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A Technology-Enhanced German Language Course: Effects of Technology Implementation and Cross-Cultural Exchange on Students' Language Skills, Perceptions and Cultural Awareness

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A TECHNOLOGY-ENHANCED GERMAN LANGUAGE COURSE:
EFFECTS OF TECHNOLOGY IMPLEMENTATION AND CROSS-
CULTURAL EXCHANGE ON STUDENTS' LANGUAGE SKILLS,
PERCEPTIONS AND CULTURAL AWARENESS

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The School of Education

by

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I would like to dedicate this dissertation to my loving wife and son, my entire family, and friends for their continued display of love and support as I have worked on completing this milestone. Your patience, help and understanding have allowed me to make this possible. Thank you, and I love you all.

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List of Commonly used Terms and Definitions

1. *Asynchronous communication* – Communication that does not take place in real time (Dempsey and Van Eck, 2007).
2. *Blog* – A web log displaying entries that are presented in reverse chronological order, and are interlinked with other media (Castaneda, Ahern, and Díaz, 2011).
3. *Chat* – Synchronous online communication via text message transmission from sender to receiver (Wikipedia).
4. *Computer Assisted Instruction* – Use of a computer as an instructional tool (Reiser, 2007)
5. *Computer Assisted Language Learning* – An approach to language teaching in which the computer plays a key role as an instructional tool.
6. *Computer Mediated Communication* – Electronic tools that allow users to communicate across time and space (Kennedy and Miceli, 2013).
7. *Constructivism* – A knowledge building process that occurs with individuals or groups by interacting with one another and the world by which they are surrounded (Driscoll, 2007).
8. *Course Management System (Blackboard, Moodle, etc.,)* – A set of tools that allows users, for example, instructors, to create (online) course content and post it on the Internet without requiring the use of computer programming (Techopedia).
9. *Instructional Media* – The physical means via which instruction is presented to learners (Reiser and Gagné, 1983).
10. *Moodle* – Modular Object-Oriented Dynamic Learning Environment (Brandl, 2005).
11. *Podcast* - An audio file that can be created by using a computer, microphone, and a software program (Ducate and Lomicka, 2009).

12. *Socio-Constructivism* – Focuses on an individual’s learning within a group setting (Whyte, 2011)
13. *Second Language Acquisition* – Learning a second language after a native language is already established (American Speech-Language-Hearing Association)
14. *Synchronous communication* – Communication that takes place in real time (Dempsey and Van Eck, 2007).
15. *Skype* - A telecommunication application that allows for synchronous video chat (Wikipedia).
16. *Wiki* – Hawaiian for “quick”, wikis are designed for online group collaboration and function as shared repositories of information among users (Castaneda et al., 2011).
17. *Web 2.0* – Online tools that assist in collaboration among users, including blogs, wikis, chat (Kennedy and Miceli, 2013).

List of Frequently Used Acronyms

1. *ACMC* – Asynchronous Computer Mediated Communication
2. *ACTFL* – American Council on the Teaching of Foreign Languages
3. *CAI* – Computer Assisted Instruction
4. *CALL* – Computer Assisted Language Learning
5. *CMC* – Computer Mediated Communication
6. *EFL* – English as a Foreign Language
7. *ESL* – English as a Second Language
8. *SCMC* – Synchronous Computer Mediated Communication
9. *SLA* - Second Language Acquisition
10. *TELL* – Technology Enhanced Language Learning

Abstract

This study employed a within-group case study design using a mixed methods approach. In doing so, the researcher used a concurrent triangulation process during a one semester intermediate German language course. In addition to the textbook, the researcher implemented a Technology to Support German Language Enhancement (TSGLE) intervention. The TSGLE included use of the following Web 2.0 technologies: blogs, podcasts, online chat, and wiki, to create an environment of increased asynchronous and synchronous interaction. Additionally, students embarked on a cross-cultural, virtual exchange with university students from Germany by interacting through a blog, a collaborative video conference session, a German film screening, email, and individual video conference sessions. Although certain challenges arise with adapting to technology use and communicating with native speakers, quantitative and qualitative data indicate regular use of Web 2.0 technologies and participating in a cross-cultural exchange can enhance language acquisition and cultural awareness.

Chapter 1

Introduction

Introduction and Background

Recent research (Wang and Vásquez, 2012) has shown there has been a clear shift and increase in the implementation of interactive, Web 2.0 technologies in foreign language learning environments. While this trend has become more common, transformations continue to occur in how these technologies are integrated (Yang, Gamble, and Tang, 2012). Previous research highlights a paradigm shift from audio-lingual methods utilizing audio cassette tapes common in the 1970s (Warschauer and Meskill, 2000), to drill-and-practice types of computer-assisted language learning (hereinafter CALL) common in the 1980s, to more interactive types of CALL technologies developed and integrated in the 1990s and early 2000s (Liu, Moore, Graham, and Lee, 2003; Zhao, 2003).

In the 1970s, the development of the audio cassette tape was the primary medium used to practice the audio-lingual method, which is learning through oral repetition. Language laboratories were typical settings where university students practiced repetitive drills via audio prompts. In the late 1970s researchers recognized that this method was leading to poor results. The focus of instruction was purely on language form, namely pronunciation, and the teaching of communicative meaning and interpreting of the target language was ignored. Conversely, the 1980s and 1990s experienced a shift from this drill and practice method toward a communicative teaching approach (Warschauer and Meskill, 2000). Liu et al. (2003) and Zhao's (2003) reviews of literature portray uses of technology in language learning environments during the 1990s. Much of the technology focused on interactive tools such as email, as well as the use of specific software such as grammar checkers. Zhao's (2003) meta-analysis of previous literature shows there were consistent, positive results with the effectiveness of technology on student learning.

However, it should be noted that only nine studies were included in this review, making it difficult to deduce the impact of technology in language education. With that said, Zhao calculated the effect size for each study, then an overall effect mean of the nine studies combined which was “quite large, indicating an overwhelmingly positive effect of technology applications on language learning” (Zhao, 2003, p. 19).

Current research indicates that tens of thousands of educators, including those in second language education, have experimented with Web 2.0 technologies (Wang and Vásquez, 2012). The concept of Web 2.0 technologies was born in 2004 (O’Reilly, 2005), and is described as online tools, such as blogs, wikis, and chat that assist in collaboration among users, not merely with a computer (Kennedy and Miceli, 2013). Wang and Vásquez (2012) believe the attributes of these technologies, such as collaboration, ease of sharing, communication and participation, are primary reasons for the aforementioned paradigm shift for using them in second language acquisition (SLA). Moreover, when utilized effectively, technology may enhance the acquisition of a second language by exposing students to authentic materials, such as listening to native speakers through podcasts (Schmidt, 2008) as well as linking students with native speakers (Ware, 2005), resulting in higher learner achievement (Zhao, 2003). Yet, properly integrating technology in the foreign language classroom has been problematic in certain instances indicating there are challenges in finding the appropriate balance of technology use for teachers as well as for students. A common challenge reported was the lack of faculty training on how to incorporate technology (Wiebe and Kabata, 2010).

Improvements in the interactive abilities of technology (Toyoda and Harrison, 2002), including that of computer-mediated communication (hereinafter CMC), have given educators (and students) the opportunity to create and enhance foreign language learning environments

with increased asynchronous and synchronous interaction both in and out of the classroom (Chenoweth and Murday, 2003). As such, the literature suggests these technologies allow students to take advantage of informal learning scenarios which foster constructive learning (Comas-Quinn, Mardomingo, and Valentine, 2009; Elola and Oskoz, 2012; Pasfield-Neofitou, 2007), enhance student motivation (Morton and Jack, 2010), promote student accountability (Ducate, Lomicka, and Moreno, 2011), improve student performance and achievement (Perez, 2003; Shang, 2005; Volle, 2005), increase student collaboration (Oskoz, 2009; Shekary and Tahririan, 2006), and promote social interaction with native speakers from a distance (Helm, Guth, and Farrah, 2012; Kötter, 2003; Ware, 2005; Yang et al., 2012).

Despite the ever-increasing use of technology to enhance language learning in the past decade, “research on the application of Web 2.0 technologies to second language (L2) learning is still quite limited” (Wang & Vásquez, 2012, p. 416). Therefore this study developed from my own interest of using Web 2.0 technologies to enhance classroom instruction and student learning in a German language course, more specifically in the areas of: 1) reading, writing, listening, and speaking comprehension, 2) cultural awareness, 3) linking students with native speakers, and 4) understanding student perceptions of using these tools and experiences to learn a foreign language.

Problem Statement

The American Council on the Teaching of Foreign Languages (ACTFL) “acknowledges and encourages using the potential of technology as a tool to support and enhance classroom-based language instruction” (ACTFL, 2014). Furthermore, ACTFL’s 21st Century Skills Map (2014) declares that students should be “using digital technology, communication tools, and/or networks appropriately to access, manage, integrate, evaluate, and create information in order to

function in a knowledge economy” (p. 14). There is a growing body of research providing data about the impact of technology on student learning, as well as the status of research on the use of technology in foreign language instruction. For example, a recent study (Jahner, 2012) surveyed 4,500 high school students enrolled in foreign language courses. Results revealed that a large amount of funding was spent to enhance technology resources in the schools, including language laboratories. Students surveyed found the labs to be helpful, websites focusing on skills practice to be useful, and websites that provide authentic, cultural materials in the target language to be beneficial. Notwithstanding these positive findings, a significant number of students indicated that several technologies were not utilized, including social networking sites, podcasts, blogs, wikis, smart phones, and interactive boards. This strongly suggests there is room for improvement regarding a more comprehensive integration of technology. “In order to provide effective and individualized language instruction, students need to encounter the language on a daily basis, which is certainly possible based on today’s applications and interconnectivity” (Jahner, 2012, p. 4).

The improvements in interactive technologies open the door for researchers to find the best possible means of integrating technology into language instruction. For instance, Lord (2008) found the use of podcasts revealed that students became more conscious of their pronunciation with the aid of said technology, and the majority stated the project was useful and should be continued in future semesters. Nonetheless, Oliver (2010) concluded that Web 2.0 tools, including blogs and wikis, are “just the tip of an integration iceberg” (p. 50), further indicating a critical need to explore the depths of what these technologies have to offer educators, particularly in foreign language education.

A number of technologies have been utilized in foreign language learning environments. These include but are not limited to the following: (a) blogs; (b) wikis; (c) podcasts; (d) online chat; and (e) video conferencing. A blog is a web log which displays entries that are presented in reverse chronological order, and are then interlinked with other media (Castaneda, Ahern, and Díaz, 2011). Wikis are designed for online group collaboration and function as shared repositories of information among users (Castaneda et al., 2011). A podcast is an audio file that is created by using a computer, microphone, and a software program (Ducate and Lomicka, 2009). Chat is synchronous online communication via text message transmission from sender to receiver (Wikipedia). Skype is a telecommunication application that allows for synchronous video chat (Wikipedia). These technologies have been found to promote collaboration (Comas-Quinn, Mardomingo, and Valentine, 2009; Ducate, Lomicka, and Moreno, 2011), enhance writing (Armstrong and Retterer, 2008; Kessler, Bikowski, and Boggs, 2012; Sun, 2010), improve listening comprehension (Schmidt, 2008), create environments conducive to constructivist learning among students (Comas-Quinn et al., 2009) and provide authentic language learning experiences with native speakers (Chen and Yang, 2014). These studies illustrate how the use of specific technologies can be used to enhance the teaching and learning of a foreign language.

In a review of literature between 2004 and 2009, Wang and Vásquez (2012) highlighted the latest trends of Web 2.0 technologies used in language learning scenarios. Their examination of 43 empirical studies found that 35% utilized blogs, 23% focused on the use of wikis, 12% examined the use of podcasts, while 5% detailed the use of multiple technologies. They suggest that these technologies “exploit the participatory potential of the Web” (p. 412). Yet, their results suggest that the use of Web 2.0 technologies is still limited and in its beginning stages.

Of the 43 empirical studies highlighted in their review, 10 address technologies which enhance writing, eight explore students' attitudes and perceptions regarding the use of Web 2.0 technologies in learning a foreign language, four examine student pronunciation and proficiency, three focus on culture, and one tackles reading comprehension. Additionally, only four (9%) of the studies specifically pertained to the German language, two (5%) utilized a mixed methods approach, while none of the studies from their review indicated the use of technology to communicate with native speakers via distance exchanges. These findings are instrumental to this study, and are therefore further detailed in the following section. Wang and Vásquez (2012) also found that the majority of the studies analyze how these Web 2.0 technologies assist educators in creating a favorable learning environment for students. Conversely, very few studies illustrate students' progress and learning outcomes using these tools. Moreover, their review found that these studies lack in-depth analyses of the investigated phenomena, suggesting more qualitative research techniques should be implemented because they "enable researchers to offer rich descriptions of observed phenomena, and to address issues related to participants' individual perspectives as well as to their personal, lived experiences" (Wang & Vásquez, 2012, p. 422).

Therefore, a need still exists to provide empirical research – both quantitative and qualitative – which analyzes the uses of Web 2.0 technologies in foreign language learning environments, especially German, with particular focus on technology's effects on: (a) language skills; (b) cultural awareness; (c) ease of linking students with native speakers in cross-cultural studies; and (d) analyzing students' perceptions on the use of these technologies to learn German. Echoing Wang and Vásquez's (2012) sentiment regarding the need for more research on students' progress and learning outcomes, Li (2012) recommends future studies center more

on quantitative data to analyze the impacts technologies have on students' language skills. Authors such as Pellettieri (2010) suggest that future research should include qualitative data to help understand students' perspectives on the phenomena of Web 2.0 technologies in learning foreign languages, as well as offer insight into the instructors' perspectives when employing such a study. In response to Wang and Vásquez's (2012) findings that 56% of reviewed studies utilize no identifiable theoretical framework, other researchers (Elola and Oskoz, 2012; Perez, 2003) call for more studies which are designed through specific theoretical lenses. This is another aspect that was pivotal for this study, as the researcher utilized technology that fostered a social constructivist learning environment among the participants.

Purpose of Study

The purpose of this study was to analyze the effects of Web 2.0 technology tools, including blogs, online chat, podcasts, wikis, Internet searches, video tutorials and video conferencing, and cross-cultural exchange on students' acquisition of German language skills and their cultural awareness of the German-speaking countries. Additionally this study analyzed students' perceptions of these technologies as a tool to enhance their language learning and cultural awareness. The researcher gauged whether students believe their German language skills were enhanced by having additional exposure to the language in authentic contexts using these technologies, and whether this method may be used in future teaching scenarios. To accomplish this, the researcher employed the aforementioned technologies, in addition to the regular use of the course textbook, to increase communication on an individual basis, with classmates, and by linking students with native German speakers at the university level in a cross-cultural communication project.

Research Questions

In order to provide an understanding of students' achievement in learning the German language and culture in a course that is enhanced by technology, as well as to gain deeper insights into students' perceptions of learning a foreign language which is enhanced by technology, this study was guided by the following questions:

1. What effect will the TSGLE intervention (blog, chat, podcast, wiki, and video conferencing) and cross-cultural exchange have on the dependent variables: students' language skills (reading, writing, listening, and speaking)?
2. What effect will the TSGLE intervention (blog, chat, podcast, wiki, and video conferencing) and cross-cultural exchange have on the students' cultural awareness?
3. How do students perceive the use of the TSGLE intervention and cross-cultural exchange in their process of learning German?

Study Procedures and Objectives

In addressing the identified research questions, this mixed methods study employed a concurrent triangulation process (Creswell and Plano-Clark, 2011). Quantitative data (Technology Implementation Survey results), and mixed methods data (blog entry and podcast recording results) were collected and analyzed to determine the effect of technology on students' learning of German by examining their reading, writing, listening, speaking skills, and cultural awareness. Qualitative data were collected and analyzed to determine student perceptions on the use of technology in the learning of German. More specifically, this included two focus group interviews, students' post-chapter reflections, the researcher's observations, and open-ended student responses to questions focusing on the virtual, cross-cultural exchange. The findings

developed from both quantitative and qualitative datasets were synthesized to answer the research questions.

Significance of Study

Wang and Vásquez (2012) highlighted several underrepresented areas in their review of literature from 2004 to 2009. These included, but were not limited to the following: studies focusing on the German language, lack of mixed methods studies, scarcity of research depicting multiple technology implementation, small percentage of literature incorporating a theoretical lens, limited research of less-used Web 2.0 tools (Skype), and no mention of virtual, cross-cultural studies. Therefore this study contributes to the literature as it provides insight into the aforementioned gaps, which has the potential to benefit educators and students of foreign languages, especially educators interested in learning how to implement technology in the classroom. As a mixed method study, it provides mixed method, qualitative, and quantitative data with the goal of better understanding the effects technology has on the learning of a foreign language, namely, German, as well as gaining a deeper understanding of students' perceptions on how effective technology can be in their pursuit of enhancing their learning of a foreign language. To contribute to the lack of theory implemented in previous research, the researcher of this study used a social-constructivist theoretical lens to evaluate the implementation of the aforementioned technologies. Finally, by embarking on a cross-cultural, distance project via blog, email, and video conferencing, this study linked students in the United States with university-level students in Germany; providing a unique venue of how technology can be used to connect students with authentic materials and real-life learning scenarios.

Previous research (Baker, 2006; Crozet and Liddicoat, 1997; Crozet, Liddicoat and Lo Bianco, 1997) has shown that learning a foreign language, which is inextricably linked to the

target culture, can provide students with a better understanding of their own cultural traditions. The study of a foreign language gives students the access required to engage with the target culture, which allows them to explore and identify the values and boundaries of their own cultural perspective. Therefore, studying German allows students to identify their own culture, as well as provide an understanding of the German culture, its language and literature as a discipline. This process requires students to speak and read in German, exposes students to linguistic structures different from English, and requires analysis of the German language, preparing them to be global citizens. This aligns with the German course from this study, as it qualifies as general education course (See Appendix B), the goals of which echo the aforementioned research (Baker, 2006; Crozet and Liddicoat, 1997; Crozet et al., 1997). Furthermore, the researcher of this study will have the potential to provide a model of German language instruction of how to incorporate technology in future curricula, including the possibility of linking students with native speakers.

Reflexivity Statement

My interest in learning the German language began at an early age when my family spent our summer vacations in Vermont visiting our German cousins from Stuttgart, who immigrated to the United States in the 1950s. While I was not speaking fluently as a youth and teenager, these visits allowed me to learn letters, numbers, simple phrases, and even some prayers that we recited at the dinner table. This interest in learning how to communicate with my cousins led me to study German in high school and college. My interest was particularly sparked when I had the chance to live and study in Salzburg, Austria during my junior year of undergraduate studies. This eventually led me to spend a summer in Heidelberg, Germany at an intensive German language school before embarking on a Master of German Studies at the University of

Cincinnati. The latter institution is where I also learned some essentials of technology, for example, how to organize classroom materials with tools such as *Blackboard*, the university's Course Management System (CMS). My methodology professor also demonstrated how to include video, web searches, and recordings of our lectures as graduate assistant student teachers, which were made available to our students.

After spending a year as a Fulbright Commission English Teaching Assistant in the small town of Bruck an der Mur in Styria, Austria, I honed my teaching skills and improved my German to where I felt confident communicating with natives in their local dialect *Steirisch* (Styrian). In order to stay in touch with my family and my now wife, I utilized the synchronous video conferencing tool *Skype* as well as the instant chat option available through the online-gaming website *Pogo*. At LSU I worked and trained with fellow faculty on the use of *Moodle*, as well as how to efficiently integrate technology into language teaching. This dissertation study illustrates the skills I learned and developed, and was enhanced by the multiple opportunities I have experienced and described above.

Chapter 2

Literature Review

Introduction

This literature review provides an overview of the following: an examination of the historical background of technology (instructional media) in education, the historical background of technology use in foreign language learning environments, and recent trends in use of technology to teach and learn foreign languages. This is followed by a section providing an overview of constructivism and social constructivism, including previous examples of this approach when using technology in foreign language teaching and learning.

Historical Background of Instructional Media

Reiser and Dempsey (2007) developed a definition of instructional media in their text *Trends and Issues in Instructional Design and Technology*. This was based on a number of previous definitions offered by the Association for Educational Communications and Technology (AECT) and is as follows:

The field of instructional design and technology (also known as instructional technology) encompasses the analysis of learning and performance problems, and the design, development, implementation, evaluation, and management of the instructional and noninstructional processes and resources intended to improve learning and performance in a variety of settings, particularly educational institutions and the workplace. Professionals in the field of instructional design and technology often use systematic instructional design procedures and employ instructional media to accomplish their goals. Moreover, in recent years, they have paid increasing attention to noninstructional solutions to some performance problems. Research and theory related to each of the aforementioned areas is also an important part of the field.

While the inclusion of technology in education is not a new phenomenon, it is important to include this definition in order to provide a basis for how educators and researchers have refined their use of technology in educational settings over the years in the field of

foreign language education. However, before describing the current trends of instructional media in foreign language learning environments, the following depicts the earliest uses and subsequent developments.

According to Saettler (1990), use of media as an instructional tool in the United States traces back to the beginning of the twentieth century when school museums were first introduced. The museum exhibits included mostly visual media such as stereographs (three dimensional photographs), slides, films, study prints, and charts. The interest of visual media was the impetus for the visual education movement which was established by the Keystone View Company, who in 1908 published *Visual Education*, a publication providing educators an informative guide to lantern slides and stereographs (Reiser, 2007). This movement led to the use of the motion picture projector as the first media device to be used in schools such as the public school system of Rochester, New York, who adopted this form of media in 1910. Over the following decade and several years after World War I, the visual education movement had developed into a professionally-recognized entity. This included the establishment of five national professional organizations for visual instruction, five journals focusing on visual instruction, more than 20 teacher-training institutions that offered courses in visual instruction, and numerous school systems having developed bureaus of visual education (Saettler, 1990).

The 1920s and 1930s became an era marking the beginning of another movement of instructional media, audiovisual instruction and instructional radio. “Technological advances in such areas as radio broadcasting, sound recordings, and sound motion pictures led to increased interest in instructional media” (Reiser, 2007, p. 19). This movement continued its expansion, particularly due to a major merger of three professional organizations for visual instruction into one organization, the Department of Visual Instruction (DVI). The DVI was a unit within the

National Education Association, which over the years eventually became called the Association for Educational Communications and Technology (AECT) (Saettler, 1990). With the establishment of the DVI, the audiovisual movement gained momentum in the field of education, particularly due to the value educators were witnessing in the use of audiovisual materials used in presenting content. One medium that became particularly recognized was radio. Many advocates strongly believed this technology would become revolutionary in the field of education. However, it was found that radio, as well as the audiovisual movement, lost its momentum in school environments. Much of this was caused by World War II, a time which saw a shift in the use of audiovisual materials from the school setting to that of the United States military. “For example, during the war the United States Army Air Force produced more than 400 training films and 600 filmstrips, and during a two-year period, from mid-1943 to mid-1945, it was estimated that there were over four million showings of training films to United States military personnel” (Reiser, 2007, p. 19). Training films were not only used by military personnel but also by citizens, particularly in training for employment, which led to more effective training programs that reduced training times as well as absenteeism by employees (Saettler, 1990).

According to Saettler (1990), additional audiovisual materials were also developed and implemented to train military forces during World War II. These included overhead projectors and slide projectors, which were used to teach aircraft and ship recognition, audio equipment, which was used to teach foreign languages, and simulators for flight training. The use of these materials, as well as the aforementioned instructional film, was perceived as a success, especially in areas of training. This led to a revived interest in the use of audiovisual materials in schools in the years following the war, with an additional effort to establish intensive research studies.

These studies were “designed to identify how various features, or attributes, of audiovisual materials affected learning; the goal being to identify those attributes that would facilitate learning in given situations” (Reiser, 2007, p. 20). The majority of studies conducted in the years following World War II focused on comparing uses of specific mediums, such as film, versus use of traditional, live instruction with no technological medium. According to Clark (1983), such studies typically resulted in students having learned equally regardless of the medium.

Due to these repeated results, critics suggested that research should shift its focus to other areas, such as how the media affects learning or how instructional methods in the use of technology, versus simply the technology, affect learning outcomes (Reiser, 2007). In the 1950s, different theories of communication began to steer research in another direction that focused on communication processes, which helped expand the focus of the audiovisual movement. However, while this new direction in research helped increase its presence, “perhaps the most important factor to affect the audiovisual movement in the 1950s was the increased interest in television as a medium for delivering instruction” (Reiser, 2007, p. 20).

The growth in use of television as a medium in education was due to two primary factors. The first was the Federal Communications Commission’s decision in 1952 to designate 242 television channels for educational purposes, which led to the increased development in public television stations, whose primary mission was to present instructional content. The second significant factor in the expansion of the use of television as an educational tool was the stimulus in funding provided by the Ford Foundation. This led to the adoption of closed-circuit television into various school systems, for example, in Maryland and Chicago. Unfortunately, poor instructional television projects, high costs of installation and maintenance, and teacher

resistance, were all factors why educational television did not experience a larger expansion (Reiser, 2007).

The 1970s witnessed a major development in instructional media¹. The term *audiovisual instruction* was now recognized as *educational technology* and *instructional technology*. Two journals published by the AECT had also experienced a name change; *Audiovisual Communication Review* changed to *Educational Communications and Technology Review*, and *Audiovisual Instruction* became *Instructional Innovator* (Reiser, 2007). Not only were changes happening in the naming of key organizations and publications, but other changes and advancements in technology, namely the computer, were also happening during the 1970s, 1980s and beyond. The development of the microcomputer in the early 1980s led to an increased interest in instructional environments. “Many educators were attracted to microcomputers because they were relatively inexpensive, were compact enough for desktop use, and could perform many of the functions performed by the large computers that had preceded them” (Reiser, 2007, p. 22).

By the mid-1990s, although the schools in the United States averaged one computer for every nine students, the impact of their use was minimal, and a number of teachers even indicated that there was little to no use of computers for educational purposes. Research studies revealed that the majority of uses of computers and technology were primarily for drill and practice exercises, and for teaching computer-related skills; they showed minimal signs of having any impact on teaching methods. Despite these revelations, there is evidence that indicates positive uses of technology (Reiser, 2007).

¹ The 1970s also marked a period in which technology played a more significant role in foreign language education. While use of audio equipment was used to instruct military personnel during World War II, technology during the 1970s was being implemented more in language laboratories (Warschauer & Meskill, 2000). This will be further discussed in the following section that highlights the historical uses of technology in foreign language instruction.

Throughout the 1990s and beginning of the twenty-first century, developments and improvements in access to the Internet increased the use of technology for instructional purposes, especially in training and business. There was also an increased use in technology in higher education settings, particularly in distance learning and online course delivery. In 2004/2005 nearly two-thirds of all colleges and universities offered accredited online degrees. In 2002, 83% of colleges and universities used course management systems such as *Blackboard* and *WebCT* (Market Data Retrieval, 2005). The United States military, including the United States Navy, United States Army, and United States Marine Corps all offer online course delivery or provided digital training facilities (Chisholm, 2003a; Chisholm, 2003b; Fuhr, 2004).

Moore (1989) recognized new developments such as the interactive capacities of technology, in particular three modes of interaction supported by media: learner with instructional content; learner with instructor; and learner with learner. The types of media described by Moore include: email, chat rooms, and bulletin boards. While there is a learning curve becoming accustomed to new technologies, these types of media, along with new capabilities in technology enhancements, allowed for types of information to be more easily presented. This includes print, video, audio, and feedback capabilities. “Moreover, the ability of computers to present information in a variety of forms, as well as to allow learners to easily link to various content, has attracted the interest of instructional designers having a constructivist perspective” (Reiser, 2007, p. 23).

