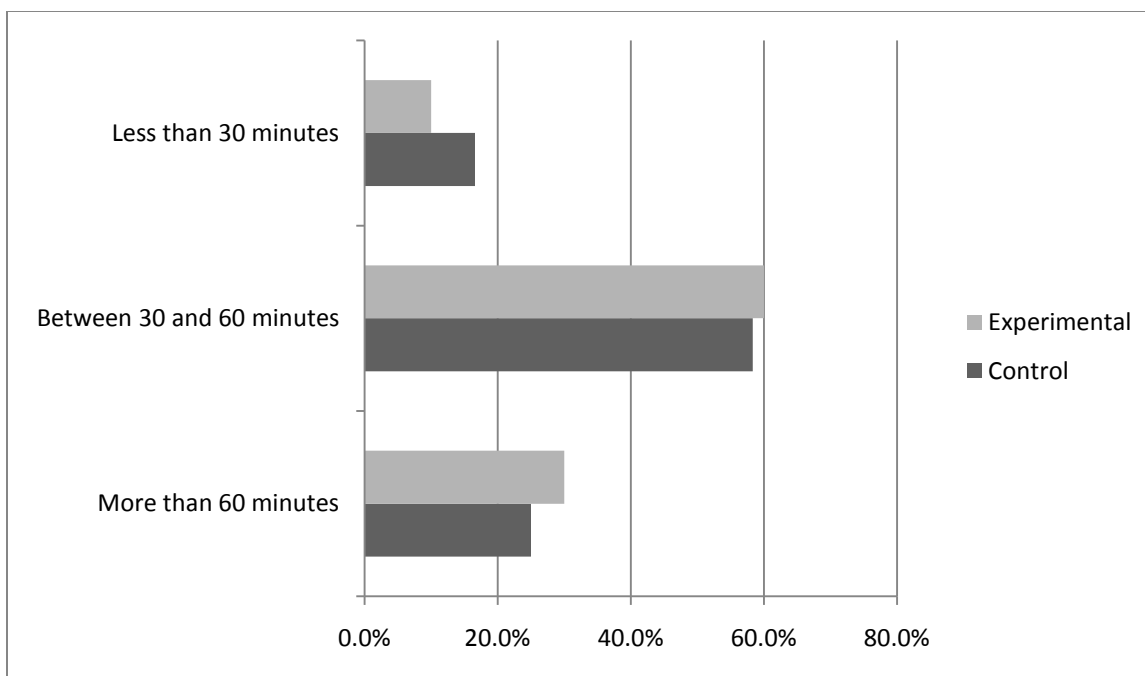


Figure 16. Time males spend on language assignment outside the classroom

Motivation to learn a new language comes from the personal desire to do so, as well as outside factors that could inspire individuals to learn. To summarize the question of motivation, no evidence was found to support the hypotheses that a real social interaction received through a social network site could motivate subjects to further their foreign language education when compared to a traditional method. However, this virtual social interaction provided subjects with an outlet to practice the new language in a way they perceived as more enjoyable which translated into longer exposure time to the target language. One thing is certain, when gender was taken into consideration, evidence demonstrated a difference in motivation.

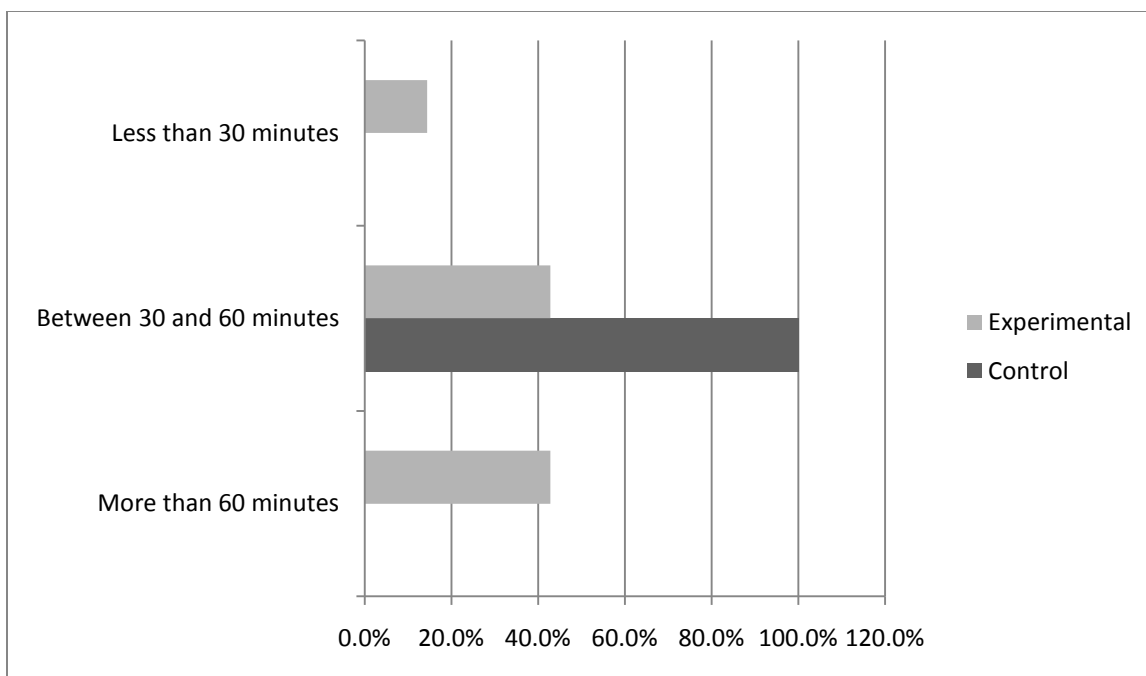


Figure 17. Time females spend on language assignment outside the classroom

### Summary of Results

This chapter presented the results of the study which investigated how the use of social network sites could assist students learning a foreign language. The trends and findings indicated the following:

1. Subjects in both groups received the same amount of instruction in the classroom environment provided by the same instructor.
2. Subjects in both groups received different assignments to complete through the semester which, at the end, was in par with the practice time required in the course syllabus.
3. No statistical significant differences were found in the reading comprehension and writing skills of the subjects at the end of the semester. No evidence was found to support the null hypotheses and as such it cannot be rejected.

4. The null hypothesis of difference in motivation between subjects practicing their language skills in a social network site as part of class and those doing it in a more traditional way cannot be rejected.
5. Based on the survey and follow-up interviews, the null hypothesis of no intra-group differences in motivation to learn the new language based in gender was rejected.

The following chapter provides implications for each of these findings.

## CHAPTER V

### CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS

#### **Introduction**

The previous four chapters presented the theoretical background, procedures, results and discussion of a study investigating issues of using social network sites in a foreign language classroom to help students improve their language skills and motivation. This chapter summarizes the study by reaching conclusions, drawing implications, and providing recommendations.

#### **Summary of the Study**

Foreign language education is not for everyone. Some people like learning about other cultures and languages while others do not really care much about them. Unfortunately for them, more and more educational institutions are encouraging, even requiring their students to learn a new language in order to be competitive in the world's market. Consequently, researchers have explored different technological tools which can facilitate the acquisition of the new language. For example, investigations by Motteram and Sharma (2009) focused on the way technologies enable the traditional classroom to be connected to the real world. They then related learner motivation and the fact that, with Web 2.0 tools, learners can increasingly choose what they can focus on in class in order to directly apply it in how students engage with others, either face-to-face or by the use of digital artifacts.

But why should educators change the way they have been teaching foreign languages? Prensky (2001a) provided the best answer by pointing that today's students have not just changed incrementally from the previous generation, nor simply changed their slang, clothes, body adornments, or styles, as has happened in the past, but that the rapid dissemination of digital technology has created a gap between generations. As such, in the past decade, different Web 2.0 tools have been investigated. Some, like blog, wiki, and synchronous computer-mediated communication (e.g., Pereira, 2009; Warschauer, 2006; Lam, 2000) have been used in foreign language classrooms all around the world today and are helping students overcome many problems.

Following this train of thought, this research explored the most popular of these Web 2.0 tools, social network sites. A social network service is an online service or site that focuses on building and reflecting on social relations among people to share interests and/or activities (Prensky, 2001a). In a classroom environment, these social relations or interaction can be tied to social constructivism which promotes learning by constructing ideas with other (Powell & Kalina, 2009), and as Eskey (1997) pointed out, "people do not learn languages and then use them, but that people learn languages by using them" (p. 133). A central assumption for this research was that the social interaction subjects received through Orkut would promote learning above that of a traditional classroom.

Additionally, most studies in the acquisition of foreign languages touch on student's motivation (e.g., Rueda & Chen, 2005; Dörnyei & Csizér, 1998; Gardner, 1995). Motivation is essential in any educational context, if the student is not motivated to learn a subject, no matter how remarkable their abilities towards the subject are, long-term goals will not be fulfilled (Dörnyei & Csizér, 1998). In other words, good curricula and teaching can only take the learner

so far, therefore, motivation is one of the main factors in learning a foreign language, and can be a predictor in the individual's success. Another assumption for this research was that the social interaction subjects received through Orkut with foreigners of their same age group would motivate them, not only to go above and beyond what was taught in class, but to instigate them to further their foreign language education.

For that reason, the main purpose of this study was to investigate how the use of a social network site in a foreign language classroom could promote learning. The independent variable was a pre-test taken at the beginning of the semester which tested reading comprehension and writing skills.

During the semester, as the intervention progressed, subjects in the control group had to write 15 paragraphs to practice what they were learning in class (Appendix F), while subjects in the experimental group joined a social network site and communicated with others in the target language (Appendix G). The tool was used not as a replacement for classroom instruction, but as the place where the subjects could put into practice what they were learning in class in a more realistic setting. Two pilot studies suggested that Orkut should be the tool to use and that the frequency subjects in the experimental group were required to post messages on the site should be regulated.

For the study discussed in this dissertation, it was hypothesized that the active use of a social network site by foreign language students would promote a higher level of reading comprehension, writing skills, and motivation towards the new language when compared with traditional methods. The dependent variable was a post-test similar to the pre-test but with minor changes to reflect what was learned during the semester. Additionally, the study was concerned with difference in gender, and as such, all results were explored first as a group, control and



experimental, and then when gender was a factor. Finally, a questionnaire and interviews were conducted to complement the statistical findings.

The results of the study showed there was no statistical difference between groups regarding reading comprehension and writing skills at the end of the experiment. With regards to subjects' motivation to further their foreign language education as a group, no difference was reported at the end of the study period. However, differences were seen when taking gender into consideration; males subjects in the experimental group showed a higher desired to continue learning the new language than their counterparts in the control group.

### **Comparing Results to Literature Review**

When conceptualizing this research, three theories were considered essential elements in using Web 2.0 tools in a foreign language education (see Figure 1). The vision was that the blending of communication, motivation, and social constructivism theories could assist in the implementation of social network sites in a foreign language classroom. It is now evident that such a belief was unsupported; however, it came to light that these theories have an effect on one another in the learning process.

As Lanham (2003) pointed out, communication is a product of two or more individuals sharing and creating ideas. Unfortunately in a foreign language classroom, the creation of new ideas is limited to the material being presented. For example, when learning future tense, students would write sentences or answer questions specifically on what they will do. However, this communication is not realistic. On the other hand, as a realistic interaction increases, acquisition of the new language increases, as in the case of language immersion programs. Doing homework in a traditional manner (see Appendix F) might expose students to the new language but only motivates those who have an innate desire to learn it.

As such, it is important to understand what Powell and Kalina (2009) ascertained, when more realistic human interaction in a classroom environment increases, students desire to learn the new language also increases (Figure 18). Regrettably, this investigation was too short, and for this reason, the long term benefits of this virtual interaction would not be examined. However, not all is lost in that a many subjects commented in the surveys and interviews how this virtual interaction made the language real. A male subject expressed that it “made learning the language not as formal because what we learned in the classroom was very formal and with the site the people you talk to and the way they speak to you, you learn how people speak in an everyday basis.” This sentiment was shared with half the male population in the experimental group. When all has been said and done, this type of virtual communication promoted individual learning because subjects wanted to create and share ideas with others.