This section has offered a concise historical overview on some of the earlier traces of technology in education, with particular focus on the twentieth century. While it is important to gauge the implementations and developments in educational technology over time, the primary focus of this project, aside from analyzing the uses of technology in a German language course,

is also to provide insight into the uses of educational technology in foreign language instruction. The following section therefore provides a historical preview of this which will then lead to an overview of current trends in the use of technology in foreign language instruction.

Historical Background of Technology in Foreign Language Learning

As was previously mentioned, technology use in foreign language instruction dates back to World War II, when United States military forces trained by using audio equipment during the audiovisual instructional and instructional radio movement (Saettler, 1990). Warschauer and Meskill (2000) have provided a brief summary on the history of educational technology in foreign language instruction, with particular focus on higher education. This provides some insight into the shift of approaches that occurred starting in the 1970s to today's uses.

In the 1970s, the development of the audio cassette tape was the primary medium used to practice the audio-lingual method, which is learning through extensive memorization and oral repetition (Taylor, 2003). This method was typically used in language laboratories where university students would practice repetitive drills following audio prompts. However, in the late 1970s researchers began to recognize that this method was leading to poor results. The focus of instruction was purely on language form, namely pronunciation, and the teaching of communicative meaning and interpreting the target language was ignored. Resultantly, the 1980s and 1990s experienced a shift from this drill and practice method toward a communicative teaching approach (Warschauer and Meskill, 2000).

The focus of the communicative teaching approach was to foster student engagement in authentic and meaningful interactions. Educators utilizing this trend focused on two perspectives in order to provide the best learning scenario for students via technology, namely cognitive and socio-cognitive approaches, not simply based on habit formation (Chomsky, 1986, as cited in

Warschauer and Meskill, 2000). Chomsky (1957) (as cited in Slife and Williams, 1995), discusses the language learning process as not based on simply stimulus and response. “Rather, it seems that human beings have an innate capacity to learn and use language, a capacity that unfolds naturally rather than being shaped. Learning and using a language is more like following rules than being shaped by reinforcement” (p. 39).

Warschauer and Meskill (2000) highlighted several technologies supporting cognitive approaches allowing for exposure to language in meaningful contexts where learners construct their own individual knowledge. Examples of these technologies include text reconstruction software, concordancing software, and simulation software. An example of text reconstruction software is *NewReader*, designed by Hyperbole, which allows instructors to alter a text by deleting or scrambling words for students to then complete it by filling in the blanks or re-scrambling the words. *Monoconc*, designed by Athelstan, is an example of concordancing software, which allows instructors and students to search through texts to find instances of the actual uses of particular words. Not only does the program provide a dictionary definition of a particular word, it also provides additional examples and particular uses of that word in a variety of ways. An example of a multimedia simulation is the French program *A le reecontre de Philippe*, produced by the Massachusetts Institute of Technology (MIT). This program allows learners to enter into computerized microworlds with exposure to the target language and culture. Students “walk around” in a virtual world and explore simulated environments, which allow for control and interactivity. While these examples of software products can be used in foreign language teaching and learning contexts, they are limited to individual or partner exercises, working solely with the computer, and do not require student to student interaction (Warschauer

and Meskill, 2000). The following section briefly discusses socio-cognitive approaches, and provides examples of technologies that foster student to student interaction.

According to Schieffeln and Ochs (1986) (as cited in Warschauer & Meskill, 2000), language learning is a process of socialization and participation in a variety of discourse communities. Students need exposure to authentic interaction, and this can be accomplished by engaging in student collaboration or authentic tasks which prepare them for the communication they will encounter outside of the classroom, for example, in the Internet. Examples of the computer-mediated communication (CMC) tools can be implemented to support this type of environment including email, blog, online chat, podcasts, wikis, and course management systems. Several other categories including social media sites, online video games, interactive television programs, and individual tools such as iPads have also been utilized to enhance the teaching/learning of a foreign language. Additionally, these technologies have also been used in foreign language distance learning (FLDL) and in long distance exchanges between students. The following section will highlight these trends in the use of technology to enhance language learning and instruction.

Technology Use in Foreign Language Learning Environments

This section primarily includes studies in higher education, but also highlights several at the K-12 level simply to illustrate the use of specific technologies that were effectively implemented. This review also includes several studies in English as a Foreign Language (hereinafter EFL) as they also illustrate effective uses of technologies. Studies in FLDL environments and for long distance exchanges are also included. It should be noted that throughout this review key terminologies related to technology, including the following: asynchronous computer-mediated communication (hereinafter ACMC), computer-mediated

communication (hereinafter CMC), synchronous computer-mediated communication (hereinafter SCMC), blog, online chat, podcasts, and wikis, will be described, defined, and used interchangeably and often.

Email

Several studies found that the use of email exchange, an asynchronous form of communication, helped assist students' reading skills (Shang, 2005), writing skills (Shang, 2007), and pronunciation skills (Volle, 2005). Shang (2005) explored students' attitudes when exchanging emails with one another demonstrating that "incorporating email into a reading class may positively influence student reading achievement" (p. 208). For this study, students exchanged emails for peer feedback and corrections. Results indicated that negative attitudes did exist among participants in that there was either not enough time to complete the task, or that some students prefer communicating face-to-face (F2F). While this may have been the case for some, the majority of students who participated in the intervention maintained a positive attitude, indicating email helped improve their reading skills; they also found the technology to be a useful exercise to practice their L2 learning, (Shang, 2005).

In a similar study, Shang (2007) again employed the use of email exchange among students, however, with a focus on improving writing. Results showed that "most students believe that it [email] is a positive strategy that helps improve their foreign language learning and attitudes toward English, as reflected by the positive responses to the survey" (Shang, 2007, p. 92). To gauge student achievement using the email as a medium of communication, the researcher, (Shang, 2007), analyzed total words, use of subordinate and coordinate clauses, sentence complexity and vocabulary complexity. The results revealed that students thought they had more practice in the target language, engaged in more social interaction and self-monitoring

of their work, and claimed their language skills and attitude toward English improved, (Shang, 2007). Volle (2005) also used email exchange but with a slightly different approach. In her Spanish courses students exchanged two types of voiced audio emails that took place on a weekly basis; read-aloud passages and grammar-drill completions. In addition, students participated in two oral conversations via MSN messaging, an instant chat tool for oral communication. The researcher analyzed students' articulation, accuracy, and proficiency and found that although improvement in articulation was not significant, improvement in conversation proficiency was significant. The researcher observed that "synchronous online oral tasks and online oral interviews are valuable experiences to the students and provide permanent records of oral development" (Volle, 2005, p. 156). Another valuable aspect of requiring students to complete oral communication tasks asynchronously and synchronously, when compared to F2F classes, is that "each student has a true voice and cannot hide online" (Volle, 2005, p. 156). The use of email exchanges, as seen in these studies, shows how students can practice their L2 learning in interactive contexts outside of the classroom, in some cases analyzing and critiquing fellow classmates and constructing new knowledge. In the next section, the review depicts studies that utilized synchronous communication technology through the use of online chat.

Online Chat

Chat is synchronous online communication via text message transmission from sender to receiver (Wikipedia). Studies that analyzed the use of online chatting found that this technology can enhance learner to learner interaction (Oskoz, 2009), promote negotiation of meaning between learners (Pellettieri, 2010; Shekary and Tahririan, 2006; Toyoda and Harrison, 2002; Tudini, 2003), and increase vocabulary (Perez, 2003). Perez (2003) compared productivity of

asynchronous (email) versus synchronous (chat) communication in a first semester Spanish course. The use of online chatting “allow[s] students more opportunities to negotiate meaning and to converse in spontaneous, everyday language away from textbooks” (Perez, 2003, p.90). Moreover, this technology has the ability to promote equivalent or higher production of the target language versus traditional, F2F courses (Perez, 2003; Abrams, 2003). Although students in Perez’s (2003) study showed equal preference to email and online chat use on a weekly basis, the analysis indicated that on average, chat produced more new words. Students also indicated that chat room sessions allowed them to practice more words and learn sentence structure faster.

Sykes (2005) analyzed the quantity of supportive moves in partner-assigned dialogues. These are apologies or explanations used when practicing how to decline an invitation. In this study, students in a Spanish course observed a modeled dialogue by native speakers before being designated to one of three groups, online chat, oral chat, or F2F. Results found that F2F groups produced more supporting moves when conducting partner-assigned dialogues as compared to synchronous oral chat and synchronous written chat. Although the F2F group produced more, Sykes (2005) found that the written chat “group was the only discussion group that allowed for consistent practice of the strategies in two modes of communication: written and oral” (p. 420).

Sanders (2006) compared chat room production in a lab setting with the presence of a teacher (control) to use of chat out-of-class without the presence of a teacher (experiment). Students chatted about their experiences with Spanish, their favorite places, and a typical day. Production in the experimental group was greater than that of the control in minutes spent chatting, turns taken, use of Spanish, and correctly spelled Spanish words. Students in the experiment group needed to prioritize their schedules outside of class time which may have resulted in being more productive with their work (Sanders, 2006). Ene, Görtler and McBride

(2005) also observed student chat room production in a German class and found that students took more turns while the teacher was absent versus when the teacher was present.

Shekary and Tahririan's (2006) study of online chat for an EFL course "focused on the naturally occurring negotiation of meaning" (p. 561). The researchers found that this form of SCMC promotes negotiation of meaning and noticing which they describe as mini-dialogues or language-related episodes (LREs), where students notice errors or raise questions during their chat exchanges (Shekary and Tahririan, 2006). After analyzing multiple identified LREs from over 125 hours of recorded chat sessions from eight dyads, the researchers found that the majority of them were correct and concluded that a blended learning environment using technologies such as online chat "enhances the process of noticing and subsequent L2 learning" (Shekary & Tahririan, 2006, p. 570).

Although these studies show how online chat can enhance student learning by promoting students' negotiation of meaning (Shekary and Tahririan, 2006), and by helping increase the use of the target language (Perez, 2003), the increased use in the language does not always translate into more effective language use. Böhlke (2003) found that while student use of chat in a German course yielded higher productivity compared to F2F student interaction, the F2F students produced more syntactic changes including the use of subordinate clauses, inverted word order, and verb separation. It is important to consider some of the learning curves involved when implementing these technologies, and to know that some students may produce better results in one environment versus another. In order to create an ideal learning scenario, researchers should keep in mind the importance of training students, and the design involved when using these technologies

Oskoz (2009) observed student behavior in the use of four online chats by exploring “ways in which learners assist each other” (p. 49) by pairing expert with novice learners. In this Spanish course, the researcher also hoped to find whether learners’ feedback helped assist in student learning. Results revealed that “learners engage in a collaborative dialogue and that they provide one another with both direct (explicit) and indirect (implicit) feedback” (Oskoz, 2009, p.64). While this study does show that use of online chat can promote student collaboration, it was recommended to incorporate posttests to check language items used in the student exchanges (Oskoz, 2009).

Pellettieri (2010) compared SCMC students using online chat to a F2F group and focused on structural interaction. Similar to Shekary and Tahririan (2006), this study also hoped to use online chat as a tool to promote negotiation of meaning where students resolve a problem they do not fully comprehend while using SCMC (Pellettieri, 2010). Students in both groups completed informational-gap exercises where the partners would describe an image to each other to then be drawn by the partner. The F2F groups did produce more turns in their exchanges, however, the SCMC groups produced more words (Pellettieri, 2010). Hirotani (2009) investigated the effects of SCMC and APMC on the development of linguistic features of learners’ speech in a Japanese language course. Discussions from two SCMC groups, one utilizing synchronous chat via MSN messenger, and one APMC group utilizing online discussions via a virtual bulletin board were compared to the discussions of a F2F group. The researcher concluded that while CMC is a good tool to prepare students for oral discussion, it may not be the most effective way to help students develop oral skills in terms of quantity of output (Hirotani, 2009). Despite this assertion, the findings indicated “that, overall, the participants significantly improved their oral proficiency skills over the course of a semester” (Hirotani, 2009, p. 423).

Blogs

A blog is a web log which displays entries that are presented in reverse chronological order, and are then interlinked with other media (Castaneda et al, 2011). Some examples on the uses of blogs include but are not limited to the following: use as a digital repository for uploading documents from mobile devices (Comas-Quinn, Mardomingo, and Valentine, 2009), use as an extensive writing task (Armstrong and Retterer, 2008; Sun, 2010), and use for producing collaborative, creative writing projects (Armstrong and Retterer, 2008). Given the nature by which blogs can promote collaboration, they may also play a pivotal role in creating constructivist learning environments (Comas-Quinn et al., 2009).

Comas-Quinn et al. (2009) conducted a study to gauge the impact mobile blogging has on student learning during a week-long study abroad course in Spain. Students developed a blog which was a repository for digital file uploads and comments. Due to ease of use and cost effectiveness, students used their own phones, digital cameras, and MP3 recorders to collect content. Students participated in a content gathering phase by documenting their travels to a town center and uploading that content to the blog. By the end of the study abroad excursion multiple images and audio recordings had been uploaded to the blog, which sparked additional commentaries by the student participants (Comas-Quinn et al., 2009). Armstrong and Retterer (2008) analyzed student participation using blogs in an intermediate Spanish course to observe the effect of blog writing on students' language acquisition skills. The authors observed that student writing improved in the areas of verb tense and an increased ability in writing complex sentences including T-units (sentences including main and secondary clauses). It was evident that this experience was positive for the students. The majority indicated that they enjoyed

writing blogs, and felt this tool was easy to use. All participants indicated they felt more comfortable and confident writing in Spanish, (Armstrong and Retterer, 2008).

Ducate and Lomicka (2008) used blogs to help improve French and German students' reading and writing skills. Results from their study revealed that students felt a sense of ownership and enhanced creativity when writing their blogs. Students also felt the blog was a more relaxed learning environment that allowed them to experiment with the language. Additionally, the blogs provided students a window into the target culture that normally would not have been experienced by the textbook alone. Sun and Chang (2012) found that students who used blogs to develop dialogue exchanges in an EFL course improved their strategies to cope with difficult language situations. Results from this study also revealed that participants engaged in knowledge sharing and creation which enhanced their sense of autonomy and ownership when writing. Similarly, Sun (2010) found that blog use improved students' writing performance in that the medium promoted autonomy, improved attitude, and enhanced motivation among participants. Lastly, Castaneda et al., (2011) found that the use of blogging in a Spanish language course provides students with the potential for learning problematic grammar structures. Results from their study indicate that students found the blogs easy to use and that they were satisfied with their regular contributions and exchanges with other participants.

Podcasts

The use of podcasts in language learning environments was also evident in multiple studies, ranging from student-created recordings to practice pronunciation (Ducate and Lomicka, 2009), to searching for downloaded podcasts used to enhance listening skills (Schmidt, 2008). Ducate and Lomicka (2009) define a podcast as “an audio file that anyone can create using a computer, microphone, and a software program” (p. 68). Not only can podcasts be student-

created, but students can also search, subscribe, and listen to a number of podcasts created by others. Academic scholars propose a four-part definition of a podcast as a digital audio or video file that is: 1) episodic; 2) downloadable; 3) program-driven, mainly with a host and/or theme; and 4) convenient, usually via an automated feed with computer software (Gil de Zúñiga, 2010).

Schmidt (2008) required students in his German language classes to find podcasts through the internet, as well as create their own. Students were trained during the first few weeks of a semester on how to find podcasts, as well as how to create their own. Schmidt helped facilitate, offered support, and provided feedback to students having difficulty finding podcasts, as well as understanding the faster-paced tempo of the language. Students were required to listen to podcasts two to three times a week and reflect on them in written form, group collaboration, or oral presentation, all in the target language. Even though students faced challenges adapting to listening to authentic German, they eventually became accustomed to the material, even when it was more advanced material. “The main advantage of the long term podcast assignments is that students will hear authentic German on a regular basis” (Schmidt, 2008, p. 189).

Ducate and Lomicka (2009) utilized podcasts to analyze student pronunciation in German and French courses. Students were required to create five scripted recordings and post them to a blog from which students would listen to each other’s podcasts and provide commentaries. After taking a pre-/post-test pronunciation attitude survey, no significant difference was found in student pronunciation. Despite these results, the French students’ accents did improve between their first and second podcasts, and half of the German students’ accents improved between the pre-test and post-test.

Abdous, Camarena, and Facer (2009) analyzed student responses from surveys and interviews from two groups; podcasts as supplemental material (PSM), and podcasts integrated

into curriculum (PIC). The PSM group indicated they were helpful, but would have found them to benefit their language skills more had they been made compulsory to access and use. The PIC group indicated the podcasts had a positive impact on their study habits, helped improve their listening skills, and increased their vocabulary. Results revealed that when compared to the PSM students, more PIC students indicated the podcasts helped make learning the material easier. In a similar study, Abdous, Facer, and Yen (2012) analyzed student achievement by comparing final grades between PIC and PSM groups. This study yielded different results compared to their 2009 study suggesting “a relationship between podcasting use and final grade that is inconsistent with the theoretical expectation” (Abdous et al., 2012, p. 50). In this study more than half of the PSM students achieved an A/A-, whereas less than half of the PIC students achieved an A/A-.

Lord’s (2008) study of podcast use found a significant improvement in students’ pronunciation. Participants were required to record texts read aloud, tongue twisters, and phonetic exercises. Students’ perceptions indicated that the integration of podcasts was useful and beneficial to their Spanish speaking skills (Lord, 2008).

Wiki

Another popular Web 2.0 tool used in a variety of foreign language learning environments is a wiki, which is a website that can be edited by anyone asynchronously allowing for collaboration among its users (Ducate, Lomicka, and Moreno, 2011). Wikis are designed for online group collaboration and function as shared repositories of information among users (Castaneda, Ahern, and Díaz, 2011). Their use in educational settings have included student-created pre-reading tasks, collaborative stories (Ducate et al., 2011), and peer-reviewed writing projects (Kessler, Bikowski, and Boggs, 2012).

Ducate, Lomicka, and Moreno (2011), analyzed the use of wikis in three language courses, French, German, and Spanish. The French, German, and Spanish courses created three individual wikis, a micropedia, pre-reading project, and branching story, respectively. The micropedia required students to compile text, images, and sound files. The pre-reading wiki required students to add cultural and historical aspects of a text for fellow students to consult as a resource. The branching story required students to create their own version of a story to be added to the wiki from which other students could choose to read. It was found that the wiki promoted responsibility and accountability on the students. Results from quantitative and qualitative data also “suggest that students viewed the wiki as a valid learning tool and found the wiki environment to be enjoyable” (Ducate et al., 2011, p. 515).

Kennedy and Miceli (2013) also used a wiki in an introductory Italian course. Despite some challenges of integrating this technology, and some signs that showed a lack of interest by the students, the participants did create some creative pages within the wiki. The researchers also found that even though the wiki did not reach its full potential in establishing a sense of community, student perception of this technology was favorable (Kennedy and Miceli, 2013).

Recent Trends of Technology

Social media websites including Facebook have also been integrated into language learning environments. Leier (2011), for instance, used Facebook in a German course for a film project. Students were required to create mini-films and upload them to the class-created Facebook page. Students viewed each other’s films and judged their contents in a discussion forum. Post-survey results showed that students enjoyed this type of interaction. Rama, Black, Van Es, and Warschauer (2012) observed student behavior, interviews and game logs for two individual students after playing a Spanish-language version of the massively multi-player online

game (MMOG) World of Warcraft (WoW). Results show that playing this type of game provides authentic L2 social interaction and an engaging and low anxiety setting to explore the Spanish language (Rama et al., 2012).

Pardo-Ballester (2012) used the online television program LoMásTV, created by Yabla Inc., to allow students to practice their listening and speaking skills by reviewing authentic video clips. The program also includes a chat tool allowing students to communicate with one another while viewing the clips. Results show that students' listening skills improved, their recall of vocabulary improved, they learned more about the culture, and found the videos useful and enjoyable. Comparing pre- and posttest results showed that students' listening and speaking skills improved.

Lys (2013) used iPads in an advanced German conversation class to enhance oral proficiency. In this study, participants were required to conduct weekly recordings, and participate in weekly video conversations using iPad's Facetime application, a video conferencing tool. Most students found use of the iPad to be helpful in learning the language. The average time of the weekly recordings increased between the first and the last recording. Although not much change in length of weekly Facetime conversations was evident, the researcher noticed that it can be beneficial to improving oral proficiency (Lys, 2013).

Technologies used in Distance Learning

This review also included studies of foreign language distance learning (FLDL) programs as they integrated interactive technologies that can also be used in F2F settings. Hannan (2009) discussed how successes in an online learning environment depend on the need for interactivity, and that e-learning environments are ideal in fostering interaction between students because of the "myriad forms of communication available and the rich exchange of ideas that build over

time” (p. 4). Stickler and Hempel’s (2010) pilot course “CyberDeutsch” helped students develop their social-constructivist skills by participating in the Moodle Virtual Learning Environment (VLE). This environment offered online discussion forums, group tasks such as creating a wiki, blog writing, unit quizzes, website access, and synchronous video conferencing. Results of this case study from two individual students’ overall actual work revealed the most significant language production. The researchers argue that such an environment is ideal for student production in the target language; however, additional research is required to gauge whether this is due strictly to being online versus F2F. In the case for this study it is evident that, if given a proper environment such as Moodle, students are capable of producing and achieving higher levels of learning in the target language.

Walker and Haddon (2011) analyzed distance learners of Chinese, French, German, Japanese, and Spanish utilizing resources including written study guides, textbooks, the WebCT course management system (CMS), and Wimba voice communication system. While most student feedback was positive, some challenges were experienced including difficulty accessing the technology, which caused some resistance from the students to the technology and online learning environment. Student reflections indicated that their experiences were positive in that they were highly motivated, claiming that in the past, F2F courses were difficult, but that this mode made it easier to learn. Students preferred the online tools including instant-feedback quizzes, online verb trainers, online dictionaries, and access to Wimba voice tools (Walker and Haddon, 2001).

Lai, Zhao, and Wang (2011) examined an online Chinese course for high school students that featured asynchronous tools including textbooks, online resources such as Chinese podcasts, Chinese character learning software, online dictionaries, weekly language and culture

assignments, and discussion forums via message centers through Blackboard CMS. Students were also required to record oral responses, complete dialogues, write short essays about their families, and offer self-reflections. The synchronous portion of the course included one-hour weekly video conferences via Adobe Connect which allows students and instructors to share documents, provides live lecture and video presentation via a web camera, conducts online chat, and shares presenter roles. The course also consisted of 12 one-hour task-based language teaching sessions, completing units every two weeks in a F2F setting. Students reacted positively to the course design, noticing progressive changes in their approach to learn. The majority retained interest in learning Chinese, and more than half continued to learn Chinese at the next level. Some students responded “I like the atmosphere of the experience”, and “I like the tasks a lot because it is a little bit different from how I am used to learning” (Lai et al., 2011, p. 87).

Cross-Cultural Exchanges

Multiple studies focusing on creating long distance exchanges between students from international locations have also been conducted in foreign language learning environments. These have focused on creating a number of online environments, for example, having ESL students located in Canada, Mexico, and Russia communicate with one another via digital bulletin boards (Basharina, 2007), creating email exchanges between students in the United States and Germany (Belz, 2002; Belz, 2003; Biesenbach-Lucas, 2005), chat room dialogues for native Cantonese speakers living in the United States (Lam, 2004), and social media network exchanges (Klimanova and Dembovskaya, 2013).

In Basharina’s (2007) study, EFL students from Mexico, Japan, and Russia linked together using the CMS *WebCT* to participate in bulletin board discussions. Three main themes

developed from this study: intra-cultural contradictions, inter-cultural contradictions, and tech-related contradictions. The intra-cultural contradictions included issues for students concerned with wanting to post a comment or not, or whether to sound formal versus informal. The inter-cultural contradictions included unequal contribution among the students, clashes among students when it came to topic choices for discussion, and even plagiarism. The tech-related contradictions included message overload which sometimes hindered the formation of a community, name and gender confusion, and a slow-functioning bulletin board, especially when compared to instant chat. Despite these contradictions that were identified, learners became less anxious communicating in the target language over time (Basharina, 2007).

Lam (2004) analyzed a Chinese/English chat room for two teenage, Chinese immigrants living in the United States. This tool provided an additional venue for language socialization, illustrating how people can navigate across contexts within virtual environments of the Internet to “articulate new ways of using English” (Lam, 2004, p. 44). Lam (2004) found that students created new online identities, such as being recognized as a speaker of English on the Internet. Klimanova and Dembovskaya (2013) analyzed the behavior of non-native speakers (NNS) with native speakers (NS) of Russian using a social media community networking tool called *Vkontakte*. Their goal was to gain a better perspective of student identity development by speaking with NS, and to observe how this internet tool can enhance language learning when NNS have a lack of contact with the L2. Analysis of the data shows that NS and NNS interaction can result in unequal power relations, where the NS becomes empowered and the NNS’s role as a L2 learner becomes diminished. Yet, despite this, the researchers found that “power relations enabled our L2 participants to shift out of the intimidating frames of L2

speakers, and assume the role of L2 learners when a need to negotiate meaning arose” (Klimanova & Dembovskaya, 2013, p 83).

Constructivism and Social Constructivism

The research reviewed in this study focused on trends in technology use in teaching and learning foreign languages both F2F and in FLDL environments. In doing so, the researcher’s goal was also to gain a better understanding of the theoretical underpinnings found in these studies. For instance, Shekary and Tahririan (2006) observed student interaction in online chat activities within the context of interaction theory which promotes online negotiation and collaboration between students in L2 learning.

Other studies (Hutchinson, 2009; Leier, 2011; Oskoz, 2009) incorporated sociocultural theory, introduced by Vygotsky (1978), which describes the learning process being enhanced by those around us. Hutchinson (2009) and Leier (2011) claim that technologies promote collaboration among one another by allowing continuous sharing and commenting on one another’s work. This collaboration also creates a natural, informal learning environment. Moreover, use of specific software tools, seen through a socio-cultural lens, allows students to facilitate their learning and improve their performance in L2 learning in that it helps address literacy and identity issues in language learning (Hutchinson, 2009). Additionally, several studies (Comas-Quinn et al., 2009; Hutchinson, 2009; Shekary and Tahririan, 2006) also addressed the use of specific technologies such as blogs that foster constructive learning. Comas-Quinn et al. (2009) look at two forms of constructivist thought that emerged from constructivist thinking, namely, Jean Piaget’s (1969) cognitive constructivism, which focuses on the mental processes of an individual’s construction of knowledge, and Vygotsky’s (1978) social constructivism, which focuses on the social contexts that shape knowledge construction.

Constructivism is derived from the notion that there is a real world that exists and is experienced, and the meanings and understandings of this world are imposed by the person (Thompson, Simonson, and Hargrave, 1996). It is an epistemology by which knowledge, or reality, is created by individuals and social groups based on their previous life experiences. These realities are embodied in human experiences, individual perceptions of events, imaginations, and mental and social constructions (Jonassen, Cernusca, and Ionas, 2007). John Dewey (as cited in Daly, 2007), mentions that “the meaning of prior experience is necessary and instrumental for shaping the intellectual formulation of any social event” (p. 32). Furthermore, “we don’t simply create idiosyncratic meanings of behavior, but we construct meanings on the basis of socially available, shared understandings of reality” (p. 32).