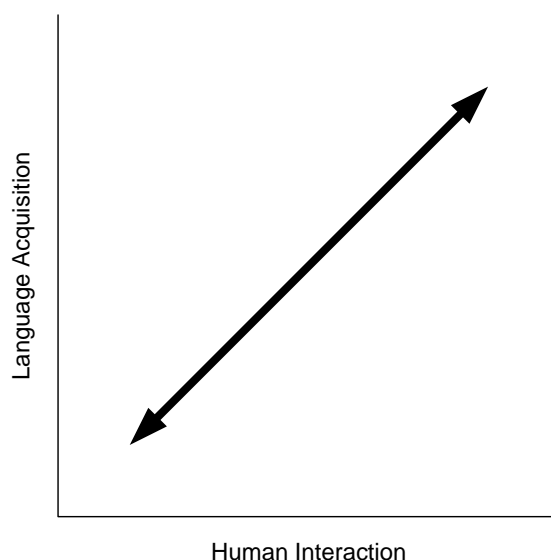


Figure 18. Relationship between communication and social constructivism theories

Related to the previous discussion, social constructivism emphasizes the importance of culture and of social context for cognitive development (Vygotsky, 1978). Discussions with the instructor brought to light that students seemed “tired” of being passive learners and would like to take an active role in the construction of meaning as observed by Daniels (1996). By participating in the social network site, subjects took it upon themselves to ask more questions to the instructor and their peers in order to understand what was going on. The instructor even mentioned a stark difference she perceived between both groups;

“One thing I liked was that the students in the experimental group would come to me and ask ‘what is this, I have never seen it and I could not find it in a dictionary’ and sure enough, it was either slang or abbreviation. I saw that the experimental group, at least in reading, they were more exposed to reading than the control group. The students in the control group did not ask many questions because they just had to compose and not read.”

The sentiments the instructor offered were in par with what the research was all about; providing students with a virtual social interaction could promote learning by motivating students to look above and beyond was taught in class.

It is evident that this virtual social interaction provided subjects the means to have a real world experience through meaningful practice as researchers recommended (Powell and Kalina, 2009; Dantas-Whitney, 2002). Figure 19 shows the relationship between this theory and motivation. When the realistic interaction with another person outside the classroom increased, the motivation and desire to learn the new language also increased. Putting class knowledge into action was the key point in increasing subject’s motivation.

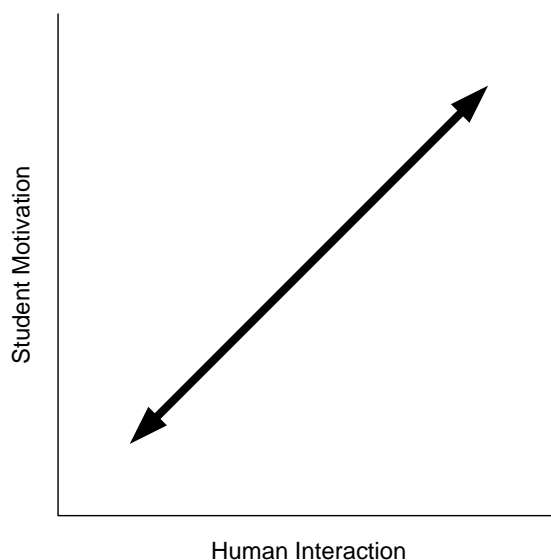


Figure 19. Relationship between motivational and social constructivism theories

This revelation brings us to the motivation theory. Rueda and Chen (2005) defined motivation, in respect to language learning, as the learner's orientation toward the target language "with regard to the goal of learning a second or foreign language." In this research, this theory was the one most evident amongst subjects. As the subject's motivation increased their desire to further learn the new language also increased (Figure 20).

What helped increase the subjects' motivation, especially the male population within the experimental group, was the interaction with a "real" person outside the classroom in the target language. Through this virtual interaction, subjects expressed their ideas, emotions, and learned what others in another country thought about it. As the course TA mentioned, it was clear when subjects' motivation increased;

“They started the semester expressing simple ideas like ‘what is your favorite flavor of ice-cream?’ and move towards ‘this is what I like to see in a relationship from a partner, this are the things I hold as been my values and what I look for in a partner.’”

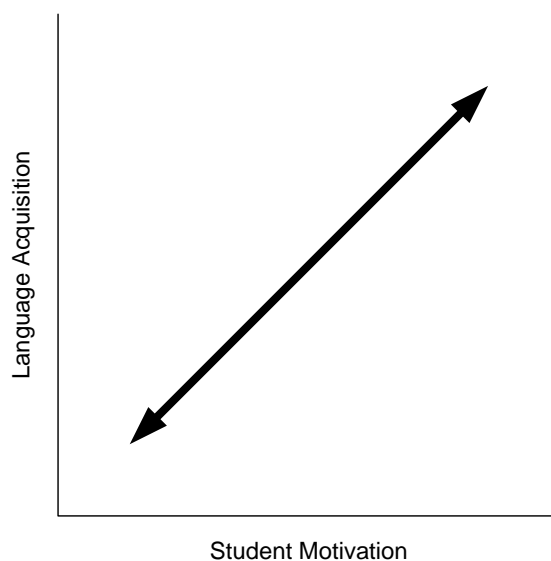


Figure 20. Relationship between communication and motivational theories

In other words, subjects had more complex thoughts and ideas, and wanted to see how their new friends felt about them. These findings support Gardner’s (1985) argument that the learner’s attitude toward the target language and its respective culture plays a crucial role in language learning motivation. As previously mentioned, the instructor offered both groups with a rich cultural background that inspired many subjects to further learn the new language. The fact that many foreign language instructors are not native speakers precludes students from getting that cultural view they seek.