According to Driscoll (2007), to create a constructivist scenario in an academic setting, it should: “engage learners in activities authentic to the discipline in which they are learning; provide for collaboration and the opportunity to engage multiple perspectives in what is being learned; support learners in setting their own goals and regulating their learning; and encourage learners to reflect on what and how they are learning” (p. 42). This learning environment represents a shift away from the emphasis being on instructional communication to that of practice-based learning. Rather than being told about the world, students are participating in interactive practices that promote an engaging and immersing scenario (Jonassen et al., 2007), where cognitive experiences are situated in authentic activities (Thompson, Simonson, & Hargrave, 1996). Wilson (1996) describes this setting “as a place where people can draw upon resources to make sense out of things and construct meaningful solutions to problems” (p. 3).

Summary

The research reviewed in this chapter shows that effective use of asynchronous and synchronous technologies² can lead to enhanced L2 learning by students such as increased vocabulary (Perez, 2003), improved negotiation of meaning (Pellettieri, 2010), improvement in listening skills (Schmidt, 2008), and collaborative and constructive learning environments (Armstrong and Retterer, 2008; Ducate et al., 2011; Leier, 2011). Despite the evidence supporting increased L2 learning, these studies also illustrate that improvements in some cases were not always significant (Ducate and Lomicka, 2009; Perez, 2003). Reasons causing this included, for example, students having difficulty working with and accessing the technology (Walker and Haddon, 2011). Some even showed the difficulty of late planning which led to a lack of student motivation, or misunderstanding of the goals of using the technology (Comas-Quinn et al., 2009). Other instances showed how students became frustrated with extensive use of the target language, and the difficulty working with strangers from different virtual locations as was the case in a FLDL environment (Lai et al, 2011).

To minimize these challenges, educators must keep several things in mind. First, making a clear plan of how you intend to use technology in the classroom is crucial. As was seen in Comas-Quinn et al. (2009), planning and designing the use of mobile blogging was done late in their course. Although this occurred, they still found positive implications of what the technology can do to encourage student participation. There needs to be clear set goals of how to design a course which includes technology integration. Second, the training of students is also a crucial component of making technology use a success in the language classroom. Schmidt (2008) required his students to access challenging audio podcasts for an entire semester.

² These include but not limited to the aforementioned technologies in this study or the following: blogs, chat, games, online television, social media, and wikis.

Although this was difficult for the students, Schmidt trained them for the first several weeks of the semester on how to access them, and he also coached them throughout the semester to help interpret the material. Lastly, be sure to model the use of the technology as this will help students have a better grasp of what your goals are for including technology (Lai et al, 2011). When this occurs the students find the use of the technology to be more convenient, and more individualized which can lead to better results (Lai et al, 2011).

This review revealed a number of insights into the use of technology in teaching foreign languages. It also revealed some possible future directions in which research can take advantage of enhanced technologies such as the interactive television program *LoMásTV* (Pardo-Ballester, 2012), iPads (Lys, 2013), or similar tools that allow for simultaneous student interaction. Other technologies of which to take advantage are social media sites such as Facebook (Leier, 2011) which can enhance a sense of community among students. And, while these technologies should be embraced, others, including blogs, chat, podcasts, and wikis, which have resulted in enhanced learning, should also be considered as meaningful tools that can enhance student interaction and constructive learning.

Chapter 3

Methodology

Purpose

The purpose of this study was to analyze the effects a Web 2.0 technology intervention, including: (a) blogs; (b) chat; (c) podcasts; (d) wikis; and (e) live video conferencing with native speakers had on the dependent variables, students': (a) reading; (b) writing; (c) speaking; (d) listening skills; and (e) cultural awareness of the German-speaking countries. In addition, this study evaluated how students perceived the effectiveness of said technology as a supportive tool to learn a foreign language and to improve their cultural awareness of the German-speaking countries. The aforementioned Web 2.0 technologies, Technology to Support German Language Enhancement, will hereinafter be referred to as TSGLE. This intervention is considered the independent variable, and the various components comprising of it have an impact on the dependent variables described above. In order to determine the effects of this intervention, a mixed methods case study was employed to establish a concurrent triangulation process (Appendix H), which Creswell (2009) describes as incorporating, collecting, and analyzing both qualitative and quantitative research.

Theoretical Framework

The researcher used a social-constructivist theoretical lens to evaluate the use of TSGLE to fulfill the participants' learning goals. Due to the multiple uses these technologies offer, the researcher integrated them to increase student interaction and collaboration with one another. As such, students had the opportunity to gain different perspectives from other learners, which can potentially lead to improvement of learning (Comas-Quinn et al., 2009). These technologies increase student interaction as "they are ideally suited to support a social constructivist approach to task and course designs" (Comas-Quinn et al., 2009, p. 100). This approach is adopted from

Vygotsky (1978), who developed his theory of social constructivism, in which he claims that learning “presupposes a specific social nature and a process by which children grow into the intellectual life of those around them” (p. 88). Learners develop cognition when they are engaged in collaborative tasks, which influences engagement in other activities (Palinscar, 1998). Because of the types of TSGLE intervention used in this study, students were provided the opportunity to instantaneously connect and increase their interaction and collaboration with one another and the language in authentic, communicative contexts. Thus creating a social constructivist learning environment.

Research Questions

The researcher hypothesized the TSGLE intervention would improve the dependent variables: students’ achievement in reading comprehension, writing ability, listening comprehension, speaking skills, and cultural awareness. The researcher also believed the students would perceive TSGLE as an effective means to support their language learning and cultural awareness over the course of a semester. In order to provide insight into students’ achievement in a German language course enriched by technology, as well as to gain a deeper understanding of students’ perceptions of learning a foreign language reinforced by technology, this study was guided by the following questions:

1. What effect will the TSGLE intervention (blog, chat, podcast, wiki, and video conferencing) and cross-cultural exchange have on the dependent variables: students’ language skills (reading, writing, listening, and speaking)?
2. What effect will the TSGLE intervention (blog, chat, podcast, wiki, and video conferencing) and cross-cultural exchange have on students’ cultural awareness?

3. How do students perceive the use of the TSGLE intervention and cross-cultural exchange in their process of learning German?

These questions provided a setting in which strengths from qualitative data add to the strengths of the quantitative data. By answering these questions, this study offers a unique perspective that focuses on the effects a TSGLE intervention and cross-cultural exchange have on students' language learning and cultural awareness. Furthermore, this study assesses students' perceptions of TSGLE as a medium to enhance language learning and cultural awareness within a constructivist learning environment.

Context

This study took place in the foreign language laboratory (FLL) on the campus of a major, public university in the southeastern part of the United States. The primary mission of the university is to bring this institution to a new level of excellence by taking steps to increase research, scholarly productivity, and the quality and competitiveness of its graduate and undergraduate students. It has nearly 1,400 faculty members and 30,000 students from 50 states and more than 100 countries. Its fifteen colleges offer 193 undergraduate and graduate/professional degrees. The FLL facility was an optimal setting in the instructional delivery for this study. Each student was provided the use of a computer, which included Internet access, headphones for listening exercises, microphones to create electronic voice files, and access to an interactive Smart Board touch screen. This setting therefore was optimal in providing an environment in which students received traditional-style instruction that was enhanced by technology allowing for asynchronous and synchronous communication.

Participants

Twenty-eight students (16 female, 12 male) participated in this study as a convenience sample that consisted mostly of undergraduate students between the ages of 18 to 25 years old. In order to be eligible to take this course, students must have passed the first two introductory courses of German taught at this university, or an equivalent from another institution. Students may also test into this level by taking the language placement examination administered by the university. Before beginning this study, the researcher first obtained approval from the university's Institutional Review Board (IRB) to conduct research (Appendix J). The students agreed to participate in this study and signed consent forms (Appendix I) at the beginning of the semester. To ensure student confidentiality, the researcher also signed and submitted a Security of Data form (Appendix J), made available by the university's IRB.

Research Design

This study employed a within-group case study design using a mixed methods approach. In doing so, the researcher used a concurrent triangulation process (Creswell, Plano-Clark, Gutmann, and Hanson, 2003) (Appendix H) during a one semester intermediate German language course, which analyzed participants during the fall 2014. In addition to the textbook, the researcher included the aforementioned TSGLE intervention at regular intervals during the 16-week semester, which covered six chapters. The TSGLE included the following: (a) eight blog posts; (b) six recorded podcasts; (c) three chat sessions; and (d) weekly use of a wiki and web search exercises, creating an environment of increased asynchronous and synchronous interaction. Additionally, students embarked on a cross-cultural, virtual exchange with German university students (hereinafter Jena Project) by participating in a blog website, a collaborative video conference session, a German film screening, individual email correspondence, and

individual video conference sessions. A more detailed overview of the TSGLE intervention is provided in the Procedure's section. Mixed methods, quantitative, and qualitative data were collected and analyzed at the conclusion of all of these activities.

Data Collection

Mixed Methods Data Collection

The mixed methods data originated from students' blog entries and students' podcast recordings, which also include the final oral examination (Appendix E). This consisted of content analyses of the following: (a) students' first, third, fifth, and seventh blog entries, and (b) students' first, fourth, and sixth podcast recordings. Results of each the blog entries and podcast recordings were all entered into separate Excel spreadsheets and subsequently exported into the *SPSS* (IBM SPSS Statistics for Windows, Version 22.0) software program to prepare for an analysis of the data. The assessment for students' writing skills was adapted by the American Council on the Teaching of Foreign Languages (ACTFL) Reading, Writing, and Listening Guidelines (2012) (Appendix D). The oral examination and podcast recordings were rated by using the Oral Proficiency Rubric (Appendix E), which was adapted from the ACTFL Speaking Guidelines (2012) (Appendix E). A complete description of these analyses is provided in the Data Analysis section.

Quantitative Data Collection

Quantitative data originated from the Technology Implementation Survey (TIS) (Appendix F), which was designed by the researcher specifically for this study and generated using *Qualtrics* software (Qualtrics, Version 2013, Provo, UT) which automatically produced descriptive statistics results upon completion. This survey took place in the FLL and included 12 Likert-type and scaled questions which asked students about their preferred use of technology in

academic settings and to rate their perception on the effectiveness of the TSGLE intervention over the course of a semester to learn German as a foreign language. Results from the TIS were collected during the last week of the semester, prior to the post-test assessment. The researcher subsequently exported these results into the *SPSS* (IBM SPSS Statistics for Windows, Version 22.0) software program to prepare for an analysis of the data. To establish validity for this instrument, the researcher adopted questions from a survey on technology use created by Educause (2013) and combined those with his own questions, which were reviewed and approved by two members of his doctoral committee. As a secondary means of establishing validity to the TIS, the researcher also conducted two factor analyses.

The first analyzed all questions from the TIS, however, this resulted in a high number of components with eigenvalues above one. Therefore the researcher conducted a follow-up factor analysis by discarding several questions from the survey. For instance, some questions asked students to rate the effectiveness of the wiki tool on their speaking enhancement. Since this tool was not used to practice speaking, the researcher discarded it, as well as any question where the technology and the intended dependent variable to be enhanced did not relate.

This provided the researcher with a factor score covariance matrix, which allowed the researcher to identify underlying factors found within the observed variables (IDRE, 2007). This also provided the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (.630), and a significance of (.000). The KMO indicates an acceptable in establishing content validity, and the significance level indicates there are some relationships between variables to include in analysis (Field, 2005).

Qualitative Data Collection

Qualitative data originated from the following: (a) two focus group interviews; (b) students' reflections from the TSGLE intervention; (c) students' open-ended responses and email correspondence with the researcher regarding the cross-cultural exchange; and (d) researcher observations over the course of the semester. The researcher conducted two focus group interviews (Appendix G), each taking place in the FLL on separate dates and lasting approximately one hour, respectively. The first took place during the last week of the semester following the completion of the TIS. Nine participants responded to 12 open-ended questions which were designed by the researcher based on results from the TIS in order to gain a better understanding of students' perceptions on the use of the TSGLE intervention to learn a foreign language. To establish homogeneity, the researcher purposely selected the nine participants whose grades were closest to the course's overall median average. This helped the researcher identify them as subgroup from the entire sample who most closely possessed this characteristic (Creswell, 2008). To establish content validity, these questions were reviewed and approved by a member of his doctoral committee.

The second interview took place after the conclusion of the semester. Eight participants responded to five open-ended questions which were designed by the researcher based on results from the TIS in order for the researcher to gain a deeper understanding of students' perceptions of the cross-cultural exchange with the students from Jena, Germany. To establish homogeneity, the researcher purposely selected the eight participants who successfully scheduled and conducted individual video conference meetings with their German partners. This helped the researcher identify them as subgroup from the entire sample who most closely possessed this characteristic (Creswell, 2008). Only six of the eight participants were present for the face to

face focus group interview. Two additional students, who also completed at least one video conference with their German partner, could not attend this focus group, but were provided the same questions and submitted their responses via E-Mail. The two focus group interviews were recorded using two Sony ICD-PX232 handheld voice recorders which produced a digitized file of each interview. Two recorders were utilized to ensure all content from each interview was properly recorded and captured. These files were then transferred to the researcher's computer in preparation for analyses. Qualitative data also included students' reflections, which they wrote and submitted at the completion of each chapter by hand or by email. The researcher provided the students with prompts asking them to reflect on the TSGLE intervention which provided insight into their perceptions on how the use of specific technologies affected their language acquisition and cultural awareness throughout each unit, which progressively became more challenging. Additional qualitative data consisted of email correspondences between the researcher and participants during the Jena Project, which allowed the researcher to gauge a deeper understanding of how participants interacted with their partners. Finally, the researcher wrote field notes throughout the semester based on his classroom observations. The researcher gathered all field notes, collected and printed all student reflections and email correspondences in preparation for analysis. The researcher was able to obtain access to the research site, including the students and location by gaining permission from the Chair of the Department of Foreign Languages & Literatures at this university (Creswell, 2009).

Procedures

First, this section provides an overview of the study's course structure, including a description of the materials and technologies used. Table 3.1 on the following page provides a visual summary of materials and technologies implemented throughout the course.

Table 3.1
Summary of Course Material and TSGLE Implementation

Chapter	Course Materials and TSGLE Implementation						
Station 1 - Berlin	Textbook	Workbook	Blog 1	Blog 2	Podcast 1	Podcast 2	Wiki
Station 2 - Munich	Textbook	Workbook	Blog 3		Podcast 3	Chat 1	Wiki
Station 3 - Heidelberg	Textbook	Workbook	Blog 4	Blog 5	Podcast 4	Chat 2	Wiki
Station 4 - Hamburg	Textbook	Workbook	Blog 6		Podcast 5	Chat 3	Wiki
Station 5 – Leipzig & Jena Project	Textbook	Workbook	Blog 7	Blog 8	Group Video Chat	Individual Video Chat	Wiki
Station 6 - Frankfurt	Textbook	Workbook					Wiki

Textbook and Workbook

The textbook and accompanying workbook used for this course and study is titled *Stationen* (Augustyn and Euba, 2014). Students were required to complete weekly-assigned textbook and workbook exercises which included reading and writing practice, grammatical exercises, and vocabulary practice. Students had the option of purchasing a copy of the paper-based textbook and a separate workbook, the Student Activities Manual (SAM), or the course e-book. The e-book is an identical version of the textbook, but with additional, interactive features, including pronunciation samples to vocabulary terms and direct links to Videoblogs. All students, regardless if they purchased the textbook or e-book, were also provided with a code to set up accounts in an online portal called iLRN (Heinle Learning Center, Cengage, Inc., 2014). Here, students accessed the electronic SAM (eSAM) or e-book. The exercises in the eSAM were identical to the SAM, however, responses to these exercises were automatically submitted into

iLRN (Heinle Learning Center, Cengage, Inc., 2014). Students had the option to submit homework exercises either by hand or via the eSAM. It should be noted that only three students submitted assignments by hand.

The textbook *Stationen* (Augustyn and Euba, 2014) is comprised of twelve chapters, in which each is titled *Station* and is devoted to a specific German-speaking city, for example Berlin. Each chapter provides historical and cultural information for the particular location as well as grammatical and lexical insights to the German language. Authentic literary texts are also included and reinforce reading comprehension and cultural knowledge (See Figures A1 and A2), and grammatical explanations and detailed vocabulary lists test students' linguistic comprehension (See Figures A3 and A4). Each chapter also includes a Videoblog section, which is a short video reflection by a native of the particular city (See Figure A5) which reinforces listening and cultural comprehension. The student activities manual (SAM) provides numerous listening, writing, grammar-based, and reading exercises, which provided students with a variety of means to practice their language comprehension (See Figure A6). The researcher also created a total of 13 video tutorials which provided students with additional, grammatical explanations and examples. These reinforced structural aspects of the language from the text and were created using *Camtasia* (TechSmith®), a capturing software that allows one to record lectures from a computer. The researcher made these available to students through *Moodle*, the university's course management system (CMS) (See Figure A7), where they could access them and other materials such as PowerPoint presentations and handouts on demand.

Technology

As a primary portion of this course design the instructor integrated a TSGLE intervention within the first six chapters, each of which lasted approximately two weeks. The TSGLE was

designed to impact the dependent variables by enhancing the course delivery. In order to illustrate the differences between technologies used in this study, Table 3.2 provides a summary of the various affordances each offer.

Table 3.2
Affordances of TSGLE

Web 2.0	Affordances						
	Asynchronous Communication	Synchronous Communication	Read	Write	Listen	Speak	Culture
Blog	+	-	+	+	-	-	+
Chat	-	+	+	+	-	-	-
Podcast	+	-	+	-	+	+	+
Wiki	+	+	+	+	-	-	-
Video Chat	-	+	-	-	+	+	+

In this context, the researcher refers to participants' interactions with the various TSGLE intervention, focusing specifically on cognitive affordances, which are certain attributes each technology provides that assists participants in thinking or knowing how to complete the particular tasks using each tool (Hartson, 2012). The plus symbol (+) indicates it offers affordance, the minus symbol (-) indicates it does not. The following describes the technologies designated for use in this study. Please visit the course syllabus (Appendix C) for a more detailed outline of their weekly implementation per chapter, and the Samples of TSGLE Intervention (Appendix A) for an example of how each technology was implemented.

Blog

Students were assigned to write a total of eight blog entries over the course of the semester, each with a five to seven sentence minimum. The first six blog entries assigned over the first four chapters were: (a) a description of what to do in Berlin; (b) a description of Berlin street food and students' "fast food" tendencies; (c) a description of what to do at Oktoberfest in Munich; (d) a description of what to do in Heidelberg; (e) students' reaction and thoughts about tuition at German universities; and (f) a description of what to do in Hamburg. Blog entries seven and eight (7-8) were designated for the fifth chapter, during which the students participated in the Jena Project. A description of these particular entries is provided in the Jena Project section.

The blog was implemented as a "Forum" writing activity available in *Moodle*. Armstrong and Retterer (2008) found that extended use of a student blog can enhance student writing ability by increasing vocabulary usage, use of subordinate and coordinate clauses, and enhancing student collaboration. The textbook *Stationen* (Augustyn and Euba, 2014) provides a number of writing activities that test student comprehension of reading passages. These activities also allow for open-ended discussions and students were required to answer particular questions to assigned readings, and conduct cultural research of the various cities within *Stationen* (Augustyn and Euba, 2014) by accessing German websites provided by the researcher and reporting on their findings. An example and description of the website is provided in Figure A8. In addition, students provided commentary to their classmates' responses, which created an environment promoting collaboration and autonomy via asynchronous communication (See Figure 3.1 on the following page).



Figure 3.1. Screen Shot of *Moodle* Forum/blog room.

Chat

Online chat was utilized for in-class language practice and review, and for two assigned partner tasks. The chat tool was implemented using *Adobe Connect* (Adobe Systems, Inc.) conferencing software program. This program includes a shared-screen option that allows the instructor to open chat rooms while delivering a lecture allowing all participants to have access to and work collaboratively within the same screen, providing all students with an increased opportunity to participate in class (See Figure 3.2 on the following page). In addition to in-class language review, one group chat session was held outside-of-class, during a regularly scheduled class meeting that the researcher could not attend. Students were invited to participate for bonus points and were allowed to access the chat room from any location with an Internet connection. During this session the researcher posted grammar sentences as well as utilized the polling tool to ask multiple-choice questions for the students to complete.

The two partner chat sessions were assigned and included the following tasks: a discussion about beverages and recycling, and a discussion about childhood activities and future aspirations, both pertaining to cultural aspects introduced in *Stationen* (Augustyn and Euba,

2014). For each exercise, students were required to ask one another six questions originating from the textbook that focused on the tasks mentioned above. Because *Adobe Connect* chat sessions could only be scheduled by the instructor, and since these particular chat sessions were conducted only between students, participants were permitted to utilize other chat tools for out-of-class chat assignments, including *Google Docs* or even text messaging.

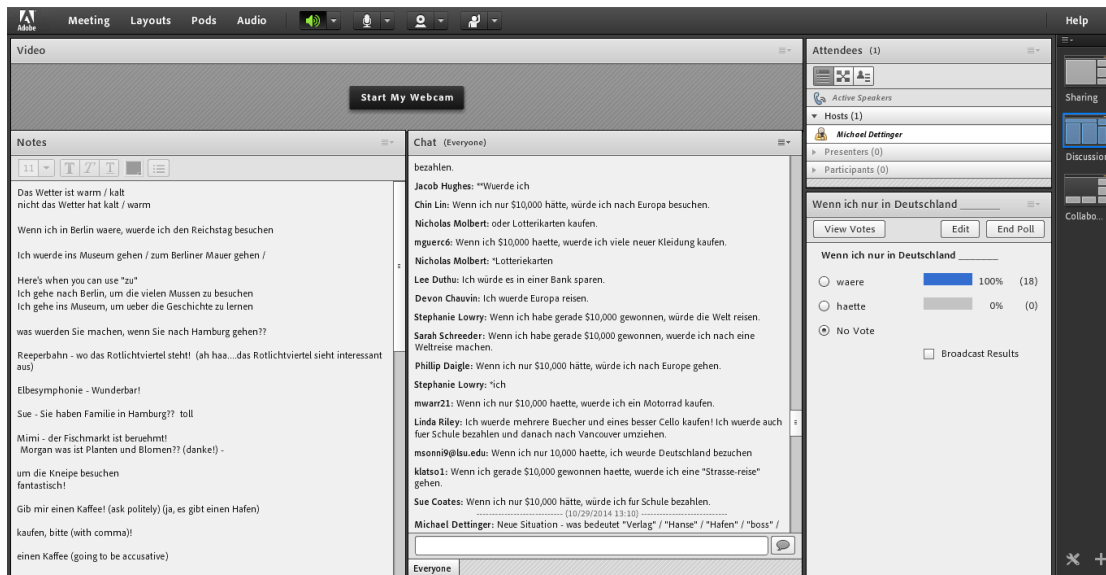


Figure 3.2. Screen Shot of *Adobe Connect* chat room page.

Podcasts

Podcasts for this course were implemented for students to practice speaking outside of class lectures. Students were required to create five audio files using the *Audacity* (Audacity ®) recording software which allowed participants to create digital recordings that can be saved, uploaded, and archived to *Moodle*. The five recording assignments were: (a) answering introductory interview questions; (b) describing current events and activities they would do in Berlin; (c) reading a textbook passage aloud; (d) dictating a variety of individual sentences; and (e) answering intensive interview questions. A sixth recording was also conducted as the second part of the oral final examination. For the first recording podcast assignment, students were

assigned to speak for a minimum of one minute by introducing themselves, talking about where they are from, what they study, what their hobbies are, and why they are studying German. Students were not permitted to write out responses ahead of time, but to simply speak as freely as possible. The second podcast required students to talk about what they would do if they were to visit Berlin. This task was in collaboration with their first blog post, which required students to research the city of Berlin and find activities they would recommend doing. They needed to speak for a minimum of one minute and were permitted to read their blog posts out loud. The third recording assignment required students to read a six sentence, eight line passage from the second chapter out loud (See Figure A9). This text included a number of new vocabulary, the majority of which represented a higher level of difficulty to pronounce for a third semester student. For the fourth recording assignment students were assigned to read aloud 15 short sentences using the past tense. Ten of these were provided by the researcher as a model, and students were required to write the last five sentences on their own, reading all 15 in sequence. The final recorded podcast assignment, required students to answer 24 interview questions provided by the researcher. These included questions about where the students are from, what they study, what their university is like, what their home town is like, and whether they had been to Germany. These questions were designed to help students prepare for the Jena Project. The sixth podcast (Appendix E), as part of the students' final, oral exam, required participants to leave a recorded voice mail. For this task, students were given up to two minutes to leave a detailed message describing their accommodations and plans to meet with a friend in Munich for Oktoberfest. They were first given a description of the task and were allowed one minute to consider a response.

Wiki

The wiki tool in this study was used as a class-study guide, for in-class note taking, and for tasks requiring students to work simultaneously practicing sentence writing. It was accessible to students anytime through a shared *Google Docs* (See Figure A10) created by the researcher, who then sent individual email invitations for each student to accept access. The class accessed the wiki on a weekly basis and the researcher used it to provide examples of language structure and for exercising grammar practice. The *Google Docs* wiki allows for synchronous use where multiple users could access and contribute simultaneously on one page, acting as a virtual blackboard, such as collaborating in teams of five to complete sentences using specific vocabulary listed within the wiki.

Cross-Cultural Exchange: The Jena Project

During the last three weeks of the semester, students participated in a virtual, cross-cultural exchange with native, German speakers³ from the city of Jena, Germany, located in former East Germany. This group included 12 undergraduate university students (nine female and three male) between the ages 18-25 studying *Deutsch als Fremdsprache* (German as a Foreign Language) with a goal of becoming German teachers following graduation. This project was coordinated by the researcher, who successfully contacted and collaborated with a colleague, who is a professor of German as a Foreign Language at this university. The project consisted of four main phases, which included: (a) Phase 1, the creation of a shareable blog and blog post entries by all students and both instructors; (b) Phase 2, a group video conference; (c) Phase 3, conducting of individual video conference sessions between paired student dyads; and (d) Phase

³ It should be noted that two of the students in Germany were originally from China and Guatemala, respectively. However, due to the amount of time they have been in Germany, their language skills were fluent and near native.

4, the screening of the German film *Friendship!* (Berg and Beckmann, 2010). The following presents a description of each of these phases.

Phase 1: Blog

The blog selected and used for this project was created via *WordPress* (WordPress, 2003) a website that allows individuals to create their own blog site at no charge or for a fee, depending on the amount of content desired to be included. Students were required to upload two blog assignments to the site *LSU und Jena Austausch: Eine Zusammenarbeit* (LSU and Jena Exchange: A Collaboration). Figure 3.3 shows an image of a participant's first blog post, which was a brief introduction with a picture attached.

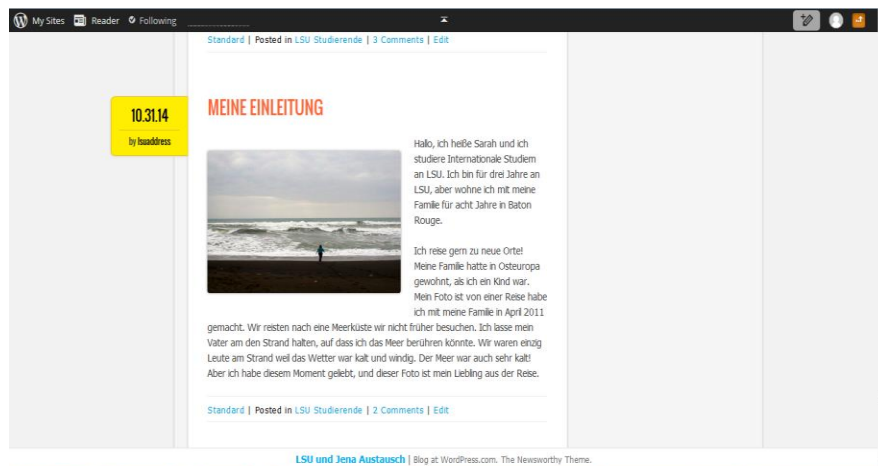


Figure 3.3. Screen Shot of a Student's First Blog Post and Image Upload.

The introduction needed to include a description of each student and describe where they are from, their major, their interests, and any additional information they cared to share. The picture either could have been of themselves or of an image depicting something about them that the German students needed to inquire about. The second blog assignment (See Figure 3.4) required students to write a statement indicating their interest in learning the German language and about

Germany and posting a question to the German students specifically asking something about Germany they wanted to know.

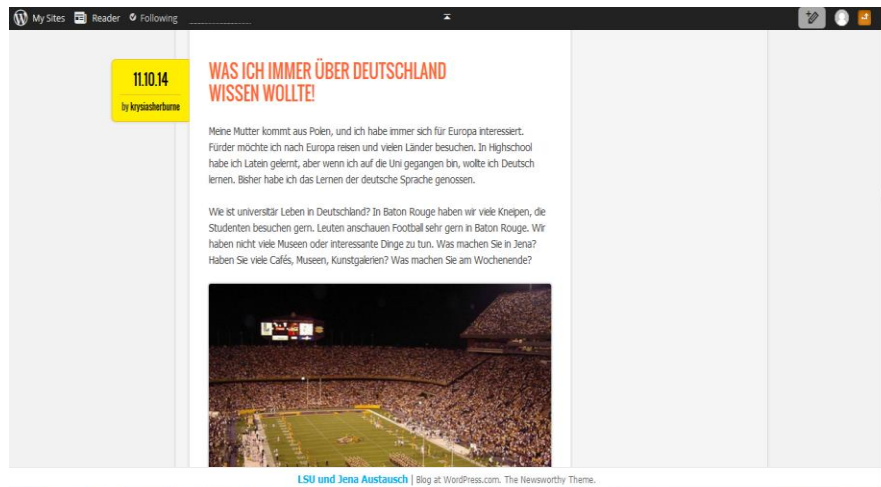


Figure 3.4. Screen Shot of Student's Second Blog Post and Image Upload.

The German students were also required to write introductions and upload these texts along with images to the blog. They were also assigned to respond to the American students' inquiries about Germany. All students who participated in this project were required to provide commentary to at least two partner students.

Phase 2: Group Video Conference

For Phase 2 of this project, students from both groups participated in a group video conference via *Adobe Connect* (Adobe Systems, Inc.) which took place in the Foreign Language Laboratory (FLL). Because of the time difference of seven hours between the two schools, the meeting lasted approximately 30 minutes. The American students met at 12:30 p.m. which was 7:30 p.m. in Germany. For this portion, the German instructor and researcher made brief introductions and described how the meeting would proceed. Several of the German students came up and introduced themselves and selected several blog posts by the American students, which led to a brief question and answer session among the students. The German students

answered the American students' blog questions and expanded candidly about their experiences as students in Germany. Since there was only 30 minutes allowed for this conference, only three to four students from each group were able to communicate with one another. However, all participants were able to listen and watch (See Figure 3.5).

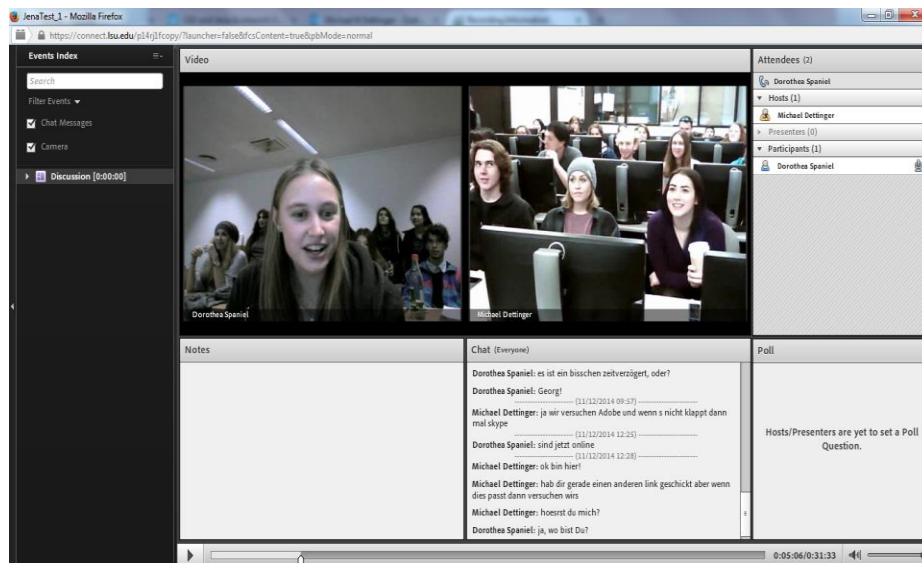


Figure 3.5. Screen Shot of Group Video Conference via *Adobe Connect*.

Phases 3 and 4: Individual Video Conferences and Film Screening

Phase 3 of the project consisted of individual video conference sessions via *Skype* (Skype™). Students were designated into pairs and were assigned to conduct two video conference sessions. Due to the skewed numbers of participants from each group (American, $n = 28$, and German, $n = 12$), only nine of the American students were able to participate in this phase. However, all students were at least able to email with one another in an attempt to schedule an individual video conference session. In these video conference sessions, which were designed to last approximately 20 minutes in length, students were assigned to first conduct brief introductions with one another in which they discussed each other's blog posts, and to then discuss the German film *Friendship!* (Berg and Beckmann, 2010), Phase 4. This film was

screened in the FLL one week into the project and was intended to take place in between the two assigned video conferences. The American students also had online access to the film to view from home. *Friendship!* (Berg and Beckmann, 2010) depicts two best friends from former East Germany who took a trip to the United States in order for one of them to find his father in San Francisco. The film represented stereotypes of former East Germany and Germans, as well as of the United States and Americans. It was a fitting medium to screen for this project as the year 2014 marked the 25th anniversary of the fall of the Berlin Wall. It was also a suitable talking point as the German university is located in former East Germany, allowing the American students to gain a perspective into a unique geographic and historic location in Germany. At the conclusion of the cross-cultural exchange, the American students were scheduled to take their end of the year assessments, including oral and written final examinations.

Data Analysis

Mixed Methods Data Analysis of Blog Entries and Podcasts

The results from students' blog entries and podcast recordings were analyzed in two ways: by conducting a content analysis and by conducting a repeated measures one-way ANOVA. The researcher conducted a content analysis of the participants' first, third, fifth, and seventh blog entries. Seventeen participants' blog entries were included in this analysis, which does not represent the entire sample ($n = 28$). The remaining participants only completed one of these blog assignments and their results were not included. The researcher then conducted a content analysis of participants' first, fourth, and sixth podcast recording. Fifteen participants' podcast recordings were included in this analysis, which does not represent the entire sample ($n = 28$). The remaining participants only completed one of these podcast assignments and their results were not included. The researcher utilized ACTFL's 2012 Language Guidelines

(Appendix D) to conduct an analysis of blogs for the following: (a) total number of sentences; (b) use of secondary clauses; (c) total word count (blogs); and (e) grammar accuracy. The grammar accuracy included a check of aspects including: (a) correct word order; (b) correct verb conjugation; (c) correct use of case; and (d) correct spelling. The researcher utilized a rubric for assessing oral accuracy established by ACTFL (2012) (Appendix E), which assesses the following: (a) fluency and coherence; (b) appropriateness of vocabulary; (c) grammatical accuracy; and (d) pronunciation. Any incorrect use of these aspects, depending on its severity, resulted in a point reduction and allowed the researcher to quantify an overall score for each. These scores then led to the second portion of data analysis for blog entries and podcast recordings.

For the second portion of analysis of blogs and podcasts, the researcher first conducted two one-way ANOVAs with repeated measures of participants' first, third, fifth, and seventh (Jena Project) blog entry results; the first to analyze overall score, and the second to analyze grammar output from the students. This included use of modal verbs, for example *sollen* (to be supposed to), which, when used, often times require students to integrate a second verb or more at the end of the sentence. This also included students' use of subordinate clauses, which automatically places a single verb or multiple verbs at the end of a clause or sentence. Lastly, this included students' total word and sentence count for each blog entry. The researcher then conducted a separate one-way ANOVA with repeated measures for the participants' first, fourth, and sixth podcast results of their overall scores. These statistical tests provided descriptive statistics, including means and standard deviations, and allowed the researcher to also measure within-group independent samples for significance (Wilks' Lambda) and effect size (Robinson-Szapkiw, 2013). The researcher did not conduct an ANOVA of the grammar output for podcast

recordings. While speaking is an important element in this course and study, based on end of the semester assessment (post-test), this university's German program, expects students at this level to perform at the Advanced Low for listening and writing, Advanced for reading, and Intermediate Mid for speaking, based on ACTFLs (2012) language guidelines. For additional information regarding these guidelines, please visit Appendices D and E.

Quantitative Data Analysis of the TIS

Quantitative data included a descriptive statistical analysis of the TIS. Upon submission of the TIS, *Qualtrics* software (Qualtrics, Version 2013, Provo, UT), immediately produced descriptive statistics based on students' responses. This provided the researcher with overall percentages of students' perceptions of the TSGLE intervention and cross-cultural exchange (Jena Project).

Qualitative Data Analysis

The researcher transcribed and analyzed the recorded, focus group interviews to determine codes. This coding process organized these data into segments of text, which was turned into categories and labeled with a specific term. This allowed the generation of a description of the participants, as well as specific themes which were analyzed in students' responses (Creswell, 2009). The same process was conducted in analyzing students' reflections after the completion of each chapter. Additionally, the researcher analyzed students' emails and open-ended responses to the Jena Project, as well as field notes taken throughout the course of the semester. From these data, he also organized and sorted out specific codes that depicted apparent themes in his observations and linked commonalities and overlapping themes from these data with those from the focus group interviews. The researcher then merged the mixed

methods, quantitative, and qualitative data in order to see if there were differences, similarities, or converge between the three data sets (Creswell, 2009).

Chapter 4

Results

This chapter provides results of mixed methods, quantitative and qualitative data, which the researcher collected separately to maintain independence of the analyses. Mixed methods data included results of repeated measures of students' blog entries and podcast recordings, which were conducted over the course of the semester. Quantitative data originated from results of the TIS, which assessed students' perceptions on the use of the TSGLE and cross-cultural exchange (Jena Project). Qualitative data originated from two focus group interviews, students' reflections, and the researcher's observations. The researcher conducted an interpretive analysis and coding process by organizing these data into categories and labeled each with a specific term. This generated the following four themes that emerged from students' responses: convenience, social constructivism, cultural awareness, and language acquisition. These themes describe the various affordances provided by the course materials, the TSGLE intervention, and cross-cultural exchange.

The researcher then merged findings from each set of data in an attempt to explore the research questions that guided this within-group case study design using mixed methods. The mixed methods, quantitative, and qualitative data indicate the TSGLE intervention and Jena Project had a tremendous impact on students' language acquisition and cultural awareness. These data also indicate that students' perceived the intervention and cross-cultural exchange as beneficial to helping them learn a foreign language. Mixed methods data revealed significant gains in the dependent variables, namely, students' writing (blogs) and speaking (podcasts). Quantitative data obtained from the TIS indicated that an overwhelmingly high percentage of students perceived use of TSGLE and cross-cultural exchange to be effective means of improving language skills and cultural awareness. Qualitative data also provided additional

insight into the improvements in students' learning, even when faced with challenges throughout the course. By merging these findings, the researcher was able to gain a deeper understanding of the effects the TSGLE intervention and cross-cultural exchange (Jena Project) had on students' language acquisition and cultural awareness. Furthermore, these data also allowed the researcher to gain insight into students' perceptions after experiencing the TSGLE intervention and cross-cultural exchange. The following provides an overview of these results and the researcher's interpretations.

Impact of the TSGLE and Cross-Cultural Exchange

In order to investigate Research Questions 1 (hereinafter RQ1): What effect will the TSGLE intervention (blog, chat, podcast, wiki, and video conferencing) and cross-cultural exchange have on the dependent variables: students' language skills (reading, writing, listening, and speaking)?, the researcher originally intended on analyzing results from pre-test (chapter 1) and post-test (final examination) instruments. However, after careful consideration, the researcher opted not to include these data. The pre-test and post-test instruments included individual language skill sections, however, they were primarily used to assess students' knowledge of the textbook content. Also, because the pre-test was a chapter test and the post-test was a cumulative final examination, these instruments did not have equal forms reliability. As a result, the researcher believes that the pre-test and post-test were potentially inadequate instruments for assessing the impact of technology use on students' language skills and will discuss this in the following chapter. The following sections include the researcher's analysis of results of each of the dependent variables: writing, speaking, reading, and listening.

Impact of the TSGLE and Cross-Cultural Exchange: Writing

In order to investigate RQ1, and to assess the effects of the TSGLE on students' writing, the researcher analyzed student performance from their authentic writing produced during blog activities. To accomplish this, students were required to write a total of eight blog entries over the course of the semester. They were required to write a minimum of five to seven sentences for each, then to provide a minimum five sentence commentary to at least two of their classmates' entries. For example, for Blog 1: Berlin, students were assigned to conduct individual research on the city of Berlin using a website provided by the researcher. Students were required to search the site and find events going on in the city that they would recommend for their classmates, then write about them. For a more detailed description of this task and all remaining blog assignments, please visit Appendix A.

The blogs from 17 students were assessed as they were the only participants who successfully completed each task. The remaining participants were unable to complete each task and were not included in these analyses. To obtain a final score, the researcher first conducted a content analysis of grammar production, such as spelling, word order, use of tense and case, as well as the following for each blog entry: (a) use of modal verbs; (b) use of subordinating clauses; (c) total word count; and (d) total sentence count of. The researcher then performed a one-way ANOVA with repeated measures to analyze grammar accuracy. Table 4.1 on the following page illustrates results of the content analysis for grammar production in students' blog entries.

Observing these results, there was a significant effect for use of modal verbs, Wilks' Lambda = 0.29, [$F(3, 14) = 11.390, p < .001$]. There was not a significant effect for use of subordinating clauses, Wilks' Lambda = 0.71, [$F(3, 14) = 1.953, p = .168$], total word count,

Wilks' Lambda = 0.73 [$F(3, 14) = 1.742, p = .204$], or total sentence count, Wilks' Lambda = 0.67, [$F(3, 14) = 2.330, p = .119$].

Table 4.1
Content Analysis of Blog Entries: Grammar Production

Repeated Measures of Grammar Production						
Blog	Modal Verbs: \bar{x}		Subordinate Clauses: \bar{x}	Word Count: \bar{x}	Sentence Count: \bar{x}	
Blog 1: Berlin	5.76		2.65	88.24	10.47	
Blog 3: Munich	5.06		2.82	77.18	8.41	
Blog 5: Heidelberg	4.06		3.65	106.76	10.76	
Blog 7: Jena	1.76		2.18	88.29	9.88	
Multivariate Tests of Each Repeated Measure						
Grammar Element	Effect	Value	F	Hypothesis df	Error df	Sig.
Modal Verbs	Wilks' Lambda	0.29	11.39	3.00	14.00	.000
Subordinating Clauses	Wilks' Lambda	0.71	1.95	3.00	14.00	.168
Word Count	Wilks' Lambda	0.73	1.74	3.00	14.00	.204
Sentence Count	Wilks' Lambda	0.67	2.33	3.00	14.00	.119

By observing the mean scores of grammar output, students produced the most subordinating clauses ($\bar{x} = 3.65$), most words used ($\bar{x} = 106.76$), and most sentences written ($\bar{x} = 10.76$) on Blog 5: Heidelberg, when compared to the other blog entries. For this blog entry,

students discussed the differences in tuition prices between the United States and Germany. Due to the minimal rates of tuition for German students, this may have sparked students' interests in writing more about this topic. The content analysis for grammar accuracy and production for these blog entries allowed the researcher to obtain a final score of each entry, which he used to more closely assess students' authentic writing performance over the course of the semester. To accomplish this the researcher performed a one-way ANOVA with repeated measures of participants' final scores on their first, third, fifth, and seventh blog entries, which are illustrated in Table 4.2.

Table 4.2
Repeated Measures of Blog Entries: Total Score

Repeated Measures of Blog Entries					
Blog Entry	Berlin: \bar{x}	Munich: \bar{x}	Heidelberg: \bar{x}	Jena: \bar{x}	
Blog Score	77.76	83.71	85.41	93.59	
Standard Deviation	6.63	7.73	4.65	3.78	
Multivariate Test					
Effect	Value	F	Hypothesis df	Error df	Sig.
Wilks' Lambda	0.09	44.82	3.00	14.00	.000

Observing these results, there was a significant effect of students' total scores of blog entries, Wilks' Lambda = 0.09, [$F(3, 14) = 44.84, p < .001$]. The mean scores of each blog entry show that participants gradually increased their performance over the course of the semester. By analyzing students' repeated measures of blog writing, the researcher was able to more accurately assess the effect of TSGLE on writing acquisition. The blog tool allowed students to write in a less-stressful environment, allowing them to produce more authentic writing.

To gain a deeper understanding of the effects of TSGLE and cross-cultural exchange on students' writing acquisition, the researcher merged findings from these mixed methods and quantitative data with qualitative data. These included students' responses during focus group interviews, students' post-chapter reflections, as well as the researcher's own observations. When referring to students', researcher identified each as P, for example, Participant 1 is referred to as P1, Participant 2 is referred to P2, Participant 3 is referred to as P3, etc., to ensure anonymity for their direct responses provided throughout this narrative, as well as all subsequent sections.

Only a slight increase in writing competency was observed on the post-test instrument. However, analyzing the repeated measures results, along with the aforementioned qualitative findings, indicates that students' writing skills improved. The researcher observed how the blogs, as well as various, additional aspects of the TSGLE intervention and cross-cultural exchange (Jena Project) also contributed to enhancing writing. These included: the textbook, SAM and course lectures, in-class tasks, Internet searches, video tutorials, chat, and wiki. For a more detailed description of these tasks, please visit Appendix A. The researcher found from students' responses that these tools also contributed to a social constructivist environment. For example, "Reading blog posts and gathering information from what others were writing assisted with my writing and putting in my own thoughts" (P9). "In-class writing tasks [...] put pressure on us to think on the spot. This helped us figure things out as we go, where we were willing to venture off and take a risk with the language" (P11). "The in-class writing really helped me. It was stressful, but I felt more prepared for the writing on the exam" (P18). Other students reported on the independence that writing blog posts afforded them. "The Moodle blog posts,

because like research on our own and forming our own sentences and paragraphs, and then to respond (to others) by reading was really positive” (P11). Another added,

As far as the websites go, I like what you provided. It was more interesting to me to go find my own websites in Germany; I learned to Google in German! And things like that where you actually had to do a real life type of situation (P9).

The researcher observed how the online chat and wiki tools promoted collaboration among the students which contributed to their writing skills. For instance, “I find the Adobe Connect very useful in getting everyone involved and on the same page” (P7). “It was a great way to get everyone involved and working together” (P2). Regarding the wiki, “When we did the Google Doc and you had like five sentences to do; it’s like each person on the row would just take one sentence and then we’d help each other out, so that was really nice” (P20). Other participants reported the various themes of blog entries enhanced their writing. “I enjoyed writing the blog post about my own college finances and comparing them to how they would be in Germany” (P7). In one case, a student referred to the blog and chat as effective tools for writing. “I feel as though the variety of my written German has improved. I think the blogs and chat have helped this” (P23).

Some students, however, required additional adaptation to the blog. For instance, one student found early on that “The blog was difficult for me” (P4). However, as the semester progressed, so did her comfort level: “they (the blogs) have been getting easier to do and that helps with my writing skills especially when I can take my time to grasp what is being said and figure out what to say in return” (P4). Students’ reports also indicated that the blog task during the cross-cultural exchange (Jena Project) assisted with their writing, even if it required an adjustment,

After we got into it and actually started posting and I was able to see everyone else’s posts, plus the posts from the other class in Jena, it made me feel a little

more comfortable about where I was and about what I was saying and about getting ideas about what to post in my next thing from other people's stuff. So after we got started, it felt easier (P9).

Other students reported that the blog tasks from the semester prepared them for this interaction. For example, "I didn't really feel weird about posting in German (laughter from group) and then like German students commenting – I kind of just treat it like a Forum" (P5). Another student remarked, "It was low pressure and because since I was used to doing that because most of the stuff we do in class was written" (P2). The combination of results of the aforementioned mixed methods, quantitative and qualitative data provided the researcher with a better understanding of the effects of TSGLE on students' writing acquisition. In order to explore RQ1 and assess the effect of TSGLE and cross-cultural exchange on students' speaking acquisition, the researcher also collected and analyzed quantitative and qualitative data. These steps and procedures are addressed in the following section.

Impact of the TSGLE and Cross-Cultural Exchange: Speaking

To assess the impact of TSGLE on students' acquisition of speaking skills, the researcher first observed student performance by conducting a content analysis of their speech produced during recorded podcast activities. The researcher then analyzed qualitative data from students' focus group interview responses and post-chapter reflections. To obtain a final score for speaking acquisition, the researcher graded students' responses from their first, fourth and sixth podcast recordings. The podcasts from 15 students were assessed as they were the only participants who successfully completed each podcast. The remaining participants were unable to complete each task and were not included in these analyses. For the first and fourth recordings, students used the Audacity software recording program to provide responses in German to prompts provided by the researcher. For example, Podcast 1 prompts included:

What's your name? Where are you from? What are you studying? What are your hobbies? Describe your family? Why do you study German? Students were required to speak for a minimum of one minute and were not allowed to write down any notes. The researcher made this requirement in order to provide a context in which the students had the opportunity to speak more authentically. In the fourth podcast task students were required to produce a recording of 15 sentences read aloud. Ten of these were provided by the researcher, and the students were required to write and record the remaining five. For a more detailed description of the fourth podcast recording, please visit Appendix A. The sixth podcast task served as the students' oral final examination and took place in the researcher's office and was recorded using his iPhone. Students were provided a scenario in which they were required to speak for up to two minutes by leaving an answering machine message describing their plans to a friend they hoped to meet in Munich. For a more detailed description of the sixth podcast recordings, please visit Appendix E.

To assess speaking language acquisition, the oral examination and podcast recordings were rated by using the Oral Proficiency Rubric (Appendix E) adapted from the ACTFL Speaking Guidelines (2012). This allowed the researcher to obtain a quantified final score based on students' performance of the following: fluency and coherence, appropriateness of vocabulary, grammatical accuracy, and pronunciation. A one-way ANOVA was computed with repeated measures of the 15 participants' final scores on their first, fourth, and sixth blog podcast recordings, the results of which are displayed in Table 4.3 on the following page.

Observing these results, there was a significant effect of students' total scores of podcast recordings, Wilks' Lambda = 0.51, [$F(2, 13) = 6.32, p = .012$]. The mean scores indicate students improved from their first podcast recording to their fourth, but experienced a slight

decrease on their sixth. By analyzing students' repeated measures of podcast recordings, the researcher was able to more accurately assess the effect of TSGLE on speaking acquisition.

Table 4.3
Language Acquisition Assessment: Speaking

Repeated Measures Mean Scores of Podcast Recordings					
Podcast Recording	Podcast 1		Podcast 4		Podcast 6
\bar{x}	91.47		93.60		91.20
s	2.36		3.74		4.04
Multivariate Test					
Effect	Value	F	Hypothesis df	Error df	Sig.
Wilks' Lambda	.51	6.32	2.00	13.00	.012

Aside from the sixth recording, which was the final oral examination, the podcast recordings allowed students to speak in a less-stressful environment, which allowed them to produce more authentic speaking. To gain a deeper understanding of the effects of TSGLE and cultural exchange on students' speaking acquisition, the researcher merged findings from these quantitative data with qualitative data. These included students' responses during focus group interviews, students' post-chapter reflections, the researcher's own observations, as well as comments provided by the researcher's German colleague.

The researcher observed that two primary elements of the course contributed to the students' speaking enhancement, the podcasts and the cross-cultural exchange (Jena Project). Students' responses from the interviews revealed that the podcasts helped with individual practice for speaking. For example, "The podcast helped by forcing me to actually use the language" (P16). "I think my speaking skills increased due to the podcast" (P6). "I enjoyed the

chance to practice my speaking with the podcast. The feedback you provided helped my pronunciation” (P9). One student remarked on the process involved with creating podcasts that assisted in speaking, “I think the podcasts helped because it made us speak and we were able to listen to ourselves and hear any mistakes in pronunciation or grammar that we would not have noticed if we didn’t listen to ourselves” (P1).

During the Jena Project, in addition to the two assigned blog posts, students were assigned to conduct two individual video conferences using the Skype software program, which allows for simultaneous video conferencing with an Internet connection. Students were required to talk with their German partners for a minimum of 20 minutes. Reports from the Jena Project indicate that interacting with the German students during synchronous video conferencing contributed to students’ speaking, even if it required some adjustment. In several instances, students reported on the challenges faced during this aspect of the exchange:

It went well, but I was nervous. I’ve got to practice listening, but in the end, it wasn’t so bad. The second time I felt more prepared. For me, forcing myself to sit down and talk to someone face-to-face and think of the words and use the vocabulary, it was huge (P9).

It took lots of brain energy. I was *striving* to speak German (grasping hands as if could not figure something out). You know after the first time I felt better the second time, it’s not that bad, you know. I just keep thinking, oh that’s the words we learned in class and then we would start using it (P4).

You’ll say something grammatically correct but you’re saying it in such a roundabout way to a native speaker, and that’s what I was worried about. And he was using words that I’ve never seen before ... like so many words, I mean that you can’t find in the back of the book’s dictionary just because there are a million terms (P3).

At the end of it (first meeting), I got off the Skype call and was like, ok that wasn’t so bad. Then we talked again later that week and I was already prepared and felt more comfortable because I had time to look up some more vocabulary, and I had prepped a little better than I had for the first time (P9).

So I just completed my first call with my partner (we did it through Skype so I wasn't able to record it) but I'm feeling a little bad because I feel like I didn't understand as much as I should have and I felt that when I tried to make sentences, they were probably out of order and not entirely understandable (that could be because I was nervous of course). Luckily my partner was very helpful and would translate some things for me when I needed, but I was just wondering if you had any tips to help me be able to speak it a little better. I've been trying to practice but I didn't do as well as I thought I would so I'm feeling a little let down! (P28).