## **Implication for Future Research**

Although a variation of this experiment was conducted on three consecutive semesters, with each study being slightly different from the previous one, there are still considerations for its improvement. From the original study where email was the tool of choice to promote a way of practicing the new language, to the use of social network sites to provide a more realistic social interaction, it is clear that the use of technology in a foreign language classroom is essential and should be continually explored.

One major limitation of the study was the time on task. While subjects in the experimental group spent the same amount of time practicing the language as everyone else taking the course, it is hard to really measure a real gain since the experiment was constricted to one semester. As such, the first recommendation is to conduct a long-term study in which subjects use the social network site in class for a full school year and then are observed for their second required year of language learning to see if, when not required, they go back to the site to ask questions, expand their knowledge, or simply socialize in the target language. Furthermore, in a long-term study, researchers could identify if the subjects which claimed they were thinking about taking more language courses actually do it and could ask them how much did the use of the social network site really influenced their decision.

Another limitation was that improvement, or lack thereof, was primarily seen from the scope of some test scores. Another recommendation is that instead of simply considering the students' improvement based on the scores of some tests, maybe a closer consideration should be given to the virtual social interaction and how it promoted learning, thus, making the experiment more qualitative in nature. As previously presented, there was no significant statistical difference

in the scores; however, the instructor, with all her years of experience, noticed that the subject in the experimental group wanted to learn the language in order to communicate with their new friends, in other words, as she pointed out “they were asking more questions and were looking for answers on their own more often.” A procedure that asks students a couple of question once or twice a month regarding their learning experience should provide enough information into what really motivated learning making the study more qualitative in nature. Also, by giving subjects a third test six month after completing the intervention, long-term retention or improvement could be verified.

Unfortunately, literature regarding the use of social network sites in foreign language classrooms to promote learning was hard to find. Questions that could be addressed in the future are: What really promotes learning, the virtual social interaction or the traditional classroom education? How much social networking should be used in a classroom environment? Could other Web 2.0 tools provide a better social interaction? Some answers to these issues should be sought after.

These simple recommendations could improve the experiment and yield better results, but at the same time it could bring to light the need for further improvement in the methodology. Let’s quickly discuss some recommendations for using social network sites in foreign language classrooms.

### **Recommendations for Using Web 2.0 Technologies in the Classroom**

Results from this experiment lead to two schools of thought, provide this real world, virtual experience at a basic language course or offering it at a more advance language level.

Since this research was conducted using a basic Portuguese language course, the results are a clear implication of what instructors could expect at that level.

Both instructor and class TA recalled that subjects were at first apprehensive to participate in the networking site mainly because they did not know anyone there, but once they started meeting people, this uneasiness subsided. Since, in some cases, this change did not take place until later in the semester, it is hard to say if any long-term improvement or motivation could be attributed to the virtual social interaction. One thing is certain, participation in the social network site challenged subjects, some more than others, to learn.

Foreign language instructors that wish to implement this Web 2.0 tool in a basic course should follow a simple recommendation; establish a “base group” in the social network site in order for the students to feel comfortable when they first join the site. As the class’ TA recommended, this base group should consist of students that have taken the class before, maybe the teachers of the schools where the students traditionally do their summer immersion programs, and last but not least, native speakers who have previously participated in the virtual relationship with USAFA cadets. Something relatively easy to set up by the instructor, this base group could help students pass that initial apprehension stage. Students would know that the people in that social network site understand what they are going through and are willing to help them when needed.

However, other instructors may believe that such an interaction may be too overwhelming for student in basic foreign language courses and that it should be implemented in an intermediate or even expert level course. By adding social network sites to an intermediate level language courses, instructors make certain that the students would have an easier time



communicating with their virtual friends since, by then, they should know more of the target language and should feel more comfortable using it. By implementing this Web 2.0 tool at an intermediate level, instructors would still be challenging students to learn, evident from the pilot studies, while, at the same time, motivate them to further their foreign language education beyond the required courses.

Using social network sites with students taking their third year of foreign language education or higher, should prove the simplest solution to many instructors. These students have already shown the attitude and attributes to learn the language, have master many aspects of it, and some have even taken part of a language immersion program. Offering an optional course for higher level students could include having a class based on the social network site in which students would have to go online and talk and chat with people. The class may be based on writing and the difference between formal and informal writing amongst other things.

Any experienced instructor can attest that learning is different from one person to the next and from females to males. The significance of social interaction and motivation to learn a new language could be hard to establish by this simple experiment. Any instructor wanting to implement this tool in their classroom should take these recommendations to heart in order to provide students with a richer understanding of the foreign language and its culture.

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APPENDIX A  
SURVEYS AND INTERVIEW PROTOCOL  
CONTROL GROUP

**Demographic Information**

1. What is your educational major?
  - a. Technical (i.e., engineering)
  - b. Non-technical (i.e., foreign language studies)
2. Is English your first language?
  - a. Yes
  - b. No
3. What is your gender?
  - a. Male
  - b. Female
4. Do you participate in Collegiate Sports?
  - a. Yes
  - b. No

**General Questions**

5. Why do you think it is important to learn a foreign language at the United States Air Force Academy? RQ2
  - a. Open answer
6. This is your last required language course; are you planning to take any other language courses after this (i.e., 300 level courses)? RQ2
  - a. Yes
  - b. No
7. How do you think this class changed your views about learning a foreign language? RQ2
  - a. Open answer
8. In a normal week, how much time do you spend on your language assignments outside the classroom? RQ1
  - a. Less than 30 minutes
  - b. Between 30 and 60 minutes
  - c. More than an hour
9. In a normal week, how much of your “free” time do you spend in social network sites like Facebook? RQ1

- a. Less than 30 minutes
  - b. Between 30 and 60 minutes
  - c. More than an hour
10. How do you think the implementation of computer-based activities or tools (e.g., Facebook) in a language learning classroom could help students improve their language skills? RQ1
- a. Open answer
11. Student motivation is essential in any learning environment, including a foreign language classroom. Do you think this class motivated you to further your language education? RQ2
- a. Yes (Why?)
  - b. No (Why?)