Based on the other accounts from the students, the researcher observed that the individual video conferencing created a social constructivist environment. During these instances, students collaborated and the German students acted as language coaches. For example, “It was really stressful. I forgot all of my German and felt that I wasn’t advanced enough to do this. It was super important she (German partner) knew English” (P2). One student remarked on how both encounters helped with her comfort level speaking German: “I will say something and they will help us out in a way so that it will be even less pressure because I know that my partner is going to help me out” (P4). She continued, “So definitely this helped and let me feel more comfortable and if I go to Germany you know it’s going to be ok” (P4). On two additional occasions, students reinforced the assistance offered by their German partners and how this helped them adapt:

The first meeting was a little more difficult just because I was nervous, but she was very kind and helpful. She worked with me as far as if I didn’t understand something, then she would either type it in the instant message to me so that I could then look it up or she would change her vocabulary to explain the word or change it to something I understood (P9).

I tried as much German as possible, although there were some miscommunications at first. I was excited to do this and after the first session, it’s ok. I love my Skype girl, she was great. I learned a lot from her and that helped me with speaking and listening. I’m still really nervous about speaking but I do have a better grasp on it (P3).

Two students even reported feeling comfortable while interacting with their German partners and how this experience improved their speaking ability:

I wasn't afraid to speak. Our Skype sessions went really well, um also being anal we never spoke English. So that was fine and was actually really good for to me practice because I haven't talked to a German speaker in a while. It ended up becoming a conversation about university life and just about his struggles with roommates in the past. It was definitely, really good application (P6).

It wasn't as high pressure because we emailed back and forth like quite a bit before the first Skype meeting. It was really mentally draining. I could tell that she (German partner) was nervous and I was nervous too but in some ways speaking is easier than typing, because you don't have to use full sentences, ever. This (Skype meeting) was the thing that helped me learn the most, like hands down (P5).

The researcher's colleague from Germany even remarked on the exchanges, and how the American students exhibited noticeable changes in their ability to communicate (speak) in this environment, "*Von unserer Seite eine große Bestätigung, dass ein großer Unterschied zwischen der ersten und zweiten Sitzung festzustellen war, also bitte ermutigt die Studierenden immer, an solchen Austauschprogrammen teilzunehmen*", which translates as: "From our perspective, there was a noticeable difference between the first and second meeting (video conference), so please encourage the students to always try and participate in these types of exchanges" (D. Spaniel-Weise, personal communication, January 30, 2015). The combination of results of the aforementioned quantitative and qualitative data provided the researcher with a better understanding of the effects of TSGLE and cross-cultural exchange on students' speaking acquisition. In order to explore RQ1 and assess the effect of TSGLE and cross-cultural exchange on students' reading acquisition, the researcher collected and analyzed qualitative data. These steps and procedures are addressed in the following section.

Impact of the TSGLE and Cross-Cultural Exchange: Reading

The researcher analyzed qualitative data from students' focus group interview responses and reflections to assess the effects of the TSGLE and cross-cultural exchange on students' reading acquisition. In doing so, the researcher observed that several elements of the TSGLE

intervention contributed to their reading comprehension. The researcher observed from students' interview responses that in-class meetings contributed to a social constructivist environment as it promoted collaboration. In this context, students indicated that working through texts together helped their reading comprehension. "Reading as a class, line by line and phrase by phrase together helped understand" (P4). The class meetings and eSAM assignments are responsible for increasing this skill" (P27). "I only liked it (literary texts) when we would go over it in class. I feel like it helped me understand better and seeing what words or phrases everyone can identify because it's really intimidating to just go by yourself" (P3). "I feel like I know about sentence structure when we go over readings in the beginning of the chapter and I enjoy that" (P18).

Based on other students' reports, reading comprehension was also enhanced through multiple sources including the eSAM, blog, video tutorials, and podcasts. For example, "I felt my German skills in reading increased. My language skills were enhanced by reading in the blog posts" (P15). "The video tutorials helped with improving my reading skills" (P2). "My reading skills were enhanced because of videos" (P9). "The podcasts helped with improving my reading skills" (P2). The researcher intended that reviewing assigned readings from the textbook and SAM as a class would promote reading comprehension. Moreover, the researcher also anticipated that reading through classmates' blog entries would expose students to more authentic language production and have an impact on their ability to comprehend in order to produce a written response. However, students' responses regarding their improved reading from tools such as video tutorials and podcasts were unexpected. These were intended for review and to practice speaking. While some podcast assignments did require students to read a text aloud, it was expected that this would affect their pronunciation. This is an indication of the

effects the TSGLE and Web 2.0 technologies can have on promoting language acquisition and will be discussed in more detail in the following chapter.

The aforementioned qualitative data provided the researcher with a better understanding of the effects of TSGLE and cross-cultural exchange on students' reading comprehension. In order to explore RQ1 and assess the effect of TSGLE and cross-cultural exchange on students' listening comprehension, the researcher also collected and analyzed qualitative data. These steps and procedures are addressed in the following section.

Impact of the TSGLE and Cross-Cultural Exchange: Listening

The researcher observed the impact on students' listening comprehension by analyzing qualitative data, which revealed that participants found a variety of tools from the TSGLE intervention and Jena Project that contributed to their listening comprehension. Several indicated the German used in class attributed to this, even if it required time to adapt. For example, "When we first came into class [...] I got about 65% of what you said [...] but by the end of the semester I found that I was understanding what you were saying" (P4). Others added that the consistency of German used in class helped with their listening skills. "My listening skills increased due to class attendance and homework assignments" (P6). "I feel my listening skills in particular have been improved through homework and in-class listening assignments" (P7). "I feel like I am hearing more German and that is helping from several different sources such as just being in class" (P8). "I think your decision to speak only in German in class is SUPER helpful. It's the only time we hear consistent German each week" (P18). The researcher intended on speaking in German as much as possible during class meetings. Only when students were having difficulty understanding complex themes, such as difficult grammar aspects, would

the researcher use English. This, however, usually only last several minutes out of a 50-minute lecture.

Some students reported that the online homework exercises from the textbook helped improve their listening. For example, “The eSAM exercises serve to keep my vocab, listening, and comprehension sharpened” (P23). Other participants reported that the video tutorials improved their listening acquisition. “The video tutorials and podcasts helped with improving my listening skills” (P2). “My listening skills were enhanced because of videos” (P9). Some even referred to the podcast as an effective resource for listening. “I feel like I am hearing more German and that is helping from several different sources such as the podcast” (P8).

Several students indicated the group video conference during the Jena Project proved to be challenging. During this video conference, both classes met in an online video conference room via Adobe Connect video presentation and conferencing software. The meeting lasted approximately 30 minutes and included students from Germany approaching the camera and microphone to provide short introductions, answer several of the American students’ questions provided from the blog, and even ask questions to several of the American students. One student noted, “I wished they spoke more slowly, because I need time to process what to say” (P3). As several students also shared the same sentiment about this phase of the project, others found the German film to be helping with their listening. Students were required to view the German film *Friendship!* (Goller, 2010) during the exchange. One explained his realization of listening enhancement,

I was watching it and I wasn’t actively thinking about translating everything that they were saying, but I was finding myself laughing at parts, and I was like, that wasn’t English (laughter from group). I think that it helped show me that I knew more than I thought I knew (P11).

Students' responses during focus group interviews and reflections provided the researcher with a better understanding of the effects of TSGLE and cross-cultural exchange on students' listening comprehension. In order to now assess the effect of TSGLE and cross-cultural exchange on students' cultural awareness, the researcher collected and analyzed qualitative data. These steps and procedures are addressed in the following section.

Impact of the TSGLE and Cross-Cultural Exchange: Cultural Awareness

In order to explore Research Question 2 (hereinafter RQ2): What effect will the TSGLE intervention (blog, chat, podcast, wiki, and video conferencing) and cross-cultural exchange have on the students' cultural awareness?, the researcher observed qualitative data from students' responses from focus group interviews and post-chapter reflections. These data revealed that participants found a variety of tools from the TSGLE intervention and Jena Project that helped contribute to their cultural awareness. Participants attributed the blog posts and individual research of websites to assisting in their cultural enhancement. For instance, "The blog and exploring websites helped me expand my knowledge of the culture. It was cool to explore these websites and, in a way, virtually go to these cities" (P11). "I think researching what Heidelberg is known for (through website searches) was how I learned about it" (P26). Moreover, participants reported about the hands-on, cultural characteristics these websites provided, which allowed for convenient access to authentic language materials. "They gave us a look into the actual culture itself" (P11), was one student's perspective. Another remarked, "I really liked how we explored what was actually out there instead of what is inside these four walls" (P9). This provided students with access to cultural insights known to Germany, for example, "I remember the Oktoberfest link. That was really cool because you were able to walk around

almost and look at everything that was going on, and that was something I hadn't done in a German class before" (P11).

Participants also reported on their interactions with their German partners, and how this contributed to their cultural development. For example, "I mean it was cool because I met someone from Germany" (P2). Another expressed her interest in film with her partner, "I tried telling her that I was really into German movies and she was very surprised at like how many German movies I had seen" (P3). When asked from her German partner about the main character from the film that the groups screened, however, she responded, "And I'm like, wow, that y'all have someone that's like your big German star and you just don't know" (P3). Others offered a variety of additional insights gained from this experience. For example, "I learned a lot about how similar we are, just as far as like interests and day to day stuff. I didn't expect us to be that different, honestly" (P5). One even commented, "I mean, we're just college kids, we're kind of universal" (P3). "It was a really, really awesome" (P11), was one student's response to the Skype video conferencing. He continued, "I enjoyed the Skype talk because I kind of got to hear their side and they were asking me questions about Louisiana, and I think it was a positive experience that I got a lot out of" (P11).

The researcher anticipated that the literary texts from the textbook and individual website searches would contribute to students becoming more acclimated with German culture. The researcher hoped that by participating in the Jena Project, that students' cultural awareness would become enriched. Moreover, the researcher intended for this exchange to provide students with a truly authentic opportunity that would also enhance their language competence. Students' responses from their interviews and reflections were able to provide the researcher with a better understanding of the effects of TSGLE and cross-cultural exchange on students' cultural

awareness over the course of a semester. To gain a deeper understanding of students' perceptions of the effects of TSGLE and cross-cultural exchange on their language acquisition and cultural awareness, the researcher collected and analyzed both quantitative and qualitative data. These steps and procedures are addressed in the following section.

Impact of the TSGLE and Cross-Cultural Exchange: Students' Perceptions

In order to explore Research Question 3 (hereinafter RQ3), How do students perceive the use of the TSGLE intervention and cross-cultural exchange in their process of learning German?, the researcher first analyzed students' responses to the Technology Implementation Survey (TIS) instrument. The TIS consisted of 11 Likert-type and scaled questions. For example, Questions 1 and 2 asked students whether they preferred or learned more in a German course that utilizes technology. Questions 3 through 7 asked students to rate their perceptions on the effectiveness of the technologies (blog, podcast, chat, wiki, Skype, and video tutorials) used throughout the course and their impact on students' reading, writing, listening, speaking, and cultural awareness. For a more detailed description of the TIS, please visit Appendix F. To obtain results of the TIS, the survey was administered during the last week of the semester using *Qualtrics* software (Qualtrics, Version 2013, Provo, UT), which automatically produced results to students' responses. Responses to the first two questions indicated that 85.71% of students learn most in a German course that uses technology, and 82.14% prefer learning German in a course that utilized technology. Table 4.4 on the following page provides the results of the next five questions that illustrate students' perceptions to the specific technologies used to learn German. The top portion reflects the percentages of students' responses of "agree" or "strongly agree". The bottom portion reflects percentages of students' responses of "disagree" or "strongly disagree".

Table 4.4
Language Acquisition Assessment: Students' Perceptions

Language Acquisition Enhanced by Technology						
Language Skill	Blog	Chat	Wiki	Podcast	Video Tutorial	Skype
Writing Skills	92.86%	89.29%	89.29%	46.43%	82.14%	50%
Speaking Skills	55.56%	48.15%	44.44%	88.89%	70.37%	81.48%
Reading Comprehension	82.14%	85.71%	82.14%	46.43%	71.43%	53.57%
Listening Comprehension	35.71%	39.29%	35.71%	85.71%	92.86%	89.29%
Cultural Awareness	92.86%	50%	42.86%	50%	64.29%	96.43%
Language Acquisition Not Enhanced by Technology						
Language Skill	Blog	Chat	Wiki	Podcast	Video Tutorial	Skype
Writing Skills	7.14%	10.71%	10.71%	53.57%	17.86%	50%
Speaking Skills	44.44%	51.85%	55.56%	11.11%	29.63%	18.51%
Reading Comprehension	17.86%	14.29%	17.86%	53.57%	28.57%	46.43%
Listening Comprehension	64.29%	60.71%	64.29%	14.29%	7.14%	10.71%
Cultural Awareness	7.14%	50%	57.14%	50%	37.71%	3.57%

These results show that the majority of students perceived the blog, online chat, and wiki tools to be helpful with their reading and writing skills as was anticipated by the researcher. However, the researcher did not expect the high percentages of students' responses indicating the podcast, video tutorials and Skype helped their writing. Likewise, the high response rate of

students perceiving that podcasts, video tutorials, and Skype helped their reading also was unexpected.

The majority perceived the podcasts and Skype sessions to help with their speaking skills. However, the researcher did not anticipate such a high response rate from students indicating they perceived the blog, chat, wiki, or video tutorials to help with their speaking. The majority perceived the podcasts, video tutorials, and Skype sessions to be helpful with their listening comprehension, and the majority perceived the blogs and Skype sessions to be helpful with their cultural awareness. While the researcher anticipated that students would perceive these as effective tools to enhance listening comprehension and cultural awareness, as was his intention, he anticipated a lower percentage of students to find the blog, chat, wiki, podcasts, and video tutorials as tools to enhance their listening skills and cultural awareness.

The goal of implementing this survey was to provide insight into the students' perceptions of the technologies used and whether they felt the TSGLE intervention helped enhance their language acquisition and cultural awareness. To seek additional answers into how students' perceived the intervention, the researcher conducted focus group interviews and collected students' reflections. These qualitative data were able to provide additional insight into students' perceptions regarding the course and TSGLE intervention that were not gathered from this survey. For example, several participants reported on the convenience and accessibility multiple features from the course offered, such as the ease of accessing the ebook as opposed to a traditional textbook. For example, several provided their reaction to the option of using the ebook versus the traditional book. "I'm more of an electronic user, so the ebook was awesome. I wouldn't have to lug around a three-ring binder" (P20). "I used the online (ebook) more often just because it's easier to have a laptop with me and I don't have to carry things around all the

time” (P24). Participants also referred to the course wiki (Google Doc) as a “good review that was easily accessible” (P3). Referring to the wiki’s use in class, one student commented “someone could go change it and you’d see it instantly” (P3). The researcher intended for the wiki to be an easily accessible tool that provided instant, simultaneous use.

In addition to the wiki, multiple participants reported the on-demand access of the video tutorials as being very convenient. “I liked the video tutorials because it gave us a chance to review the material with your explanation of how without actually having to go to your office” (P9). “The video tutorials were very helpful. I can review them over and over again” (P4). “I love the tutorials you post on YouTube before the class test. It is a *great* review” (P18). “The video tutorials were life savers” (P21). While the students’ responses were helpful in providing the researcher with a better understanding to their perceptions, there still existed some unanswered questions to students’ responses to the TIS. As was the case for the unexpected low result of students’ listening comprehension, perhaps the timing of the TIS affected some of the responses provided by students. The TIS was administered during the last week of classes prior to the final examination post-test. It is possible students were at their limit in terms of workload and coursework expectations. As this may be the case, this will be discussed in more detail in the following chapter. Despite the results of the TIS, most of which were anticipated, one student did provide his overall impressions of the course and TSGLE intervention, as he stated,

Both my language skills and cultural awareness were enhanced through the blogs, chats, podcasts, Adobe Connect, reading out of the textbook, participating in class discussions and looking at the tutorials. I find that by using all of my available resources, I expand my understanding of the language. The thorough method leaves no chance for any misunderstandings. I find class lectures to be the best option for my learning style, but I also like the use of technology (P19).

This may shed more light on students’ perceptions of the use of technology to learn German. In addition to seeking more understanding of students’ perceptions of the use of

TSGLE to learn German, the TIS also was intended to learn more about students' reactions to the cross-cultural exchange. Questions 8 through 11 of this survey asked students to rate their perceptions of the cross-cultural exchange (Jena Project) and its effect on their cultural awareness and language acquisition, their overall impressions on the exchange, and issues encountered during the exchange. Each question was followed by a four-point Likert scale ranging from "strongly agree" through "agree", or "disagree" to "strongly disagree". Table 4.5 provides these results, and reflects the percentage of students' responses of "agree" or "strongly agree".

Table 4.5
Cross-Cultural Exchange: Students' Perceptions

Enhancement of Cultural Awareness and Language Acquisition					
Awareness of East German Culture Improved	Awareness of Current German Culture Improved	Vocabulary Enhanced	Communication Skills Enhanced	Pronunciation Enhanced	Increased Motivation
71.43%	92.86%	85.71%	89.29%	85.71%	82.14%
Overall Impressions of Exchange					
Image of Germany Changed		Interest in Continuing Project		Recommendation of Project for Future Classes	
71.43%		82.14%		89.29%	
Issues Experienced					
Technical Issues		Language Barriers		Personal Issues	
75%		78.57%		82.14%	

These results indicate that the majority of students perceived the Jena Project to be a good means to enhance their cultural awareness and language acquisition. Students' responses to the survey show that students' knowledge of East German culture and culture of present-day Germany improved. These results also indicate how students' language acquisition, such as their communication skills, pronunciation, and increased vocabulary was improved. The majority expressed interest in continuing cross-cultural exchange and even recommended it for future classes. Despite these responses, students did provide insight into the technical issues faced as well as the language barriers that existed. In order to find additional insight into students' perceptions, the researcher also analyzed students' interview responses and reflections. For example, several participants reported how the Jena Project blog was an effective means of bringing them closer to the German culture and introducing both groups to one another. For instance, one student remarked,

It was a nice starting point and it was a nice way to get to know everybody and their interests and perhaps we could find something in common with somebody and you could talk about it. It sort of formed a relationship before we even started Skype (P6).

Other comments also aligned with this sentiment, as well as provided insight into how the exchange helped their language acquisition. For example, "I thought it was a good introduction and effective in how it introduces everybody. The language was just, um, getting used to it and getting used to the idea of someone who is actually German reading my German" (P9).

Participants also reported how the blog aided their writing development. "I like the pressure of knowing if I was going to read something [...] I didn't understand or I know what they're talking about. And [...] when they commented back, I was excited, because they were talking to me" (P10).

Some commented on the technical issues faced during the group video conference, such as the time delay and small camera angle. Others reported about their initial anxiety of interacting during the group video conference, particularly with the language barrier. “We were nervous and anxious to see what would happen. I realized they seemed just as nervous or anxious as us” (P5). “At first I wasn’t that interested, but then seeing the German students made me very curious. I realized we are very different” (P2). “I was pretty confident and thought I wouldn’t get embarrassed, but at same time I was hoping they wouldn’t call on me” (P5). “I had the feeling I want to do this but I’m not quite over the threshold” (P4). One student, however, did not seem overwhelmed to interact with the German students, “I thought it was a breeze. But it was different maybe for me, because I’ve been exposed to German since the fifth grade” (P6). As this was not the case for most, she did provide additional commentary indicating the exchange was a very applicable means of utilizing German in a very natural way. Lastly, one student commented on the German film that was screened by both groups, which provided an interesting take on German film. She commented, “It was funny for me seeing a light-hearted German romp. I’m a film major and I love German movies, but all German movies I watch are super serious and scary” (P3). The TIS and students’ responses indicated that the majority of students perceived the TSGLE intervention and Jena Project to assist in language acquisition and cultural awareness.

The researcher anticipated the TSGLE and cross-cultural exchange would enhance students’ language acquisition and cultural awareness. As was observed by the mixed methods, quantitative and qualitative data collected during this study, this intervention did indicate improvement in students’ writing, speaking, reading, listening, and cultural knowledge. For example, the researcher conducted repeated measures to gauge the impact of technology on

students' writing and speaking skills. The results indicate students did show improvement in these language skills as they were able to communicate in authentic language scenarios.

Quantitative results from the TIS, as well as qualitative data from students' focus group interviews and reflections, also provided the researcher with a deeper understanding of the impacts of the TSGLE and cross-cultural exchange. These revealed that in addition to writing and speaking, students' reading and listening comprehension, as well as cultural awareness were enhanced through use of the synchronous and asynchronous communication afforded through the various technologies and exchange with the Jena students. The researcher intended for these technologies and exchange to increase and improve communication and use of German and ultimately immerse students more deeply with the language and culture. Of course, challenges were experienced by the students during this process. However, these experiences provide lessons to be learned, and can help create more effective uses of technology intervention and cross-cultural exchange for future studies. The findings indicate that the majority of students improved their language acquisition and cultural awareness. What follows is a discussion that addresses the aforementioned results of the TSGLE intervention and cross-cultural exchange, as well as implications of what the findings revealed. Additionally, the discussion outlines the strengths and weaknesses experienced during the intervention in this German language course, as well as recommendations for future studies based on the outcomes over the course of this study.

Chapter 5

Discussion

This chapter provides a brief introduction of the research problem and description of the study which included a TSGLE intervention and cross-cultural exchange to enhance language acquisition and cultural awareness in a German language course. The researcher then provides a discussion of the conclusions and summaries of the findings by providing an interpretation of the quantitative and qualitative data. Furthermore, the researcher provides implications of the findings and concludes with suggestions for future research.

As previous research has shown, technology offers the potential to enhance classroom-based language instruction (ACTFL, 2014). More specifically, Web 2.0 technologies, such as those utilized in this current study, have the ability to enhance collaboration, communication and sharing of content among students (Wang and Vásquez, 2012). Yet, according to Jahner (2012), “In order to provide effective and individualized language instruction, students need to encounter the language on a daily basis, which is certainly possible based on today’s applications and interconnectivity” (p. 4). While there is evidence indicating increases in the applications of technology in SLA, “research on the application of Web 2.0 technologies to L2 learning is still quite limited” (Wang & Vásquez, 2012, p. 416). Therefore, previous literature (Li, 2012) has recommended future research to center more on quantitative data to analyze the impacts technologies have on students’ language skills, as well as qualitative data to “offer rich descriptions of observed phenomena, and to address issues related to participants’ individual perspectives as well as to their personal, lived experiences” (Wang & Vásquez, 2012, p. 422). Furthermore, other researchers (Elola and Oskoz, 2012; Perez, 2003) have urged for more studies to be designed through specific theoretical lenses.

In response to these findings and recommendations, this study employed a within-group case study design using a mixed methods approach. To accomplish this, the researcher employed a TSGLE intervention to increase and improve students' communication on an individual basis, with classmates, and by linking students with native German speakers in a cross-cultural exchange. This allowed the researcher to analyze the intervention's effects on students' language acquisition and cultural awareness, as well as analyze students' perceptions of this pedagogical method to enhance their language acquisition and cultural awareness. The researcher used a concurrent triangulation process during a one semester intermediate German language course and merged findings of mixed methods, quantitative, and qualitative data to answer the research questions that guided this study in an attempt to provide deeper insight into the aforementioned gaps reported. The researcher hypothesized that students' language acquisition would improve after a semester-long TSGLE intervention. The results of this study did show that TSGLE enhanced students' language acquisition and cultural awareness. Results also indicated that an overwhelming majority of students perceived this intervention to be a beneficial means to enhance these skill sets. The researcher collected and analyzed mixed methods, quantitative, and qualitative data to come to this conclusion and presents an interpretation of these findings in the discussion that follows.

Although the researcher originally intended on using pre-test and post-test instruments to assess the effects of a technology intervention on students' language acquisition, it was found that these were potentially inadequate instruments to accomplish this. One reason supporting this claim was that these instruments did not have equal forms reliability. The post-test was a cumulative test that included a larger quantity of content for the students to prepare, mainly grammar. Moreover, the post-test was the final examination and administered during a time

when students have multiple final examinations and projects in their other coursework. In addition to this, the timing of the Jena Project, which was near the end of the semester, may have also contributed to students having difficulty managing their time to accomplish all of their tasks effectively. This was reported by multiple students, who commented on the difficulty to simply find time to schedule individual video conferences with their partners. As (Lin et al., 2008) found, personal limitations for students was a major problem encountered when conducting a study utilizing technology implementation in addition to regular coursework. These limitations included busy schedules in school or personal situations which hindered their ability and/or effort to practice. These findings (Lin et al., 2008) align with some of the experiences that resulted in this current study. Many students reported that they work outside of school, some even as much as 40 hours per week, and some with families to support. In addition to the pre-test and post-test instruments not having equal forms reliability, the researcher also found that these examinations were more suitable to assess textbook content.

The pre-test and post-test instruments, which included individual language skill sections, were primarily used to assess students' knowledge of the textbook content, not the impact of technology per se. Research (Grimes and Warschauer, 2008) has shown that assessment for effects of technology should address 21st century skills, including, global awareness, critical thinking and problem solving skills, and information and communications technology literacy. Furthermore, ACTFL's 21st Century Skills Map (2014) declares that students should be "using digital technology, communication tools, and/or networks appropriately to access, manage, integrate, evaluate, and create information in order to function in a knowledge economy" (p. 14). However, assessment instruments, including standardized tests, are inadequate in measuring these skills as they focus more on students' knowledge of discrete facts (Grimes and

Warschauer, 2008). While Grimes and Warschauer (2008) refer to standardized tests on a national level, the researcher believes that the pre- and post-test instruments used in this current study, which were pre-designed by the authors of *Stationen* (Augustyn and Euba, 2013), apply to this claim.

Therefore, in order to more accurately measure the impact of TSGLE, for example, on students' writing and speaking skills, the researcher performed repeated measures statistical testing of students' performance on blog posts and podcast recordings completed over the course of the semester. Results from these tests, the TIS, and qualitative data support the positive gains the TSGLE afforded students in their language skills and cultural awareness. The following will expand on this in more detail.

Writing

Descriptive statistics of repeated measures indicated significant effects of blog post entries on students' writing. Overall mean scores also indicated an improved score on each measure. Students' responses to the TIS and qualitative data indicated that in addition to the blog tasks, other Web 2.0 technologies used throughout the semester, also improved their writing skills, including online chat and wiki. The researcher's intent on using each of these tools was to increase students' opportunities in written practice in more informal settings. The asynchronous affordance of the blog allowed students to process their thoughts before providing a written response. The synchronous affordance of the chat allowed students to apply their written German in a more improvisational manner. Previous research supports these findings and also shows that these tools are especially beneficial to enhancing individual's writing ability. Armstrong and Retterer (2008) utilized a semester-long blog and found that students' writing abilities and attitudes were enhanced. The researchers found that student writing improved in

areas including, use of verb tense, and writing more complex sentences by using primary and secondary clauses. Sun (2010) reported that blog use improved students' autonomy, attitude, and motivation, and Ducate and Lomicka (2008) found that blog use gave students a sense of ownership and more opportunity for creativity.

The blog and podcast tasks from the TSGLE intervention and cross-cultural exchange, which were conducted in less-pressured situations compared to that of an exam, suggest that students were able to take their time and enjoy using the technology to complete each assignment. For example, when referring to the blog, one student remarked, "that helps with my writing skills especially when I can take my time to grasp what is being said and figure out what to say in return". Regarding the blog assignments, there were multiple students who wrote the minimum sentence requirement of each task, five sentences. The researcher intended for blog assignments to be a minimum of five to seven sentences. It is difficult to ascertain if the minimum production was an indication of a lack of motivation, or perhaps even a result of personal limitations, such as busy schedules in school or personal situations, which hinder one's ability to practice (Lin, Winaitham, and Saitakham, 2008). However, other students took advantage of the blog task to exhibit their potential by writing initial posts and by adding multiple commentaries to their classmates' entries. In these instances, such as Blog 5: Heidelberg, students' writing tended to flourish, which was evident in the amount of words used, sentences written, and even use of secondary clauses, an indication of a higher proficiency with the language (Armstrong and Retterer, 2008). For some students this was expected, as several exhibited stronger language skills from day one, either from previous experience with German in school or even opportunities spent in Germany. Yet for several other participants who had less experience with German, this was as an unexpected outcome. Some of these students expressed

they had done poorly in previous German courses or simply struggle with the language. It was rewarding to see them participate in multiple asynchronous blog exchanges with their classmates, which suggests the potential of blogs to promote learner autonomy and constructivism (Ducate and Lomicka, 2008; Sun, 2010).

In regards to the current study, this was evident during the blog phase of the Jena Project. As a warm-up phase to the project, students found that this helped improve their writing skills as it allowed them to adapt to the language whereby they had to perform in front of an audience of native speakers. Several students commented that writing for a native speaker did add some pressure, but that it was rewarding when the German students would provide commentary and begin an interaction. The students felt that writing repeated blog entries over the course of the semester helped them prepare for this, and that they viewed the Jena blog as simply another blog task to write. These data indicate that writing blog tasks, as well as using other Web 2.0 technologies, such as chat and wiki, can allow students' writing to flourish. By having additional exposure and practice in authentic writing situations, for instance, in informal environments, students demonstrated positive gains in their writing skills. The multiple blog assignments throughout the semester even prepared students to interact with native speakers, which reveals that even with some adjustments that students can adapt to authentic writing and language production. The results of repeated measures of students' blog posts, as well as focus group interview responses and students' reflections, indicate that the TSGLE had a positive effect on their writing skills. In addition to students' writing performance, the researcher also wanted to assess the effects of TSGLE and cross-cultural exchange on students' speaking skills.

Speaking

Students' responses to the TIS and from focus group interviews indicated that podcast recordings improved their speaking skills. Descriptive statistics from repeated measures also indicated significant effects of podcast recordings on students' speaking. While these data indicated improvement between the first and fourth podcast, students' sixth podcast resulted in a lower mean score. A possible explanation of the lower mean score of the sixth and last podcast recording was due to it being the students' final oral examination. Students were only given two minutes to come up with a response on a topic they had not prepared for prior to the exam, creating a high-pressure situation. Despite this students still performed at a high level during the podcast recordings.

The researcher intended on using podcasts for students to practice speaking outside of class meetings, especially since these lasted only 50 minutes, three times a week. With 28 students participating in this environment, it is challenging to have ample amounts of in-class time devoted to practice speaking on an individual basis. While some students displayed high levels of confidence communicating in German, some expressed they felt intimidated by this factor, which led them to be less inclined to speak in class. These students noted that having the time to create recordings allowed them to apply their speaking abilities, take the time to listen to their mistakes, and correct them through instructor feedback. For instance, one student remarked that podcasting helped "because it made us speak and [...] we were able to listen to ourselves and hear any mistakes in pronunciation or grammar we [...] would not have noticed if we didn't listen to ourselves". This aligns with previous research, which has shown that podcasts can improve students' speaking capabilities, for instance, (Ducate and Lomicka, 2009), who found that podcasts helped improve students' accents between pre- and post-test assessments.

Similarly, Lord (2008) found that students gained significant improvement in pronunciation from creating a variety of podcast tasks, such as tongue twisters, conducting phonetic pronunciation exercises, and reading texts aloud. An indication that more practice using technology such as podcast should be considered for individual practice and then applied in F2F or even SCMC environments.

The significant results of the repeated measures of students' blog entries and podcast recordings align with the researcher's belief that the TSGLE would improve students' language acquisition. While the language skills assessed in these instances were only designated for writing and speaking, the researcher believes the interactive affordances provided by the blog and podcast tools contributed to student learning. Moreover, these tools gave students the opportunity to interact using their 21st century skills outlined by Grimes and Warschauer (2008) and ACTFL's 21st Century Skills Map (2014). Additional research (Bull, Thompson, Searson, Garofalo, Park, Young, and Lee, 2008) describes the "phenomenon" of informal learning, stressing it "is associated not only with students' abilities to access and enjoy media and online content, but also to create, produce, publish, and maintain it in real time" (p. 101). Rossett and Hoffmann (2007) describe informal learning as something that takes on multiple forms and occurs outside of the learner's control. Additionally "new technologies increase our access to information, empowering learners to pursue knowledge in informal as well as formal educational contexts using web and mobile tools" (Comas-Quinn et al., 2009, p. 102).

As was indicated by students, the blogs and podcasts did help them practice their individual language skills in writing and speaking. The repeated tasks throughout the semester were then applied by interacting with native speakers. Students seemed to be more comfortable while writing the blog entries during this project, which was anticipated by the researcher.

Students at the intermediate level of German are expected to write at the Advanced Low level based on ACTFLs (2012) language guidelines. These indicate students at this level should be able to compose simple summaries, but that they may not be substantive. For a more detailed description of these guidelines, please visit Appendix D.

While podcasts did afford improvements in speaking on an individual basis, qualitative results indicated that when faced in a speaking situation with native speakers, the ability to speak comfortably proved to be a challenge. Some students reported feeling overwhelmed and expressed they lacked the ability to communicate effectively in German. Despite these experiences, however, they indicated enjoying the opportunity to communicate with someone from Germany. Other students, who had less difficulty communicating in German, primarily due to having been taught the language previously, felt that interacting with native speakers was a very applicable way to practice German in school. One indicated that one normally does not have this sort of opportunity in an American school system, and that the language courses in the United States mostly consist of book exercises. This indicates a possible recommendation for future studies and will be addressed later. The positive results of students' speaking and writing indicate that the TSGLE did have an effect on these language skills. Students' responses also show that these Web 2.0 technologies can help with individual learning and better prepare them for interactive communication with non-native speakers, as well as with native speakers. These results also align with the informal learning that is promoted while using these tools, as well as enhancing students' 21st Century Skills communicative and critical thinking skills, as outlined by the aforementioned research (Bull et al., 2008; Grimes and Warschauer, 2008). In addition to assessing students' writing and speaking skills, the researcher also wanted to assess the impacts of the TSGLE and cross-cultural exchange on students' reading comprehension.

Reading

Students' responses to the TIS and qualitative data indicated that a number of aspects of the course, including the textbook, in-class meetings, the SAM, blog posts, online chat, video tutorials, podcasts, and wiki as tools that contributed to their reading acquisition. During in-class meetings, the researcher reviewed textbook reading selections that were assigned for homework, which included a discussion of the content and review of new vocabulary. As the researcher anticipated, students reported that the in-class review of these texts gave them a better understanding of language structure and use of particular vocabulary. Data also indicated that the blog was a tool that enhanced their reading. In addition to writing eight blog posts, students were also required to read and comment on their classmates' entries. Participants reported that the blogs had a dual effect; reading through the textbook and websites for additional research allowed them to write follow-up responses, and reading their classmates' responses aided their comprehension by providing alternative means of expressing themselves in German. This is supported by Shang (2005), who found that email exchanges between students for feedback and corrections resulted in a positive experience that enhanced reading skills. Although blogs and email represent different mediums, they both promote asynchronous communication, which can enhance language skills (Volle, 2005).

While students' responses indicating that the blog tasks assisted in reading comprehension were anticipated by the researcher, he did not expect students' responses from the TIS to indicate that other tools, such as podcasts and video tutorials, would aid reading skills. Although the podcasts were intended to promote speaking enhancement, three of the six assigned podcasts gave students the opportunity to practice reading pre-written responses aloud. The video tutorials were merely intended to be a review of language structure and grammar; the

researcher did not anticipate that this tool would assist students' reading comprehension as reported. Previous research also shows that a variety of Web 2.0 technologies can enhance reading comprehension, which (Ducate et al., 2011) found evident in pre-reading tasks using a wiki to enhance reading comprehension of assigned texts. While certain outcomes, such as blogs and podcasts helping with writing and speaking were expected, the unanticipated responses from students in this current study that certain tools aided in other language skills, indicate the need to continue analyzing the effects Web 2.0 technologies have on students' overall language acquisition. In addition to assessing the effects of the TSGLE on students' writing, speaking, and reading, the researcher also hoped to find aspects of this intervention that contributed to listening comprehension.

Listening

Students' responses to the TIS and qualitative data indicated that a variety of aspects and tools used in the course, such as in-class discussion, video tutorials, and podcasts led to an improvement in their listening comprehension. The researcher's goal was to use German as often as possible, and to only use English when additional explanation was required to clarify complex language structures, especially when students were having difficulty understanding the initial explanation in German. Students reported they preferred the use of German in class, even if it was challenging at first. One remarked, however, "by the end of the semester I found that I was understanding what you were saying". Although podcasts were intended to be used for speaking practice, students could listen to their recordings to make revisions, and even listen to instructor-created podcasts to be used as guides. Previous research also supports the claim that Web 2.0 tools can enhance listening acquisition. Schmidt (2008), for example, incorporated podcast tasks for an entire semester, where students were required to access multiple, pre-

recorded podcasts on a weekly basis and complete follow-up reports on their findings. He observed improved listening comprehension over the course of the semester, even when content was challenging. The consistent exposure to native speakers allowed students to adapt to the language, even at advanced levels. Abdous et al., (2009) implemented podcasts as review tools and found that students improved their study habits, increased their vocabulary, and improved their listening skills.

In addition to assessing the effects of TSGLE on students' language acquisition, the researcher also wanted to evaluate the effects of a cross-cultural exchange on students' language learning. While certain aspects of this exchange have already been touched upon in this discussion, the following will address additional findings that resulted from a virtual tele-collaboration with native German speakers.

Language Acquisition: Jena Project

During the Jena Project it was found that simply having the opportunity to interact with native speakers is what attributed to students' language acquisition. Although students experienced challenges during some of their correspondence, they reported the project increased their vocabulary, improved their communication skills and pronunciation. Students were also more motivated when communicating in German at the completion of the cross-cultural exchange. Enhancement to students' language acquisition was due to their interaction and application of the German language in the blog, group video conference, film, individual video conference, and chat option within the individual video conference. The results of repeated measures of blog tasks indicated students performed at their highest level on this particular task. This suggests that repeated interaction with technology over longer periods of time, has the potential to improve communication skills, such as higher proficiency in writing. Moreover,

results revealed that continuous use of this medium helped students prepare for their asynchronous communication. Based on students' responses, it was suggested the blog phase of this project was low-pressure and proved to be a good introduction in linking two cultures together.

Wang, Zou, Wang, and Xing (2013) describe how students can benefit from cross-cultural exchange by shifting from an intra-cultural communication environment, for example, a single foreign language classroom at a single location, to that of an intercultural communication environment. This includes communication with international learners via tele-collaborative partnerships, which provide intercultural interaction between groups of students "who might otherwise not have the opportunity to interact" (Wang et al., 2013, p. 248). Previous research (Pellettieri, 2010) also indicates that technologies promoting synchronous computer mediated communication (SCMC) have the added benefit that allow students to interact outside of class time or even with others around the globe where learners are likely to engage in effective and meaningful L2 practice. Moreover, interacting in online environments also gives students the opportunity to communicate on their own in that they cannot hide online (Volle, 2005).

Viewing a German language film and participating in group and individual video conference meetings resulted in enhanced listening and speaking skills. Students indicated after some initial struggles they were able to adapt to each medium, and that participating in video conferences afforded them with the ability to collaborate with their partners, who acted as coaches guiding them through the language process. For instance, when referring to the individual video conference, one student remarked, "I learned a lot from her and that helped me with speaking and listening". Another commented about the help she received from her partner: "She worked with me [...] and if I didn't understand something, then she would either type it in

the instant message to me [...] or she would change her vocabulary to explain the word or change it to something I understood”. One student remarked that the individual video conferences “helped speaking skills, especially improvisational conversation skills”. He even reported that email and Facebook correspondence “helped with writing and comprehension skills”. In addition to these comments, he indicated that this interaction improved his “efficiency of online language navigation”.

While the researcher’s goal of embarking on a cross-cultural exchange would contribute to students’ language acquisition and cultural awareness, the last comment provided by the student indicating this project also helped improve his technical skills was not anticipated. Although this was the case, this result does align with previous research (Grimes and Warschauer, 2008), who reported that in addition to enhancing communication skills, that the use of technology in an academic setting can also promote technical literacy. This is an additional finding that should be considered for future studies.

These results suggest that linking students in cross-cultural exchange has the potential to improve students’ language comprehension. The researcher and his colleague from Jena encouraged the German students to function as language coaches and work with the American students on improving their language skills. Because the German students will potentially become German teachers, this was an applicable task. Oskoz (2009) observed how learners using Web 2.0 technology such as chat, assisted one another and how feedback provided by learners developed students’ learning. It was found that this communication tool allowed students to request for help when necessary, in that expert learners “used a variety of implicit and explicit mechanisms of assistance to help their partners” (Oskoz, 2009, p. 55), and how “novice learners tend to integrate both implicit and explicit feedback provided by expert learners”

(Oskoz, 2009, p. 56). Tudini (2003) suggested that linking non-native speakers with native speakers can promote negotiation of meaning of language. These results (Oskoz, 2009; Tudini, 2003) align with the findings from this current study which also found that, in addition to improving students' language skills, cross-cultural exchange has the potential to improve students' cultural awareness.

Cultural Awareness

Reports from students indicated that multiple aspects of this German course, including the textbook, blog assignments, and Jena Project, enhanced their cultural awareness. It was suggested that these tools and aspects of the study provided students with authentic access to cultural content. The textbook offers a chapter by chapter overview of various German cities including historical, geographical, and cultural insights into each location. The *Moodle* blog tasks required students to conduct individual research of specific websites pertaining to each city introduced in the textbook, including websites about Berlin, Munich, Heidelberg, Hamburg, and Leipzig. For more details regarding these websites, please visit Appendix A. These websites allowed individuals to become immersed in the German language and culture. For example, when accessing a website about Oktoberfest, one of Munich's annual fall festivals, one student claimed, "it was cool to explore these websites and, in a way, virtually go to these cities".

While exploring websites in a target language can bring students closer to a language's culture, as was reported by students, the Jena Project perhaps gave students the closest access to authentic cultural content, and even provided both groups access into one another's culture. The majority of students reported that this project changed their image of Germany in that it enhanced their cultural knowledge of East Germany as well as contemporary German life, particularly as a university student. Students commented that the interaction helped them get to

know one another. As a result, the common interests they shared revealed how similar they were as college students from two different countries. For example, one commonality that many shared, was going out in town either to watch movies, go to museums, or even to clubs to listen to live music. Many students from both groups even commented on the food available at their respective universities, and although it might lack imagination, it met their needs to curb their hunger. An unexpected point of conversation during the group video conference, was when both groups discussed having McDonald's as a food option. The researcher observed that this helped the American students realize that although their partners resided on a different continent, that there were similarities the two cultures shared, even if it was fast food options that brought them closer.

Previous research (Wang et al., 2013) has shown that intercultural competence can be enhanced through e-learning, particularly by connecting language learners with native speakers. The ability to easily connect in a virtual world “emphasizes the inherently intercultural nature of language learning, with learners in these collaborative partnerships developing both linguistic and intercultural competence while engaged in electronically mediated dialogue with their foreign partners” (Wang et al., 2013). In addition to the Jena Project's assignment requirements, this exchange demonstrated how students established continued communication with one another. Some even reporting to have emailed multiple times and even connecting on social media sites such as Facebook. These findings were unexpected and suggest the potential cross-cultural exchange can provide in regards to not only improving language acquisition and cultural awareness, but also by establishing relationships.

Implications of Findings

The findings suggest that technologies such as blogs, chat, podcasts, wiki, and cross-cultural exchange can have a positive impact on students' reading, writing, listening and speaking skills, cultural awareness, as well as students' motivation and perceptions of participating in this type of pedagogy. Moreover, these tools, as well as in-class meetings can help support collaboration, constructivism, and learner autonomy, creating an environment promoting social constructivism. As such, individual's learning experiences have the potential of being enhanced by those surrounding them (Vygotsky, 1978). Learner's cognition also has the potential to develop when engaged in collaborative tasks, which can influence engagement in other activities (Palinscar, 1998).

The researcher observed that in-class activities, homework, group activities, the TSGLE intervention and Jena Project were all aspects of the study that contributed to social constructivism. The researcher found that by using various Web 2.0 technologies, students had increased opportunities for communicating, which allowed for more student-to-student, student-to-computer, and student-to-instructor interaction. This interaction resulted in increased use of German. Furthermore, much of the course correspondence, including blog activities and course email was accessible via the Course Management System (CMS) *Moodle*. This system (See Appendix B, Figure 8) is designed to be used for multiple purposes to assist in the organization and dissemination of course content. Rosenberg (2007) defines this process as Knowledge Management (KM), which "is the creation, archiving, and sharing of *valued information*, expertise, and insight within and across *communities* of people and organizations with similar interests and needs, the goal of which is to build *competitive advantage*" (pp. 157-158). For this

study, it was used as a repository for storing large amounts of materials such as uploaded files⁴, Internet links, and access to the blog. It was also used to organize, distribute, and assign tasks, as well as allow participants to access a gradebook and email. It played a vital role in this course, as it “is based on socio-constructivist pedagogy with the goal of providing a set of tools to support an inquiry- and discovery-based approach to online learning” (Brandl, 2005, p. 16).

Previous research supports the researcher’s observations of Web 2.0 technologies promoting social constructivism. For example, Oskoz (2009) found that use of online chat promoted collaboration for students as they engaged in dialogues and provided feedback to one another. Pellettieri (2010) found that online chat promoted negotiation of meaning between students by resolving difficult language problems. Sun and Chang (2012) found that dialogue exchanges while using a course blog led to students being more engaged with knowledge sharing and creation, which enhanced their sense of autonomy and ownership. Lastly, Tudini (2003) found that students negotiated meaning based on feedback provided by the native speakers, indicating a collaborative-like environment created by online chat.

Perhaps an indication of positive impact of TSGLE intervention was due to the convenience these tools afforded, as was reported by multiple students. Aspects contributing to this, included the course textbook, wiki, the instructor-created video tutorials, and blog. The researcher intended on using said materials to provide students with tools that were easily accessible and could be used with limited training. The textbook provided students with numerous glimpses of language structure and language, and the wiki was provided as a tool for synchronous and simultaneous language practice and review. The video tutorials were meant to be accessible for on-demand review of language structures, and the blog was available through

⁴ These include but are not limited to the course syllabus, handouts and language guidelines, and PowerPoint presentations.

the course CMS for language application and reflection for writing practice. Reasons for these tools being convenient included being accessible, enjoyable to use, offering hands-on usability, and providing easy access to authentic content. Previous research also illustrates the convenience afforded by various Web 2.0 technologies. For example, Castaneda et al., (2011) reported that the incorporation of a blog is easy for students to utilize and that students were satisfied using them. Comas-Quinn et al., (2009) also expressed that accessibility of a blog made for student participation easy. Additionally, Schmidt (2008) found that incorporating podcasts over the course of a semester gave students access to authentic material in the target language. These findings align with the results from this previous study, and indicate that the TSGLE intervention and cross-cultural exchange has the potential to improve students' language acquisition and cultural awareness.

Strengths and Limitations

Since this study employed a triangulating process, the researcher was able to use both quantitative and qualitative data to determine if there was convergence, differences, or some combination between the two (Creswell, 2009). The use of repeated measures allowed the researcher to interpret that the TSGLE was an effective intervention on students' performance over the course of a semester. This was particularly evident from the use of multiple blog entries and podcast recordings, which provided insight into students' improvement of language skills, namely, their writing and speaking skills. The TIS allowed the researcher to determine that students perceived the TSGLE intervention to be an effective tool assisting in language learning over the course of a semester. Students' interview responses and reflections also provided the researcher with a deeper understanding of students' perceptions to learning and teaching a foreign language enhanced by technology. The number of participants ($n = 28$) was a relatively

small sample size, which may have affected the overall statistical power. However, the use of the aforementioned repeated measures, as well as obtaining students' reports, provided the researcher with a deeper understanding of the effects of a technology intervention and cross-cultural exchange on students' learning. Despite these positive findings, several limitations of the study were also present.

The use of a convenience sample made it challenging to generalize results to a larger population. Although results indicated the TSGLE had a positive impact on students' language acquisition and cultural awareness, as well as students' perceptions of using such an implementation to enhance their experience in a language course, it does not necessarily indicate these results would be replicated if employed under the same conditions at another institute. Having no presence of a control group could be an additional factor contributing of this. The researcher's presence, particularly in focus group interviews, may also have resulted in a limitation to this study as this may have caused biased responses by participants.

Recommendations for Future Research

Future research should carefully consider the use of Web 2.0 technologies and, more specifically, the amount and type of technology tools to implement in a study. Moreover, researchers should consider why implementing said technology will be used and what type of training should be incorporated. Wiebe and Kabata (2010) found that students were unclear as to what the specific goals and outcomes of using technology would afford them. Schmidt (2008) reported that proper training in the use of technology is a critical aspect to consider when utilizing it in a language course.

Some participants from this current study were challenged by the technology, reporting it sometimes "gets in the way of me trying to understand the language". In addition, other

participants suggested more speaking be incorporated into in-class meetings, “I would like more opportunities to practice speaking and listening because they are a weak point of mine”. Others felt some of the less-used technologies, such as online video, should be implemented more, because it “was really beneficial for listening comprehension skills. I think it’s good for us to hear more German being spoken like that”. Based on the TIS results, the majority of students reported that online chat was an effective tool to practice German. However, qualitative results offered an alternative glimpse to students’ reactions, as several indicated they were very dissatisfied with this medium. One student even indicated that “there are far too many individual assignments for me to handle, even try to keep track of”. Wang et al., (2013) insist on the need to determine the amount of time demanded of students when utilizing technological aspects in a course. Conducting training and setting target goals of how to implement technology, in addition to regular coursework, should be considered ahead of time. Researchers should also consider utilizing a control group to make comparisons after a technology intervention.

Future research implementation of cross-cultural exchange should consider the logistics involved. In this study, logistics proved to be a difficult obstacle to avoid. Although the intent was for every participant to have a partner to interact with during the individual video conferences, the 12 German participants made it challenging for the 28 American students to find ideal times to connect. Aside from communicating via email, only nine of the American students were successful in scheduling and connecting with their partners for synchronous video conferencing. Should similar logistic obstacles result after attempting to schedule time to conduct video conferencing, future studies should take more advantage of asynchronous communication tools that allow for continued interaction between partners. One suggestion could be to include the instructor in email exchanges between partners so that he or she may

establish at an earlier point in the interaction if finding time for them to participate in synchronous interaction will be a challenge. Based on this, an adjustment in the scope of the interaction could be changed to strictly asynchronous.

Zhang (2013) also found similar challenges when trying to connect students with native speakers, as the native speakers were rarely available to connect and interact in the target language. Moreover, Zhang (2013) found that although technologies – such as the blog and video conferencing tool used in this study – allow for communication with anyone from anywhere, learning opportunities were affected by time lags. Also, careful use of the technology, such as *Adobe Connect* (Adobe Systems, Inc.), must be taken into consideration, as the group video conference was affected by a time delay. With multiple microphones being used simultaneously, the responses by the American students resulted in sometimes up to a five second delay before the German students could hear and interpret what was said. The researcher suggests a trial run to test for bugs in the technology. Because the German students' semester began during the middle of the American students' course, planning an ideal starting point to initiate the Jena Project was challenging. Although all participants were able to interact in the blog and group video conference, several students reported wanting to begin such a project earlier in the semester in order to take full advantage of what this feature can offer in terms of language acquisition and cultural enhancement. That said, establishing early communication with possible cross-cultural partners is necessary to designing an effective learning environment. Despite this, the data results of this mixed methods cases study revealed that an overwhelming majority of students benefitted from the TSGLE intervention and participating in cross-cultural exchange and recommend this in future courses. These findings suggest future studies attempt to implement technology intervention and cross-cultural exchange.

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Appendix A

Figures and Sample Lessons of TSGLE

The following figures illustrate images from the course textbook *Stationen* (Augustyn & Euba, 2014) and CMS. This is followed by Samples of the TSGLE intervention, which provides an example lesson of each of the various technologies throughout this course.

STATISTIK


Einwohnerzahl:	3,2 Millionen
Fläche:	892 km ²
Besucherkapazität des Techno-Clubs Berghain:	1.500 Personen

Station Berlin

Berlin ist seit dem Fall der Mauer^o 1989 wieder eine offene Stadt. Das Brandenburger Tor, das einmal das Symbol der deutschen Trennung^o war, ist heute das Wahrzeichen der deutschen Hauptstadt. Als westliche Insel im Osten hatte Berlin geographisch und politisch lange Zeit eine Art Sonderstatus^o. Erst durch die politischen Veränderungen Ende der 80er Jahre in Deutschland und ganz Europa ist Berlin wieder zum Mittelpunkt geworden.

Nachdem Berlin 1991 wieder Hauptstadt wurde, begann man in der Innenstadt viel zu bauen und zu renovieren. Das Stadtbild Berlins verändert sich seitdem ständig^o auf dem Weg zu einer neuen Metropole. Glücklicherweise^o gibt es in der Stadt Grünzonen wie den Tiergarten und viele weitere Parkanlagen und Gärten. In den Außenbezirken findet man großräumige Neubausiedlungen^o und Villenviertel^o, Seen, Flüsse und Wälder. Weiter außerhalb liegt das idyllische Umland des Landes Brandenburg.

Die Wiedervereinigung Deutschlands bedeutet aber nicht, dass Berlin eine einheitliche^o Lebenswelt geworden ist. Hier leben Deutsche aus allen Regionen und mehr als 440.000 Ausländer. Wie in jeder Millionenstadt hat jeder Bezirk seinen eigenen Charakter. Durch relativ günstige^o Mieten und die Vielfalt der Lebenswelten ist Berlin nach wie vor ein attraktiver Wohnort für Künstler, Kreative und alle, die es werden wollen.



Mauer wall • Trennung separation • Sonderstatus special status • ständig continuously
 glücklicherweise luckily • Neubausiedlungen housing developments • Villenviertel
 old neighborhoods • einheitliche homogeneous günstige reasonable, low

Figure A1. Screen shot of *Station* overview text.

Eine berühmte Berlinerin

Marlene Dietrich (1901-1992)

Marlene Dietrich wurde am 27. Dezember 1901 in Berlin-Schöneberg geboren. Als sie 18 Jahre alt war, machte sie eine Ausbildung als Violinistin und studierte dann an der Berliner Hochschule für Musik. Im Alter von 23 Jahren bekam sie ihre erste Theaterrolle, und bald danach begann ihre Filmkarriere. Durch ihre Rolle in Josef von Sternbergs Film *Der blaue Engel* wurde Marlene Dietrich weltberühmt^o. In diesem Film spielt sie die Kabarett-Sängerin Lola-Lola, in die sich ein respektierter Professor verliebt. Sie drehte noch sechs weitere Filme mit Sternberg und arbeitete später mit Billy Wilder, Alfred Hitchcock und Orson Welles. Sie wurde ein Hollywood-Star durch ihre Filme mit Paramount Pictures und blieb in Amerika. Während des dritten Reiches versuchten nazionalsozialistische Filmemacher sie nach Deutschland zurückzuholen, um deutsche Filme mit ihr zu machen. Goebbels selbst war ein großer Bewunderer von



Dietrich in *Blonde Venus* (1932)

Paramount / The Kobal Collection/Picture Desk

Figure A2. Screen shot of cultural text.