### **Additional Information**

12. The researchers are interested in further interviewing some participants to learn firsthand what you think about this project and second language education in general. Are you interested in participating in this 15 – 20 minute interview?
- a. Yes
  - b. No
13. If you agree to participate in this short interview, please provide the following information. (This information will only be used to contact you for the interview; it will not be used to identify respondents to the survey.)
- a. Last name
  - b. E-mail
  - c. Phone number

## EXPERIMENTAL GROUP

**Demographic Information**

1. What is your educational major?
  - a. Technical (i.e., engineering)
  - b. Non-technical (i.e., foreign language studies)
2. Is English your first language?
  - a. Yes
  - b. No
3. What is your gender?
  - a. Male
  - b. Female
4. Do you participate in Collegiate Sports?
  - a. Yes
  - b. No

**General Questions**

5. Why do you think it is important to learn a foreign language at the United States Air Force Academy? RQ2
  - a. Open answer
6. This is your last required language course; are you planning to take any other language courses after this (i.e., 300 level courses)? RQ2
  - a. Yes
  - b. No
7. How do you think this class, specifically the use of a social network site, changed your views about learning a foreign language? RQ2
  - a. Open answer
8. In a normal week, how much time do you spend on your language assignments outside the classroom? RQ1
  - a. Less than 30 minutes
  - b. Between 30 and 60 minutes
  - c. More than an hour
9. In a normal week, how much of your “free” time do you spend in social network sites like Facebook? RQ1
  - a. Less than 30 minutes
  - b. Between 30 and 60 minutes
  - c. More than an hour
10. How much time did you spend using Orkut during the research? RQ1
  - a. Less than 30 minutes
  - b. Between 30 and 60 minutes

- c. More than an hour
11. What is your opinion about the use of social network sites in a classroom environment? RQ1
    - a. Open answer
  12. Orkut was used in class to provide a more realistic social interaction than that currently offered. How do you think this social network site met that goal? RQ1
    - a. Open answer
  13. Student motivation is essential in any learning environment, including a foreign language classroom. How did the use of Orkut as part of a class change your motivation, either positively or negatively, to learn a new language? RQ2
    - a. Open answer
  14. Did you feel the need for further instructor's assistance during your project? RQ1
    - a. Yes (If yes, what kind of assistance did you need?)
    - b. No
  15. Do you think this virtual social interaction was successful in improving your writing skill and reading comprehension in the foreign language? RQ1
    - a. Yes
    - b. No (Why not?)

### **Additional Information**

16. The researchers are interested in further interviewing some participants to learn firsthand what you think about this project and second language education in general. Are you interested in participating in this 15 – 20 minute interview?
  - a. Yes
  - b. No
17. If you agree to participate in this short interview, please provide the following information. (This information will only be used to contact you for the interview; it will not be used to identify respondents to the survey.)
  - a. Last name
  - b. E-mail
  - c. Phone number

## INTERVIEW PROTOCOL

Today I'll be asking you some questions about your experience regarding the experiment conducted in your Portuguese class. I will record this conversation and later transcribe it in order to have evidence of the interview; however, the only identifiable information in the transcript will be your last name. The information collected will be for research purposes only, and it will not affect your standing at USAFA, so feel free to answer truthfully. Do you agree to participate in the interview? If at any time you decide that you no longer want to participate, please let me know and I will dispose of the recording and any transcripts thereof.

I will start by asking you some of the same questions from the survey since I don't your specific responses, but might deviate from them, depending on your answers. Any questions before we start?

1. What do you think about having to learn a second language at USAFA?
2. How do you think this class, specifically, the use of a social network site, changed your views about learning a foreign language?
3. Talking about social network sites, do you have an active account on a social network site (Facebook)?
4. In an average week, how much of your "free" time do you spend in this social network site?
5. Talking about your Portuguese class, what is your opinion about the use of social network sites in a classroom environment? Do you think it promotes learning?
6. Orkut was used in class to provide a more realistic social interaction than that currently offered. How do you think this social network site met that goal?
7. How did the use of Orkut as part of your class change your motivation, either positively or negatively, to learn a new language?

8. The purpose of using Orkut was to help students improve their reading comprehension and writing skill in the new language. Do you think this virtual social interaction was successful in improving them?

## APPENDIX B

### INSTRUCTOR AND TA QUESTIONER

1. What do you think about the overall design of the research project?
2. Do you feel you needed more information from me in order to execute the plan?
3. Thinking of the experiment per se, do you think we should do anything differently than what we did this semester? (i.e., how students interact in Orkut, the amount of time they should spend on it, etc.)
4. Being with the students throughout the experiment, did you notice any change in motivation in the students in the experimental group as compared to those in the control group?
5. Do you think it is worth your time to set up this virtual social interaction in the classroom environment?
6. Do you believe the students gain any knowledge or improve their language skills by participating in this social interaction?



## APPENDIX C

### IRB APPROVAL LETTERS

In the next two pages, you will find the approved IRB letters from the University of Georgia and the United States Air Force Academy (where the research will be conducted).

PROJECT NUMBER: 2010-10580-0

TITLE OF STUDY: Technology in language education: Providing social interaction in a second language classroom

PRINCIPAL INVESTIGATOR: Dr. Michael A. Orey

Dear Dr. Orey,

Please be informed that the University of Georgia Institutional Review Board (IRB) reviewed and approved your above-titled proposal through the exempt (administrative) review procedure authorized by 45 CFR 46.101(b)(2) - Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, /unless:/ (i). the information obtained is recorded in such a manner that human participants can be identified, directly or through identifiers linked to the participants; /and /(ii). any disclosure of the human participants' responses outside the research could reasonably place the participants at risk of criminal or civil liability or be damaging to the participants' financial standing, employability, or reputation.

Please remember that no change in this research proposal can be initiated without prior review by the IRB. Any adverse events or unanticipated problems must be reported to the IRB immediately. The principal investigator is also responsible for maintaining all applicable protocol records (regardless of media type) for at least three (3) years after completion of the study (i.e., copy of approved protocol, raw data, amendments, correspondence, and other pertinent documents). You are requested to notify the Human Subjects Office if your study is completed or terminated.