Strukturen

Das Verb: Konjugation, Tempus, Modus, Aktiv und Passiv

Konjugation

German verb forms show the subject of a sentence in number and person. This is accomplished through conjugation, the use of different endings added to the verb stem.

Number	Person	Present Tense of <i>machen</i>
Singular	(1st) ich	mach e
	(2nd) du	mach st
	(3rd) er/es/sie	mach t
Plural	(1st) wir	mach en
	(2nd) ihr	mach t

Figure A3. Screen shot of Grammar Explanation.



Grundwortschatz:

Stadt und Land

In dieser Liste finden Sie Wörter, die Sie brauchen, wenn Sie über Stadt und Land sprechen. Gibt es noch andere Wörter, die Sie brauchen? Ergänzen Sie die Liste.



der Berg , -e <i>mountain</i>	die Natur <i>nature</i>
der Einwohner , - / die Einwohnerin , -nen <i>resident</i>	der Ort , -e <i>place, location</i>
der Fluss , -e <i>river</i>	der Park , -s <i>park</i>
das Gebiet , -e <i>area</i>	die Region , -en <i>region</i>
die Geschichte , -n <i>history; story</i>	der See , -n <i>lake</i>
die Großstadt , -städte <i>metropolis, big city</i>	die Stadt , -e <i>city, town</i>
die Hauptstadt , -e <i>capital city</i>	die Umgebung <i>surrounding region</i>
die Lage , -n <i>location</i>	der Wald , -er <i>forest</i>
die Landschaft , -en <i>landscape, countryside</i>	das Zentrum , die Zentren <i>center</i>

Figure A4. Screen shot of Vocabulary List.

Videoblog

Connie

Vor dem Sehen

A

Kulturelles Leben

Was wissen Sie über die Kulturszene (Musik, Theater, Kunst, Literatur, Esskultur ...) in Ihrer Heimatstadt? Was wissen Sie über die Kulturszene in Berlin? Machen Sie eine Liste und vergleichen Sie.

„Ich bin mit meiner Kamera im Café Adler, das ist in der Nähe des Checkpoint Charlie.“

© Cengage Learning

meine Heimatstadt	Berlin

Figure A5. Screen shot of *Videoblog*.

ANNOUNCEMENTS VOICEBOARD SHARE IT! TUTOR HELP

Station 1: Berlin > B. Strukturen > S: 15. Eine Tour durch Berlin (Deklination)

STATION 1

Berlin

B. Strukturen

Schriftliches

15 Eine Tour durch Berlin (Deklination)

Ergänzen Sie jeden Satz mit den passenden Formen der Artikel und Nomen in Klammern. Achten Sie dabei auf den Kasus.

1. Der Reiseführer zeigt (die Leute)
 (das Brandenburger Tor).

2. Sie machen Bilder von (die Gedächtniskirche)
und (der Reichstag).

3. Ein Tourist kauft ein Stück (die Mauer) in
 (der Souvenirladen).

4. Die ganze Gruppe läuft durch (die

Figure A6. Screen Shot of SAM exercise.

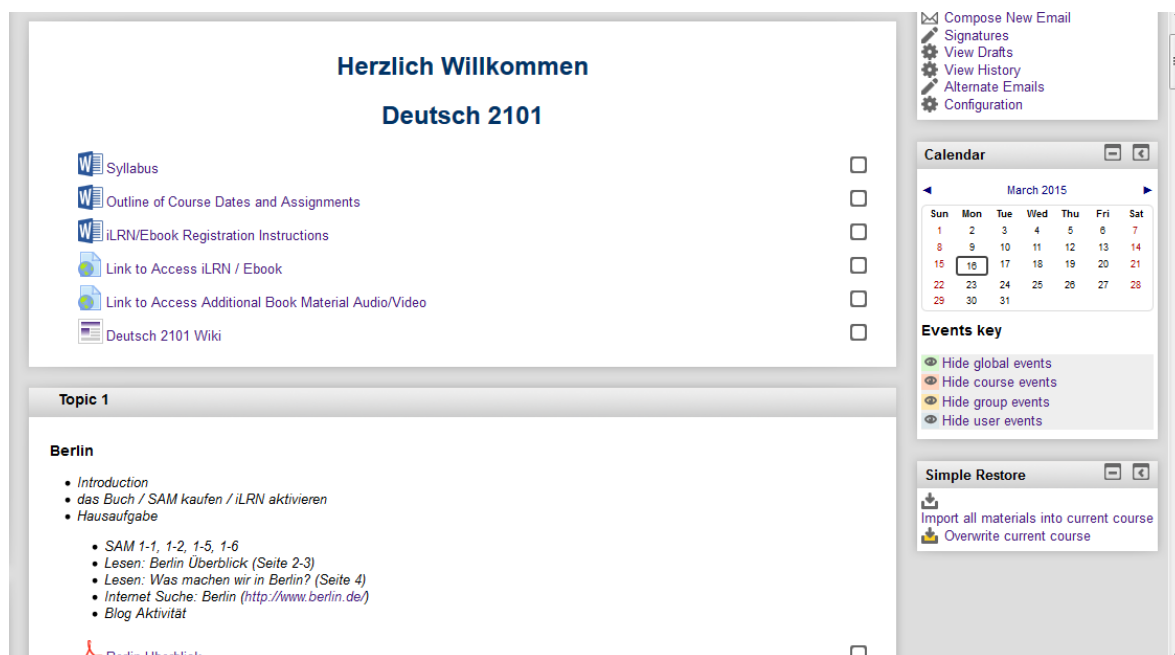


Figure A7. Screen Shot of *Moodle* CMS.

Samples of TSGLE Intervention

Blog

Students were assigned to write eight blog entries over the course of the semester, each with a five to seven sentence minimum. The first six blog entries assigned over the first four chapters were: (a) a description of what to do in Berlin; (b) a description of Berlin street food and students' "fast food" tendencies; (c) a description of what to do at Oktoberfest in Munich; (d) a description of what to do in Heidelberg; (e) students' reaction and thoughts about tuition at German universities; and (f) a description of what to do in Hamburg. Blog entries seven and eight (7-8) were designated for the fifth chapter, during which the students participated in the Jena Project. A description of these particular entries is provided in the Jena Project section. The following sample describes the first blog entry, a description of what to do in Berlin. The remaining five blog entries related to the textbook chapters follow the same format and are not

described here. The last two blog entries from the Jena Project are described in full detail in Chapter 3.

Blog Task Sample: A description of what to do in Berlin

Students were required to access the blog tool within a *Moodle* Forum. Since the theme in this chapter is Berlin, students completed an Internet search of Berlin using the website www.meinestadt.de, and to research its contents to find and recommend things to do in the city.

Figure A8 provides a screenshot of this website.

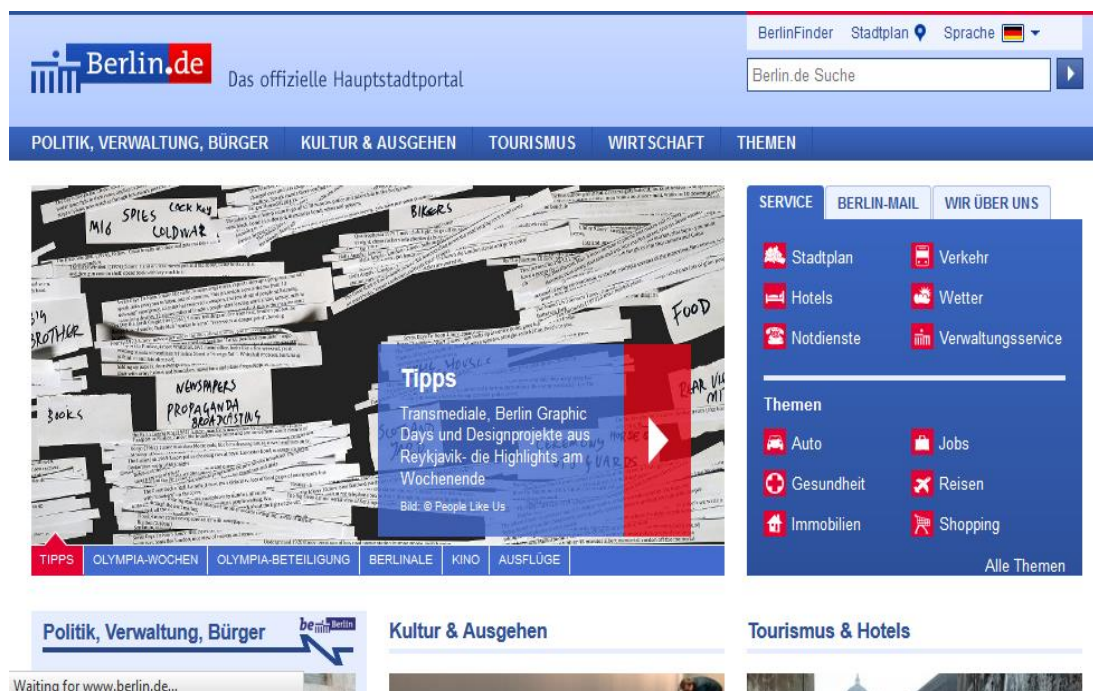


Figure A8. Screen Shot of www.berlin.de.

Students were required to find the following: (a) sight-seeing opportunities in Berlin; (b) food locations, (c) major events; and (d) things to do in the evening. Students were assigned to write five to seven sentences to describe what they recommend doing in Berlin and post this to the blog Forum in *Moodle*. They were required to provide links to specific events and locations and to provide reasons why they would recommend doing the activity. Students were then required to read at least two of their classmates' blog posts and provide commentary.

Online Chat

The two partner chat sessions were assigned and included the following tasks: a discussion about beverages and recycling, and a discussion about childhood activities and future aspirations, both pertaining to cultural aspects introduced in *Stationen* (Augustyn & Euba, 2014). For each exercise, students were required to ask one another six questions originating from the textbook which focused on the tasks mentioned above. The following sample lesson provides the questions from online chat session 1.

Online Chat Sample: Answer the Following Questions with a Partner:

1. *Nennen Sie ein paar Getränke. Was trinken Sie am liebsten?* (Name a few types of drinks. What do you like to drink the most?)
2. *Was trinken Sie zum Frühstück? Was trinken Sie tagsüber oder abends?* (What do you drink for breakfast? What do you drink during the day or evenings?)
3. *Was trinken Sie gern im Restaurant oder auf Partys?* (What do you like to drink in restaurants or at parties?)
4. *Welche Getränke trinkt man mit Eis?* (What drinks do people drink with ice?)
5. *Wenn Sie Wasser trinken: Kaufen Sie Wasser in Flaschen oder trinken Sie Leitungswasser? Filtern Sie das Leitungswasser?* (When you drink water, do you buy it in bottles or do you drink tap water? Do you filter the water?)
6. *Was machen Sie mit den leeren Flaschen, Packungen oder Dosen?* (What do you do with the empty bottles, packages, or cans?)

Podcast Assignments

Podcasts for this course were implemented for students to practice speaking outside of class lectures. Students were required to create five audio files using the *Audacity* (Audacity ®)

recording software which allowed participants to create digital recordings that can be saved, uploaded, and archived to *Moodle*. The five recording assignments were: (a) answering introductory interview questions, what's your name? Where are you from? What are you studying? What are your hobbies? Describe your family? Why do you study German?; (b) describing current events and activities they would do in Berlin; (c) reading a textbook passage aloud; (d) dictating a variety of individual sentences; and (e) answering intensive interview questions, and (f) final examination. Figure A9 illustrates the text students were required to read aloud for podcast assignment 3. See Appendix E for the final oral examination.

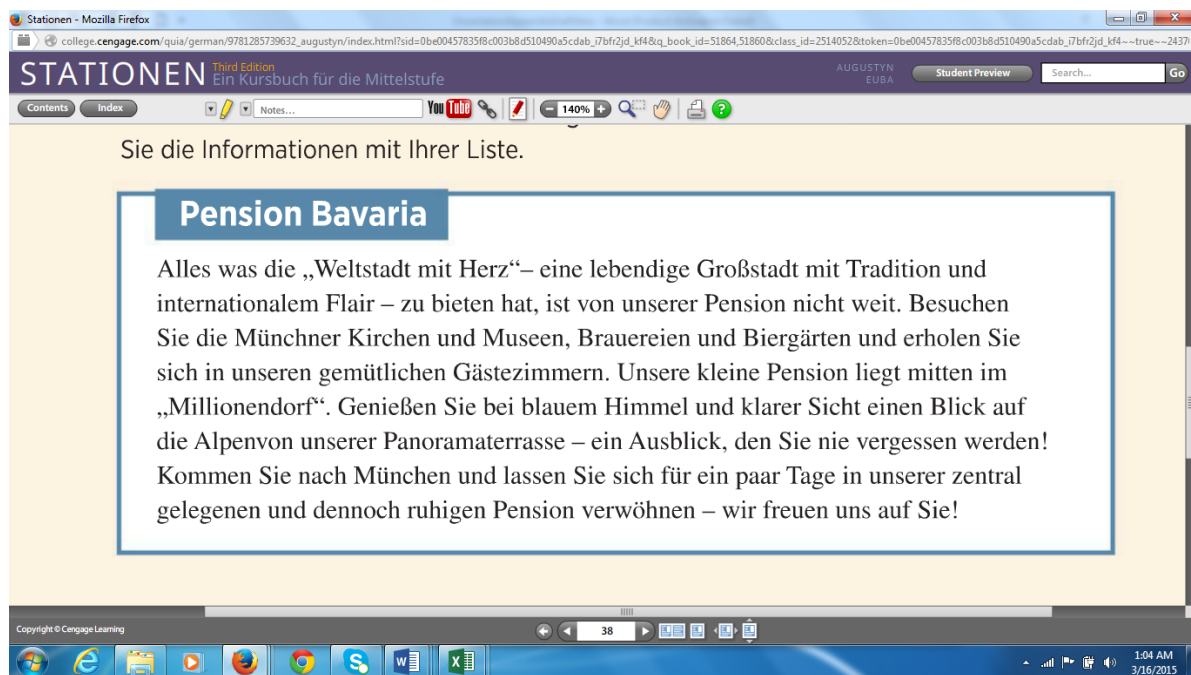


Figure A9. Screen Shot of Podcast Assignment 3.

Wiki

The wiki tool in this study was used as a class-study guide, for in-class note taking, and for tasks requiring students to work simultaneously practicing sentence writing. It was accessible to students anytime through a shared *Google Docs*. Figure A10 provides a screen shot illustrating the wiki, followed by a description of an in-class task is provided.

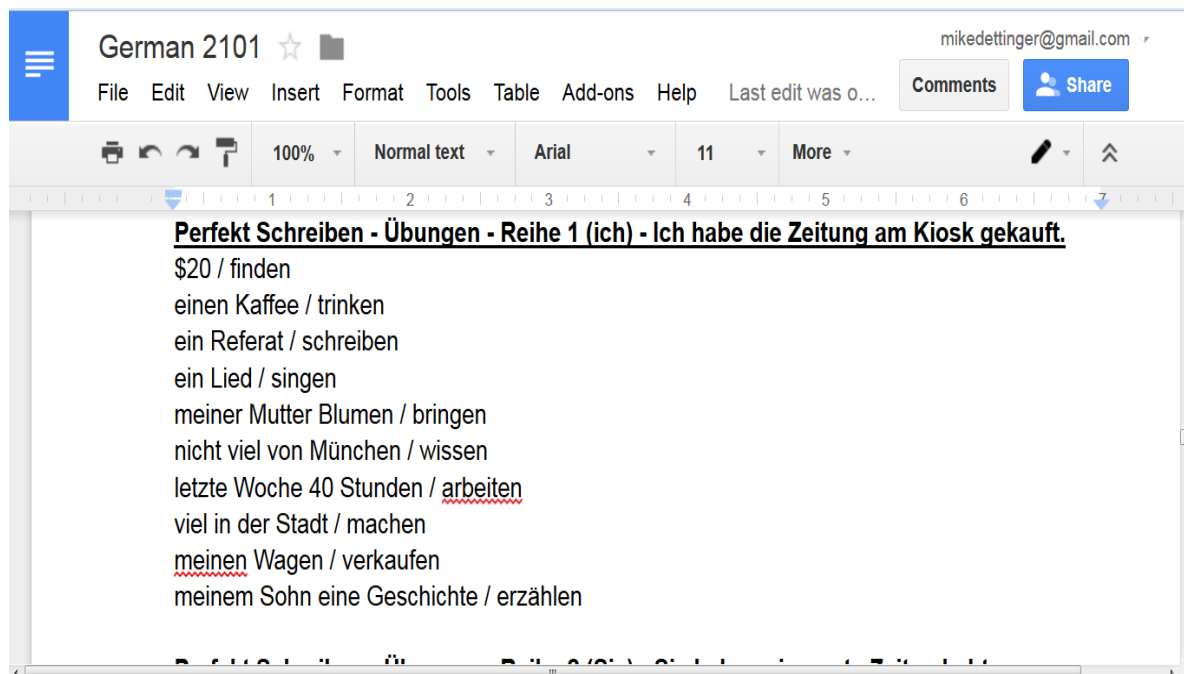


Figure A10. Screen Shot of *Google Doc* wiki page.

Wiki Task

The FLL was divided by five rows, with approximately five students per row. For this task, each row was given a set of jumbled sentences which the designated row needed to complete. Figure 3 illustrates what row 1 (*Reihe 1*) was responsible for completing.

Appendix B

General Education Course Explanation

This describes the General Education Explanation for Intermediate German, and was developed by the German Language Program of the Department of Foreign Languages & Literatures. Through the study of a foreign language students develop an analytical understanding of language. A student acquires competency in the four critical skills: listening, speaking, reading, and writing. Furthermore, language encapsulates how a people think and their cultural biases which affect how they regard and evaluate the world. Learning a foreign language requires that a student confront the underlying assumptions embedded in that language and how another culture constructs and thinks about its society and the world at large. Therefore, students acquire cultural literacy which is difficult or impossible to attain without knowledge of the language. Acquiring cultural literacy of another people also leads students to understand that fundamental differences exist among different cultures. Moreover, studying a foreign language fosters a greater understanding of one's own language and culture. German 2101 will thus help a student become a citizen of the world. As globalization continues to expand its reach into all areas of society, students must have the ability to interact with people of different cultures and diverse linguistic backgrounds. Students not only need to become educated citizens of the United States of America but also must learn how to become citizens of the world. Learning a language, its literature, and cultures in which the language is used, can provide students with opportunities to explore new ideas and different perspectives and ways of thinking.

GERM 2101: In the first semester of Intermediate German, the student receives increased practice in reading, conversation, and writing; the student's store of basic lexical items increases and there is a methodical review of the grammatical structures first introduced in the

first year. The textbook used is entitled *Stationen*. As was the case in the elementary program, the text includes a wide variety of readings of both a purely literary and broadly cultural nature. These are key to strengthening students' awareness of cultural matters. As was the case in the elementary program supplementary Power Point presentations have also been prepared for this course and its sequel 2102 to provide a more detailed overview of each artist or "Station" (city) featured.

Appendix C

Intermediate German Syllabus

General Information:

Instructor: Mike Dettinger / Office: Prescott 249

Office Hours: Monday - Thursday 11:30-12:30 OR by appointment

Telephone: 578-8633 / Email: mbdett1@lsu.edu

Course Description:

Herzlich Willkommen to German 2101. This course is the first of the intermediate level courses.

Our emphasis will lie on providing you with a stimulating communicative context, while giving you equal opportunities for developing your listening, speaking, reading and writing skills. A prerequisite of German 1102 or equivalent is required for this course. Students may use this course for credit in the General Education Curriculum.

Objectives

Having successfully completed this course, you will be able to:

- Speak and have simple to more complex conversations and discussions.
- Narrate events or tell stories in the present, past, future, or subjunctive in writing at the length of 15-20 sentences.
- Listen to and watch short narrations & videos on specific topics.
- Read short texts on topics pertaining to culture and literature.

Grade Composition:

Tests 30% (5 Tests, Stationen 1-5, @ 6%)

Participation/Homework20%

Quizzes 5%

Oral Presentation.....5%

Essays.....10%

Oral Exam 10%

Final Exam 20%

(Grading Scale: 100 - 90% A, 89 - 80% B, 79 - 70% C, 69 - 60% D, 59 - 0% F)

Participation:

Much of the learning takes place in class since only here you will have the chance to freely interact with the instructor as well as with fellow students. Regular attendance and active participation is imperative for success in this class. When missing a class, it is the student's responsibility to catch up on the missed material.

Homework Policies

Homework assignments will consist of written and online tasks. Any written assignment, generally given throughout the week, will be due the following day in class. These will consist of a short review of material covered on the day assigned. All online assignments via (*Moodle*), for example, Forum entries, voice file upload, or partner and/or group projects will be announced and discussed beforehand in class. *Student Activities Manual* (SAM) assigned exercises will also be announced at the start of each chapter. There will be 6-7 of these due weekly.

Late Policy:

Any assignment, written or online, turned in late will be reduced automatically by 50%. All assignments for a given chapter must be turned in on the day of the chapter test. Anything turned in afterward will not be accepted without a valid excuse such as a medical or family emergency.

Textbook:

Stationen (3rd Ed.) Augustyn, P., and Euba, N. (2014). Textbook and *Arbeitsbuch*

Foreign Language Lab (FLL):

The FLL is located on the second floor of Prescott and we will meet here for class this semester.

Lab/online assignments will include but will not be limited to the following: 1) MP3 recordings, 2) online chatting, 3) exploring iTunes and podcasts *auf Deutsch*, 4) Google Maps & Earth searches, 5) various web search activities in German, including problem-based tasks (individually or in groups), and 6) viewing of German-language films. If going to the lab individually, you must first visit 234 and check in at the front desk before entering a lab room.

Tests and Quizzes:

5 chapter tests are administered during regular class time. Short vocabulary quizzes will be given in each chapter. These will be announced or given as a pop quiz. Make-up tests/quizzes are only given in case of an excused absence according to LSU Policy Statement 22.

Exams

Final Exam:

The final exam will be given on Wednesday, December 10, 2014 from 7:30 a.m. until 9:30 a.m. in room 234 Prescott Hall. Students with a scheduling conflict must have all arrangements for an alternate exam time completed by Monday, November 10, 2014. No make-up exam will be given unless a student provides clear documentation of an emergency situation that prevented him/her from participating in the exam.

Oral Exam:

During the last week, students will take an oral exam in the instructor's office.

Oral Presentation

At some point throughout the semester you will give a brief presentation in German. We will discuss this format well in advance. The topic will be your choice, however, you will be presenting on a particular aspect of the German language and/or culture. It can be a person, place, custom, business, etc., and it can also include an aspect of Austria, Germany, or Switzerland, or any German-speaking country. You may want to do this as a partner presentation. You will have to include a website or some form of media in your presentation.

Technology

Throughout this course, and along with the textbook materials, you will also participate in a number of activities that include technology. These include but will not be limited to the following: blog (*Moodle* Forum), online chat via *Adobe Connect*, wiki (*Google Doc* or similar), creating voice recording files (podcasts), and accessing professionally established podcasts, and exchange communication. (More information below on the schedule of technology use in this course)

Miscellaneous:

I'm looking forward to working with all of you throughout the semester. I hope you will find it to be challenging and rewarding. This third semester course will continue the basic grammatical rules learned in German 1101 & 1102. You will also be introduced to new vocabulary, grammatical structures, and cultural aspects of the German language and German-speaking countries. You will be expected to be punctual, complete your work on time, and be courteous and professional to me and your fellow classmates. In case of an emergency please contact me at your earliest convenience. Academic honesty is expected of you at all times. Although use of dictionaries, both book and online, are welcome, online translators of any kind are not (will be

explained in class). Cell phones are not allowed *at any time* during class for personal phone calls or text messaging. There will be times, however, when we will take advantage of using your phones for communication practice.

Stammtisch:

During the semester the German section meets weekly at *Stammtisch*. This is an informal discussion group which meets Wednesdays at 4 p.m. in the Art & Design Building. I encourage you to come and practice your German. This is open to anyone interested in practicing their German outside of class time. It is a good opportunity to meet others in the German program.

German Club:

Students will also be encouraged to attend German Club meetings, as well as become a member. The German Club participates in a number of extra-curricular activities including films, picnics, and the symphony. More information will be announced throughout the semester.

Note: This course awards four hours of credit towards a student's fulfillment of the General Education Requirement in the Humanities area (IV) by training students to develop (a) an informed appreciation of the roles of the arts and humanities, (b) further understanding of other cultures and other times, and (c) a greater awareness of the manner in which language is used to facilitate communication between individuals and peoples.

Overview of Learning Objectives and Schedule of Assignments/Technology Integration:

Station 1, Berlin

Learning Objectives:

- Language: Word classes of German / Verb conjugation / Active vs. Passive Voice
- Culture: Marlene Dietrich / Currywurst

Week 1:

- SAM Assignments: 1-1, 1-2, 1-5, 1-6
- Chat – In-class: Grammar practice (German language structure)
- Blog (*Moodle* Forum): Read Text *Berlin Überblick*: Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Podcast: Upload voice file recording to *Moodle* (introduction: *Wie heißen Sie? Woher kommen Sie? Was studieren Sie? Was machen Sie gern in Ihrer Freizeit? Warum lernen Sie Deutsch?*)

Week 2:

- SAM Assignments: 1-8, 1-11, 1-14, 1-15, 1-16, 1-17, 1-20, 1-21
- Chat: In-class: Picture description (key words / grammar application)
- Blog (*Moodle* Forum): Read Text: *Die Geschichte der Currywurst* Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Podcast: 1) Download and listen to following podcast and answer listening comprehension questions; 2) Provide 30-60 second podcast and name 3 things to do in Berlin this weekend
- Wiki: As a class we will collect links / images / video of Berlin and upload to *Moodle*
- Chat: Participate and submit interview chat session with partner (copy & paste content and email me).

Station 2, München

Learning Objectives:

- Language: Speaking in the past tense (*das Perfekt*) / giving polite commands/requests (*der Imperativ*)

- Culture: German bottle recycling system / Oktoberfest

Week 1:

- SAM Assignments: 2-1, 2-2, 2-5, 2-6, 2-8
- Chat – In-class: Grammar practice (Past tense)
- Blog (*Moodle* Forum): Read Text *München Überblick*: Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Podcast: Upload voice file recording (your weekend description): *Was haben Sie am Wochenende gemacht?*

Week 2:

- SAM Assignments: 2-9, 2-11, 2-16, 2-18, 2-20, 2-23, 2-24, 2-25
- Chat: In-class: Picture description (key words / grammar application)
- Blog (*Moodle* Forum): Read Text *Ein Münchner Flaschensammler packt aus* Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Podcast: 1) Download and listen to following podcast and answer listening comprehension questions; 2) Provide 1-2 minute podcast on your *visit* to the Oktoberfest
- Wiki: As a class we will collect links / images / video of Oktoberfest

Station 3, Heidelberg

Learning Objectives:

- Language: Writing/telling stories in the past tense (*das Imperfekt*) / learning the use of when: *als, wenn, wann* / the past perfect tense (*das Plusquamperfekt*)
- Culture: Mark Twain in Germany / the University of Heidelberg / University tuition in Germany

Week 1:

- Sam Assignments: 3-1, 3-2, 3-4, 3-5, 3-6, 3-7
- Chat: In-class: Grammar practice (past tenses – Perfekt / Imperfekt / Plusquamperfekt)
- Blog (*Moodle Forum*): Read Text *Heidelberg Überblick* Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Podcast: Upload voice file recording (what you did when you were 10) *Was hatten Sie gemacht, als Sie 10 Jahre alt waren?* 2 minute minimum – name at least 3 things you did, for example, during summer months.
- Wiki: (Google Doc – work in groups and research information on German-speaking city, for example, links, maps, videos, images).