Good luck with your study, and please feel free to contact us if you have any questions. Please use the IRB number and title in all communications regarding this study.

Sincerely,

Mrs. LaRie Sylte, M.H.A, M.A., CIP  
Human Subjects Office  
University of Georgia  
[www.ovpr.uga.edu/hso/](http://www.ovpr.uga.edu/hso/)

MEMORANDUM FOR DR. MIGUEL VERANO

1 February 2010

FROM: HQ USAFA/XPN

SUBJECT: Protocol FAC20100038E Exempt Status

1. The HQ USAFA Institutional Review Board considered your request for exempt status for FAC20100038E – Technology in Language Education: Providing Social Interaction in a Second Language Classroom. Your request and any required changes were deemed exempt from IRB oversight in accordance with *32 CFR 219.101, paragraph (b)(1)*. The board agreed that sufficient safeguards were in place to protect research participants. Please note that the USAFA Authorized Institutional Official, HQ USAFA/CV and the Surgeon General's Research Oversight & Compliance Division, AFMSA/SGE-C review all USAFA IRB actions and may amend this decision or identify additional requirements.
2. The protocol will be considered closed, but will be retained in XPN for 5 years then sent to permanent storage. As the principal investigator on the study, the Surgeon General's Research Oversight & Compliance Division requires that you retain your data, reports, etc. for 3 years following completion of the study.
3. If the conditions under which you have been granted exempt status change, you must notify the IRB Chair or IRB Administrator immediately. We will advise you on whether additional IRB review is required.
4. Please use tracking number **FAC20100038E** in any correspondence regarding this protocol. If you have any questions or if I can be of further assistance, please don't hesitate to contact me at 333-6593 or the IRB Chair, Dr. Wilbur Scott at 333-6740.

A rectangular box containing a handwritten signature in cursive script that reads "Gail B. Rosado".

GAIL B. ROSADO  
HQ USAFA IRB Administrator

APPENDIX D  
ASSESSMENTS  
PRE-TEST

**(LEITURA #1)**

Paula Santos é estudante de Antropologia na Universidade de São Paulo (USP), no Brasil. Todos os dias chega à faculdade às oito horas. Depois das aulas, das quatro às sete, Paula trabalha no escritório. Neste semestre, ela estuda Antropologia Contemporânea, Mitologia e simbolismo, Identidade Cultural e Etnologia Comparada. O curso preferido dela é Mitologia e Simbolismo. O curso de Etnologia comparada é difícil, mas o professor é muito bom. Ela também gosta do curso de Identidade cultural; é fácil e muito interessante.

O amigo de Paula é Tom Martin. Tom é dos Estados Unidos e estuda Português na USP. Ele também estuda Literatura Brasileira, História e Geografia do Brasil. Tom é uma pessoa muito responsável e estudiosa. Chega à universidade às dez horas. Ele fala português todos os dias com os colegas da turma. À tarde, estuda na biblioteca ou pratica português no laboratório de línguas.

1. Quantas matérias Tom estuda na universidade?
  - a. 4
  - b. 5
  - c. 6
  - d. Tom não estuda.
  
2. Quando Tom chega à universidade?
  - a. De manhã
  - b. À tarde
  - c. À noite
  - d. Ao meio-dia.
  
3. O que Paula faz à tarde?
  - a. Ela trabalha
  - b. Ela estuda na biblioteca
  - c. Ela pratica português
  - d. Ela dorme
  
4. Qual é o curso favorito de Paula?
  - a. Antropologia Contemporânea

- b. Identidade Cultural
  - c. Etnologia Comparada
  - d. Mitologia e Simbolismo
5. Qual é o melhor título [ =*best title*] para este texto?
- a. Paula Santos e Seu Amigo Tom Martin
  - b. Universidade de São Paulo
  - c. Os Estudantes e os Cursos
  - d. Tom Martin – Um Estudante Americano

**(LEITURA #2)**

O Norte do Brasil ocupa 42% da extensão territorial do país e é composto pelos seguintes estados: Acre (a capital é Rio Branco), Amapá (Macapá), Amazonas (Manaus, Pará (Belém), Rondônia (Porto Velho), Roraima (boa Vista) e Tocantins (Palmas). Apesar de ser a maior região do país, tem o menor número de habitantes do Brasil. Vários grupos indígenas vivem nessa região e falam línguas pertencentes às famílias Tupi, Karib, Tukano, Jé, Pano e Aruaque. Portanto, a cultura indígena está presente em muitos aspectos da vida cotidiana de todos os habitantes do Norte.

Apesar de 85% da Região Amazônica estar situada em território brasileiro, ela se estende por mais oito países sul-americanos: Bolívia, Colômbia, Equador, Guiana, Guiana Francesa, Peru, Suriname e Venezuela. A floresta amazônica, a maior floresta tropical do mundo, cobre toda a região e tem uma enorme biodiversidade. Há mais de cinco mil espécies de árvores, mais de três mil espécies de peixes, mais de cem espécies de macacos, milhares de aves e animais típicos da floresta como capivaras, preguiças, jacarés, botos, peixes-boi e enormes sucuris.

O rio Amazonas tem suas origens na Cordilheira dos Andes, no Peru. Em território brasileiro, o rio Solimões, de águas mais claras, e o rio Negro, de águas mais escuras, se unem em um belíssimo espetáculo da natureza para formar o rio Amazonas. O Amazonas é o maior rio do mundo tanto em volume de água quanto em extensão. A importância do rio Amazonas não é só regional, pois juntamente com seus afluentes contém 20% das reservas de água do planeta.

6. O Norte do Brasil é uma área enorme e ...
- a. muitas pessoas vivem nesta região.
  - b. poucas pessoas vivem nesta região.
  - c. somente indígenas vivem nesta região.
  - d. *a, b, c* estão corretas.
7. O Norte do Brasil tem .... estados
- a. sete
  - b. cinco
  - c. seis
  - d. oito

8. Fazem parte da Região Amazônica...
    - a. sete países
    - b. oito estados
    - c. dois estados e seis países
    - d. nove países
  9. O conjunto de todas as espécies de seres vivos e dos seus ecossistemas na floresta amazônica inclui...
    - a. variedade de vegetais
    - b. variedade de seres terrestres
    - c. variedade de seres aquáticos
    - d. *a, b, c* estão corretas
  10. Pela quantidade de água doce que possui, o rio Amazonas tem importância...
    - a. local
    - b. regional
    - c. nacional
    - d. mundial
- 

**REDAÇÃO:**

Você tem um melhor amigo? Descreva seu melhor amigo/a e as razões de ser seu melhor amigo.

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**POST-TEST****(LEITURA #1)**

Tim trabalha para uma empresa em Manorville, Califórnia. Ele presta serviço de ajuda ao consumidor. Ele se levanta às 6 horas todos os dias. Ele vai de carro para o trabalho e inicia seu trabalho às oito horas. Ele fala com as pessoas no telefone para os ajudar com os seus problemas bancários. As pessoas telefonam para o banco para fazer perguntas sobre as suas contas. Ele não dá informações sobre contas até as pessoas responderem a algumas perguntas. Tim pergunta às pessoas a data de nascimento e o endereço. Se a pessoa der a informação incorreta, Tim pede para a pessoa telefonar novamente com a informação correta. Tim é bem educado e amigável com todo mundo. Ele almoça no parque perto do escritório. Ele volta para casa às cinco horas da tarde. Depois do trabalho, ele vai para a academia para fazer exercícios. Ele janta às sete horas. Tim gosta de assistir TV depois do jantar. Ele vai para a cama às onze horas da noite.

1. Onde Tim trabalha
  - a. No Brasil
  - b. Nos Estados Unidos
  - c. No México
  - d. *a e b* estão corretos.

2. O que ele faz durante o dia
  - a. Ele ajuda pessoas no banco
  - b. Ele ajuda pessoas no telefone
  - c. Ele ajuda pessoas a consertar TVs
  - d. Ele ajuda pessoas a lavar carros
  
3. Por que as pessoas telefonam para o banco
  - a. Para ajudar Tim
  - b. Porque Tim é educado e amigável
  - c. Para dar informações
  - d. Porque precisam de ajuda com a conta bancária
  
4. O que Tim faz para checar informações
  - a. Ele faz perguntas
  - b. Ele pede as pessoas para telefonarem novamente
  - c. Ele pede para ver documentos
  - d. a e b estão corretos.
  
5. O que ele faz à noite
  - a. Ele janta.
  - b. Ele vai à academia.
  - c. Ele trabalha mais.
  - d. *a e b* estão corretos.

## (LEITURA #2)

Brasília é a capital do Brasil desde 1960. Construída em menos de 5 anos, ela está situada no coração do Brasil, país enorme, para tornar a sede do governo federal mais acessível a todos os brasileiros. A mudança do governo federal do Rio de Janeiro, a antiga capital brasileira, para Brasília não foi fácil. Ninguém queria deixar a bela cidade do Pão de Açúcar e do Corcovado para ir viver no Planalto Central, numa cidade nova, sem mar, sem praia. Nem os funcionários públicos, nem os políticos...

No entanto, Brasília é agora, sem dúvida, o centro das decisões políticas do país. Brasília é uma cidade diferente. Sua construção obedeceu a um plano-piloto. À noite, com suas luzes acesas, a cidade, vista do alto, parece um grande avião.

Os edifícios principais de Brasília têm linhas de grande beleza e são sempre uma surpresa para o turista. A Praça dos Três Poderes é o cartão postal da cidade. Nela, estão os edifícios do Congresso Nacional, do Supremo Tribunal Federal e o Palácio da Alvorada, o local onde reside e trabalha o Presidente da República. Há muitos outros edifícios de rara beleza em Brasília, como a catedral que, de longe, parece duas mãos postas em oração e o Palácio dos Arcos, sede do Ministério das Relações Exteriores – lindo, com seu jardim aquático.

Brasília é o resultado do trabalho combinado de três grandes artistas brasileiros: o urbanista Lúcio Costa, o arquiteto Oscar Niemeyer e o paisagista Burle Marx.

Nada se compara a Brasília e ela, por sua vez, não se integra a mais nada. É uma cidade única, diferente de todas as outras cidades do mundo. De todas. Realmente, Brasília é Brasília.

6. Qual é o melhor título para o texto?
    - a. Brasília, o centro das decisões políticas.
    - b. Brasília, uma cidade diferente.
    - c. Brasília, um grande avião.
    - d. Brasília, uma cidade moderna.
  
  7. Porque a capital mudou do Rio de Janeiro para Brasília?
    - a. Porque Brasília é maior
    - b. Porque Brasília não tem praia
    - c. Porque Brasília é uma cidade nova
    - d. Porque Brasília é fácil de se acessar
  
  8. É correto afirmar que Brasília...
    - a. Tem edifícios belos
    - b. É o centro político do país
    - c. É onde o presidente reside
    - d. Todas as opções estão corretas
  
  9. Pode-se concluir que a Praça dos Três Poderes
    - a. É o lugar mais bonito de Brasília
    - b. Tem pouca movimentação
    - c. Foi feito para os turistas
    - d. Todas as opções estão corretas
  
  10. A expressão *Brasília é Brasília* significa:
    - a. Brasília é uma cidade importante
    - b. Brasília é uma cidade com artistas importantes
    - c. Brasília é uma cidade especial
    - d. Todas as opções estão corretas
- 

### **REDAÇÃO:**

Você pensa que é correto clonar uma pessoa? Porque ou porque não?



APPENDIX E

HOLISTIC RUBRIC

<b>Paragraph – Rating Scale</b>	
<b>5</b>	<ul style="list-style-type: none"> <li>• The paragraph’s main idea directly addresses the topic and is stated clearly and succinctly</li> <li>• The paragraph is logically organized, coherent, and marked by explicit transition</li> <li>• The paragraph contains specific supporting ideas, examples, and explanations explicitly connected to the main idea</li> <li>• Choice of vocabulary is excellent</li> <li>• Grammatical errors are minor and infrequent</li> <li>• Spelling and punctuation are generally accurate</li> </ul>
<b>4</b>	<ul style="list-style-type: none"> <li>• The paragraph’s main idea is related to the topic and is reasonably clear</li> <li>• The paragraph shows solid organization and use of coherence markers</li> <li>• The paragraph contains at least two supporting ideas, examples, or explanations clearly related to the main idea</li> <li>• Vocabulary use is above average</li> <li>• There may be minor grammatical errors that do not interfere with the main idea</li> <li>• Errors in spelling and punctuation occur, but do not distract the reader</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>• The paragraph indicates a main idea related to the topic, but in ways that could be clearer and more explicit</li> <li>• The paragraph’s organization may lack logic or coherence because connectors and transition signals are not used consistently or effectively</li> <li>• Vocabulary use is average for an intermediate language student</li> <li>• The paragraph may contain major grammatical errors that compromise its comprehensibility</li> <li>• Spelling and punctuation errors may distract the reader</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>• The paragraph’s main idea is only marginally related to the topic or is difficult to identify</li> <li>• The paragraph does not have an obvious organizational structure; coherence is weak because connectors and transition signals are inappropriate or absent</li> <li>• Supporting points are inadequate in number and either unclear or irrelevant</li> <li>• Vocabulary use is weak</li> <li>• Grammatical errors may be numerous and major, to the extent that the text cannot be easily read and understood</li> <li>• Errors in spelling and punctuation consistently distract the reader</li> </ul>

1	<ul style="list-style-type: none"><li>• The paragraph does not address the topic or lacks a main idea</li><li>• The text lacks organization and coherence</li><li>• Attempts at supporting the main idea are ineffective due to inappropriateness or an absence of development; explicit coherence markers are altogether absent</li><li>• Vocabulary use is extremely weak</li><li>• Major grammatical errors abound, causing the reader major comprehension difficulties</li><li>• Spelling and punctuation errors are frequent and highly distracting</li></ul>
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## APPENDIX F

### CONTROL GROUP'S ASSIGNMENT

Cadets had to write 15 paragraphs in different topics throughout the length of the experiment (seven weeks). Subject's participation was required since this was a graded assignment for Portuguese 132 in the Fall 2010 semester. The guidelines for the project, as provided to subjects, were as follow:

**What:** A Portfolio (15 paragraphs on different topics)

- Have a thin binder to save your paragraphs. The instructor will not accept your paragraphs if you don't have a binder.
- Write your paragraphs (10 sentences for each topic).
- Submit binder – topics 1-5 on October 31<sup>st</sup>, topics 6-10 on November 22<sup>nd</sup>, and topics 11-15 on December 3<sup>rd</sup>.
- First and second parts: The instructor will sign her name on each entry and give you the binder back (the entries will not be read at this time).
- December 3<sup>rd</sup> – Instructor will collect the binder with all of you 15 entries. Paragraphs without the instructor's signature will not be accepted.
- Be creative, pay attention to your grammar, and do not use online translators.

**Topics:**

1. Post card – You are going to Brazil to stay with a Brazilian family. Tell them about yourself
2. My first day at USAFA
3. My favorite vacation
4. What I will do this Thanksgiving (*Ação de Graças*)
5. What I really like and why
6. 10 things I did last weekend
7. 10 things I will do next weekend
8. Five places I want to visit in the world and why
9. My favorite person in the world
10. A surprise I had

11. My best friend
12. Future school – What will school be like in 50 years? How will students learn? What will they learn?
13. The best or worst movie of all times
14. Your favorite time away from home
15. (Choose a topic)

**Do you need an example?**

**O que eu fiz no último Natal.**

No último Natal, eu fui para minha casa. Eu comi muito. Minha família fez peru e batatas. Eu também gosto de tortas. Minha torta favorita é de pêssego. No dia 26 de dezembro, eu vi meus amigos. Eu tenho muitos amigos. Nós fomos ao cinema e assistimos um filme. Depois, nós conversamos até tarde. Meu Natal foi muito bom.

## APPENDIX G

### EXPERIMENTAL GROUP'S ASSIGNMENT

Cadets had to JOIN Orkut and engage in conversations amongst themselves and other Brazilians for the length of the experiment (seven weeks). Subject's participation was required since this was a graded assignment for Portuguese 132 in the Fall 2010 semester. An advance Portuguese student taking an independent study course helped monitor the Orkut community weekly, posted topics, and chatted with cadets. The guidelines for the project, as provided to the subjects, were as follow:

The following are elements of the project that need to be fulfilled for you to complete the assignment (point break-down are listed in parenthesis):

#### **Account Set-up and Community Joining**

1. A) Set-up and Orkut account with Username and Password  
B) Join "Uma Viagem ao Brasil" (One travels to Brazil) Group (5 pts)

#### **Posting on Community Board**

2. A) You must check the forum topic on the community board once per week  
B) You must post a reply on the topic board once per week  
**-POST DUE EVERY FRIDAY BY TAPS-**  
C) Posting of the forum board must be in Portuguese and at least three lines in length while relating to the topic in some way  
D) Replies will be graded on effort and content along with length. Remember, three lines is the absolute minimum (10 pts)

#### **Engagement with non-Cadets**

3. A) Engage with five people who are not cadets in Portuguese

- B) You must write a total of ten lines of conversation per week with at least one of these five people
- C) At the end of the semester you must have spoken with at least five people who are not cadets. At a minimum, you should have at least ten lines between both you and five non-cadets members BY LESSON 38 (25 pts)

### **Project Turn-in/Discussion Content**

- 4. A) Write at least ten lines of conversation per week with anyone (lines DO NOT include the lines that comprise the “Engagement with non-Cadets” part of the project)
- B) Write a report written in Portuguese of half a page length stating if electronic social networking helped your reading and writing in the language
- C) Attach your weekly ten lines of conversation with anyone, your ten lines of conversation with five non-Cadets, and all your postings on the Community Board to the back of the report
- D) The project Turn-in is the report and online printed discussions as stated above due on Lesson T38 (60 pts)