Week 2:

- SAM Assignments: 3-10, 3-15, 3-17, 3-19, 3-20, 3-22, 3-23
- Chat: In-class: Review of grammar
- Blog (*Moodle Forum*): Read text *Wie viel kostet das Studentenleben?* Answer discussion questions / Read classmates'
- Podcast: Download and listen to *Stadtbilder: Heidelberg* podcast and answer listening comprehension questions. <http://www.dw.de/deutsch-lernen/heidelberg/s-31538>
- Wiki: (Google Doc – work in groups and finalize research information on German-speaking city, for example, links, maps, videos, images). Post to Moodle Forum. Also vote on your favorite (other than yours) and provide reason why.

Station 4, Hamburg

Learning Objectives:

- Language: Using manners/hypothesizing (*der Konjunktiv II*) / Making polite requests (*der Konjunktiv II bei Modalverben*) / Hindsight (*der Konjunktiv II der Vergangenheit*)
- Culture: The German Media / Globalization / Use of *you* in German and the German workplace

Week 1:

- SAM Assignments: 4-1, 4-2, 4-6, 4-8, 4-9, 4-10
- Chat: In-class: Grammar practice (subjunctive mood)
- Blog (*Moodle Forum*): Read Text *Hamburg Überblick* Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Podcast: Upload voice file recording (making wishes using the subjunctive: *Wunschsätze* p. 106).

Week 2:

- SAM Assignments: 4-7, 4-13, 4-15, 4-16, 4-17, 4-19, 4-20, 4-21, 4-24
- Chat: In-class: Grammar review (subjunctive mood)
- Blog (*Moodle Forum*): Read Text *Jung, dynamisch, du?* Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Podcast: Download and listen to following podcast and answer listening comprehension questions.
- Chat: Participate and submit interview chat session with partner (copy & paste content and email me).

Station 5, Leipzig

Learning Objectives:

- Language: Indirect speech (*der Konjunktiv I*) / Review of sentence structure of German

- Culture: Former East Germany / 1989 – Fall of the Berlin Wall

Week 1:

- SAM Assignments: 5-1, 5-2, 5-5, 5-6
- Chat: In-class: Grammar practice (Indirect speech)
- Blog (*Moodle* Forum): Read Text *Leipzig Überblick* Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Podcast: Upload voice file recording (reading: *Was lesen Sie gern? Haben Sie eine/n LieblingsschriftstellerInnen? Warum? Wie heißen ein par Ihre Bücher? Was empfehlen Sie?*). Title your podcast with your name as well as your favorite author's. 2 minutes

Week 2:

- SAM Assignments: 5-9, 5-10, 5-13, 5-15, 5-18, 5-20, 5-21
- Chat: In-class: Grammar review (Indirect speech)
- Blog (*Moodle* Forum): Read Text *Abriss der Gründerzeit?* Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Podcast: Download and listen to one of your classmate's podcasts based on their favorite author's name and provide an additional podcast commentary. 1-2 minutes.
- Wiki: Begin working on final travel multi-media project: German-speaking city / accommodations / food / sight-seeing / a night out on the town

Station 6, Frankfurt

Learning Objectives:

- Language: Using passive voice / Changing passive to active voice / Changing active to passive voice
- Culture: Johann Wolfgang von Goethe / Nudity in Germany

Week 1:

- SAM Assignments: 6-1, 6-2, 6-5, 6-7
- Chat: In-class: Grammar practice (Passive Voice)
- Blog (*Moodle* Forum): Read text *Frankfurt Überblick* Answer discussion questions / Read classmates (minimum 1) and provide commentary to their response.
- Wiki: (Google Doc – continue researching information on German-speaking city, for example, links, maps, videos, images). Download and create account for *Camtasia* to use for multi-media presentations.

Week 2:

- SAM Assignments: 6-10, 6-11, 6-14, 6-15, 6-16, 6-22, 6-23
- Chat: In-class: Grammar review (semester in review)
- Blog (*Moodle* Forum): Read text *Oben ohne* Answer discussion questions / Read classmates' Wiki Projects and provide commentary. Also vote on your favorite (other than yours)
- Wiki: (Google Doc – finalize research information on German-speaking city, for example, links, maps, videos, images). Load into *Camtasia* and post to *Moodle* Forum.

Appendix D

ACTFL Proficiency Guidelines 2012

Writing

A note about the writing task for Intermediate German: The writing task above was chosen to measure students' ability to write in German at the Advanced-Low level on the American Council on the Teaching of Foreign Language (ACTL) Guidelines for Writing. Given that Intermediate German at this university is a 3rd semester language course, we feel our students should reach the Advanced-Low level of writing ability by the end of the 3rd semester of German. The following describes what successful students should be able to do by the end of Intermediate German:

Advanced-Low

Writers at the Advanced-Low sublevel are able to meet basic work and/or academic writing needs. They demonstrate the ability to narrate and describe in major time frames with some control of aspect. They are able to compose simple summaries on familiar topics. Advanced-Low writers are able to combine and link sentences into texts of paragraph length and structure. Their writing, while adequate to satisfy the criteria of the Advanced level, may not be substantive. Writers at the Advanced-Low sublevel demonstrate the ability to incorporate a limited number of cohesive devices, and may resort to some redundancy and awkward repetition. They rely on patterns of oral discourse and the writing style of their first language. These writers demonstrate minimal control of common structures and vocabulary associated with the Advanced level. Their writing is understood by natives not accustomed to the writing of non-natives, although some additional effort may be required in the reading of the text. When attempting to perform functions at the Superior level, their writing will deteriorate significantly.

Listening

A note about the listening task for Intermediate German: The listening task and accompanying questions above were chosen to measure students' understanding of spoken German at the Advanced-Low level on the American Council on the Teaching of Foreign Language (ACTL) Guidelines for Listening. Given that Intermediate German at this university is a 3rd semester language course, we feel our students should reach the Advanced-Low level of Listening proficiency by the end of the 3rd semester of German. The following describes what successful students should be able to do by the end of Intermediate German:

Advanced Low

At the Advanced-Low sublevel, listeners are able to understand short conventional narrative and descriptive texts with a clear underlying structure though their comprehension may be uneven. The listener understands the main facts and some supporting details. Comprehension may often derive primarily from situational and subject-matter knowledge.

Reading

A note about the reading task for Intermediate German: The reading task and accompanying questions above were chosen to measure students' understanding of written German at the Advanced level on the American Council on the Teaching of Foreign Language (ACTL) Guidelines for Reading. Given that Intermediate German at this university is a 3rd semester language course, we feel our students should reach the Advanced level of reading proficiency by the end of the 3rd semester of German. The following describes what successful students should be able to do by the end of Intermediate German:

Advanced

At the Advanced level, readers can understand the main idea and supporting details of authentic narrative and descriptive texts. Readers are able to compensate for limitations in their lexical and structural knowledge by using contextual clues. Comprehension is likewise supported by knowledge of the conventions of the language (e.g., noun/adjective agreement, verb placement, etc.). When familiar with the subject matter, Advanced-level readers are also able to derive some meaning from straightforward argumentative texts (e.g., recognizing the main argument). Advanced-level readers are able to understand texts that have a clear and predictable structure. For the most part, the prose is uncomplicated and the subject matter pertains to real-world topics of general interest. Advanced-level readers demonstrate an independence in their ability to read subject matter that is new to them. They have sufficient control of standard linguistic conventions to understand sequencing, time frames, and chronology. However, these readers are likely challenged by texts in which issues are treated abstractly.

Appendix E

Oral Final Examination Instrument

You're spending an academic year abroad in Munich and a European friend you met during orientation and who is studying at another university in Germany plans to visit you for Munich's famous Oktoberfest. Due to the popularity of the festival and the scarcity of accommodations, you and your friend are staying at different youth hostels. After arriving at your hostel, you decide to call your friend to see where her hostel is located. You also want to plan something for your first night in Munich. After dialing your friend's cell phone number, you realize that you have reached her voicemail. Once you hear your friend's voicemail message and tone, leave a message and be sure to do the following:

- Tell her the name of your hostel and its location
- Provide a brief description of your room
- Ask her the name of the hostel where she's staying and its location
- Ask what she wants to do later that evening
- Ask her where she wants to eat and what time she wants to meet
- Tell her what you would like to eat
- Any other information you would like to include
 - Thinking time: 1 minute. Speaking time: 2 minutes

Rubric for Assessing Oral Accuracy				
Score: ___/ 20	Excellent	Good	Fair	Poor
Fluency & Coherence	5	4	3.5	2.5
Appropriateness of Vocabulary	5	4	3.5	2.5
Grammatical Accuracy	5	4	3.5	2.5
Pronunciation	5	4	3.5	2.5

ACTFL Proficiency Guidelines 2012: Speaking

A note about the speaking task for Intermediate German: The speaking task above was chosen to measure students' oral proficiency in German at the Intermediate-Mid level on the American Council on the Teaching of Foreign Language (ACTL) Guidelines for Speaking. Given that Intermediate German at this university is a 3rd semester language course, we feel our students should reach the Intermediate-Mid level of speaking proficiency by the end of the 3rd semester of German. The following describes what successful students should be able to do by the end of Intermediate German:

Intermediate Mid

Speakers at the Intermediate-Mid level are able to handle successfully a variety of uncomplicated communicative tasks in straightforward social situations. Conversation is generally limited to those predictable and concrete exchanges necessary for survival in the target culture; these include personal information covering self, family, home, daily activities, interests and personal preferences, as well as physical and social needs, such as food, shopping, travel and lodging. Intermediate-Mid speakers tend to function reactively, for example, by responding to direct questions or requests for information. However, they are capable of asking a variety of questions when necessary to obtain simple information to satisfy basic needs, such as directions, prices and services. When called upon to perform functions or handle topics at the Advanced level, they provide some information but have difficulty linking ideas, manipulating time and aspect, and using communicative strategies, such as circumlocution. Intermediate-Mid speakers are able to express personal meaning by creating with the language, in part by combining and recombining known elements and conversational input to make utterances of sentence length and some strings of sentences. Their speech may contain pauses, reformulations and self-corrections

as they search for adequate vocabulary and appropriate language forms to express themselves. Because of inaccuracies in their vocabulary and/or pronunciation and/or grammar and/or syntax, misunderstandings can occur, but Intermediate-Mid speakers are generally understood by sympathetic interlocutors accustomed to dealing with non-natives.

Appendix F
Technology Implementation Survey (TIS) Instrument

Technology Implementation Survey (TIS) Instrument

1. Which resources/tools do you wish your instructors used less...or more (used in this class less or more)?

	Less 1	2	3	4	More 5
a. Course or Learning Management System (Moodle)					
b. E-books or E-textbooks					
c. Freely available course content beyond your campus (iTunes podcasts, Deutsche Welle, Tagesschau video/audio news, etc.)					
d. Lecture / PowerPoint capture (for later use/review)					
e. Online Collaboration Tools (Adobe Connect, Google Docs)					
f. Integrated use of Your Tablet, Laptop, or Computer during class					
g. Integrated use of Your Smartphone during class					
h. Use of Voice Recording Tools (Audacity, Smart Phone, etc.)					

2. In your experience of learning German, in what type of learning environment do you tend to learn most?

- () Courses with no online components
- () Courses with some online components
- () Courses that are completely online
- () No preference

3. In your experience of learning German, what type of learning environment do you prefer?

- ☐ Courses with no online components
- ☐ Courses with some online components
- ☐ Courses that are completely online
- ☐ No preference

4. Please use the following scale to rate how each of the technologies included enhanced your Reading Skills in German:

	Strongly Disagree	Disagree	Agree	Strongly Agree
Moodle Forum (Blog)				
Podcast Voice Recordings with Audacity (or other)				
Online Chat				
Wiki (Google Doc)				
Skype (Distance Exchange with Jena)				
Video Tutorials				

5. Please use the following scale to rate how each of the technologies listed enhanced your Writing Skills in German:

	Strongly Disagree	Disagree	Agree	Strongly Agree
Moodle Forum (Blog)				
Podcast Voice Recordings with Audacity (or other)				
Online Chat				
Wiki (Google Doc)				
Skype (Distance Exchange with Jena)				
Video Tutorials				

6. Please use the following scale to rate how each of the technologies listed enhanced your

Listening Skills in German:

	Strongly Disagree	Disagree	Agree	Strongly Agree
Moodle Forum (Blog)				
Podcast Voice Recordings with Audacity (or other)				
Online Chat				
Wiki (Google Doc)				
Skype (Distance Exchange with Jena)				
Video Tutorials				

7. Please use the following scale to rate how each of the technologies listed enhanced your

Speaking Skills in German:

	Strongly Disagree	Disagree	Agree	Strongly Agree
Moodle Forum (Blog)				
Podcast Voice Recordings with Audacity (or other)				
Online Chat				
Wiki (Google Doc)				
Skype (Distance Exchange with Jena)				
Video Tutorials				

8. Please use the following scale to rate how each of the technologies listed enhanced your Cultural Awareness of the German-speaking countries:

	Strongly Disagree	Disagree	Agree	Strongly Agree
Moodle Forum (Blog)				
Podcast Voice Recordings with Audacity (or other)				
Online Chat				
Wiki (Google Doc)				
Skype (Distance Exchange with Jena)				
Video Tutorials				

Friedrich-Schiller University of Jena Student Exchange Survey (FSUJES) Instrument:

When answering the following questions, keep all aspects of the project in mind: blog posts, Adobe Connect group conversation, individual Skype meetings, Email exchanges

9. What did you learn in terms of the following: Rate using the following scale

	Strongly Disagree	Disagree	Agree	Strongly Agree
Cultural Knowledge of East German History				
Cultural Knowledge of Germany today				
Vocabulary				
Communication Ability in German				
Pronunciation				
Motivation				

10. Did the following forms of the Communication / Medium affect your learning of German

(Language and Culture): Rate using the following scale.

	Strongly Disagree	Disagree	Agree	Strongly Agree
Use of Communication via Blog				
Use of Communication via E-Mail				
Use of Communication via Skype				
Use of an Alternative Communication Tool				
Learning German via Film				
Learning German Culture via Film				
Use of an Alternative Activity				

11. Please rate your impressions of this project using the following scale:

	Strongly Disagree	Disagree	Agree	Strongly Agree
Did your perspective / image of Germany change at all after working on this project?				
Would you be interested in continuing this (type of) project? Please explain!				
Would you Recommend this form of Communication / Project to your fellow students in future classes?				

12. How would you rate the following aspects in terms of being problematic? (technical / language difficulties / personal aspects, e.g. shyness?)

	Strongly Disagree	Disagree	Agree	Strongly Agree
Technical				
Language Difficulties				
Personal Aspects, e.g. Shyness				

Appendix G

Focus Group Interview Protocols

Focus Group 1

The focus group interview first began with a short introduction to explain to the participants what the scope of the discussion and questions would include:

1. To begin, I'd like to get a better understanding of your reaction to textbook / ebook *Stationen*.
 - a. How about Workbook / iLRN?
2. At times we accessed (either assigned or offered) free online materials (outside of course materials) including websites for blog assignments, such as www.berlin.de among several others. What did you take away from having access to these materials?
3. At times we accessed (either assigned or offered) free online materials (outside of course materials) including, video tutorials, chat, wiki, and podcasts. In what ways were these tools supportive (not supportive) of your learning?
4. I'd like your reactions to your thoughts on reading comprehension and to these tools?
 - a. Which methods work best / don't work?
5. What are your reactions to writing skills?
 - a. What methods are most effective for you?
6. What did you take away from these tools in terms of listening comprehension?
 - a. What methods work best for you in enhancing listening skills?
7. What are your reactions to these?
 - a. In your opinion, what is an effective method for practicing/enhancing speaking skills?

8. In what ways were these tools supportive (non-supportive) in learning & understanding culture?
9. When you don't have direct access to country itself, how do you go about learning culture?
10. Jena: Over course of semester, we discussed having an exchange with students from Germany, FSU Jena. I arranged this over the summer, but had never embarked on such a project. When looking back, we went from posting blog entries to conducting a video conference, to partnering you up, to exchanging E-Mails, to having Skype meetings, to viewing the film *Friendship*. Starting with the blog activities, what did you take away from this?
11. What understandings did you take away from the film *Friendship*?
12. What did you gain with your partner exchanges? Language, culture, personal growth, etc.?
13. What did you gain with your partner exchanges? Language, culture, personal growth, etc.?
14. How did your perspective / image of Germany change while engaged in this project? (this course?)

Focus Group 2

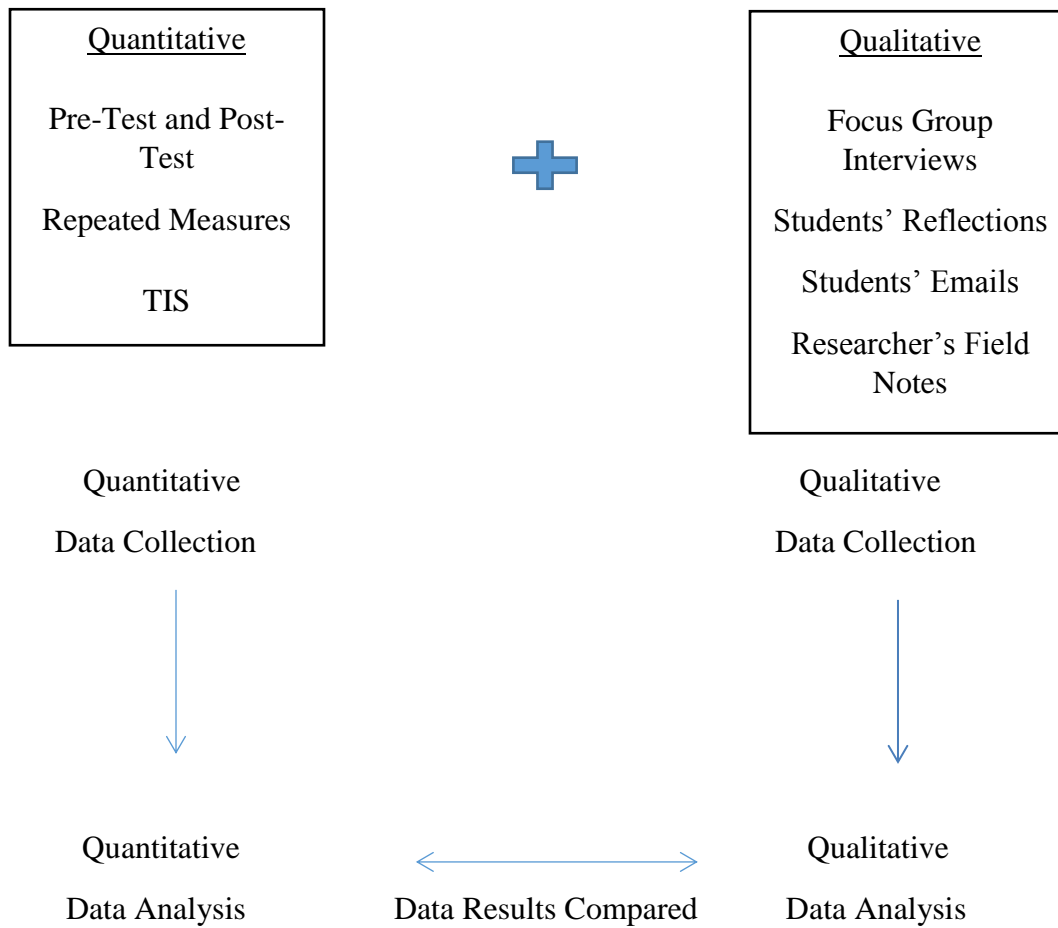
1. Jena: Over course of semester, we discussed having an exchange with students from Germany, FSU Jena. I arranged this over the summer, but had never embarked on such a project. When looking back, we went from posting blog entries to conducting a video conference, to partnering you up, to exchanging E-Mails, to having Skype meetings, to

viewing the film *Friendship*. Starting with the blog activities, what did you take away from this?

2. What understandings did you take away from the film *Friendship*?
3. What did you gain with your partner exchanges? Language, culture, personal growth, etc.?
4. What did you gain with your partner exchanges? Language, culture, personal growth, etc.?
5. How did your perspective / image of Germany change while engaged in this project? (this course?)

Appendix H
Concurrent Research Design Diagram

(Adapted from Creswell, Plano Clark, Gutmann, and Hanson, 2003)



Appendix I

Consent Form

1. Study Title: A Technology-Enhanced German Language Course: Effects on Student Learning and Perception
2. Performance Site: Louisiana State University and Agricultural and Mechanical College
3. Investigators: The following investigators are available for questions about this study.
 - a. Principal Investigator: Michael B. Dettinger, M.A., Ed. S (225) 578-8633, mbdett1@lsu.edu
 - b. Co-Investigator: Dr. S. Kim MacGregor, Dr. S. Kim MacGregor, (225) 578-2150, smacgre@lsu.edu
4. Purpose of the Study: The purpose of this study is to measure academic performance and student perception using a technology-enhanced approach to learn German in an Intermediate German Language Course.
5. Study Inclusion: Individuals between the ages of 18 and 65 who do not report psychological or neurological conditions.
6. Number of subjects: 30 (after addition of German students for virtual exchange, subject total is now 39)
7. Study Procedures: The study will be conducted in one phase using concurrent triangulation mixed methods. Quantitative data in the form of written pre-/post-tests, oral examination, and attitude survey will be collected and analyzed. Qualitative data in the form of focus group interview responses, written reflections from student participants, as well as written observations from the instructor (researcher) will also be collected and analyzed. The two methods will then be analyzed to verify for convergence or any differences.

8. Benefits: No monetary reward will be distributed to the participants.
9. Risks: Every effort will be made to maintain the confidentiality of the study's records.
Files will be kept in secure locations, for example, grades and data will be saved and filed on a password-protected computer which only the investigator has access.
10. Right to Refuse: Subjects may choose not to participate or to withdraw from the study at any time without penalty or loss of any benefit to which they might otherwise be entitled.
11. Privacy: Results of the study may be published, but no names or identifying information will be included in the publication. Subject identity will remain confidential unless disclosure is required by law.

12. Signatures:

The study has been discussed with me and all my questions have been answered. I may direct additional questions regarding the study specifics to the investigators. If I have questions about subjects' rights or other concerns, I can contact Dennis Landin, Institutional Review Board, (225) 578-8692, irb@lsu.edu, www.lsu.edu/irb. I agree to participate in the study described above and acknowledge the investigator's obligation to provide me with a signed copy of this consent form.

Subject Signature: _____ Date: _____

Appendix J

IRB Approval Documents

ACTION ON EXEMPTION APPROVAL REQUEST



Institutional Review Board
Dr. Dennis Landin, Chair
130 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8892
F: 225.578.5983
irb@lsu.edu | lsu.edu/irb

TO: Michael Dettinger
Foreign Languages & Literatures

FROM: Dennis Landin
Chair, Institutional Review Board

DATE: August 1, 2014

RE: IRB# E8881

TITLE: A Technology Enhanced German Language Course: Effects on Student Learning and Perception

New Protocol/Modification/Continuation: New Protocol

Review Date: 7/31/2014

Approved X Disapproved _____

Approval Date: 7/31/2014 Approval Expiration Date: 7/30/2017

Exemption Category/Paragraph: 1.2a

Signed Consent Waived?: Yes

Re-review frequency: (three years unless otherwise stated)

LSU Proposal Number (if applicable): _____

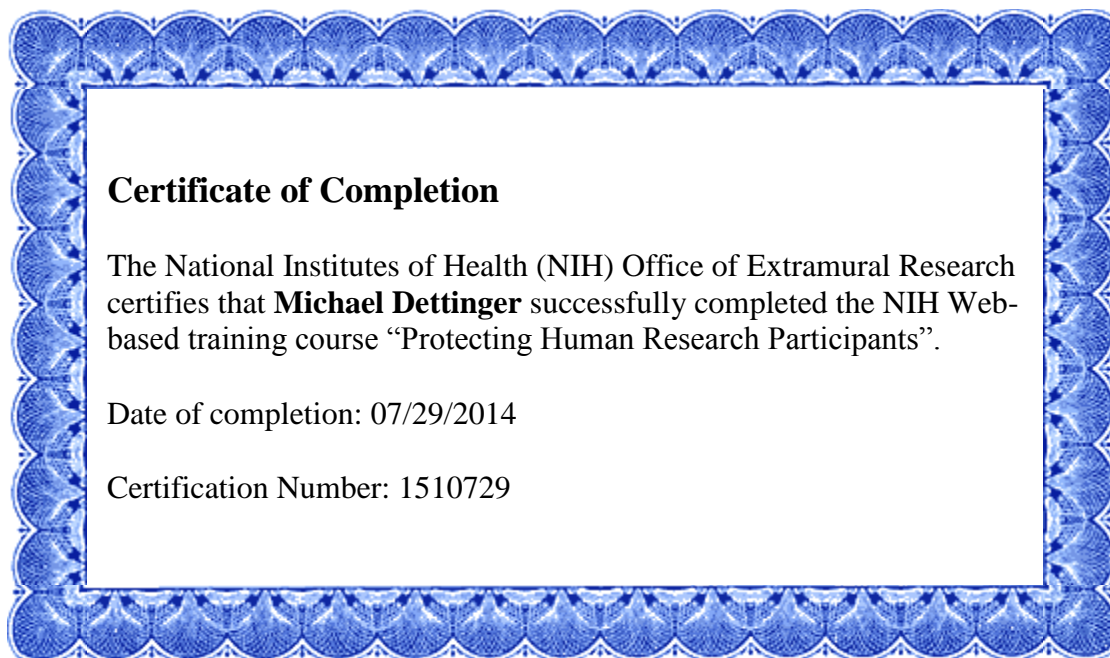
Protocol Matches Scope of Work in Grant proposal: (if applicable) _____

By: Dennis Landin, Chairman 

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –
Continuing approval is CONDITIONAL on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. SPECIAL NOTE:

**All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.lsu.edu/irb>*



Security of Data Form

****Please sign and submit this document with your IRB application****

Security of Data

Number: PS06.20

SECURITY OF DATA

PURPOSE

I certify that I have read and will follow LSU's policy on security of data – PS06.20 (http://itsweb.lsu.edu/ITS_Security/IT_Policies/LSU/item614.html) and will follow best practices for security of confidential data (http://itsweb.lsu.edu/ITS_Security/Best_Practices/Sensitive_Data/item862.html) This Policy Statement outlines the responsibilities of all *users* in supporting and upholding the security of *data* at Louisiana State University regardless of *user's* affiliation or relation with the University, and irrespective of where the *data* is located, utilized, or accessed. All members of the University community have a responsibility to protect the confidentiality, integrity, and availability of *data* from unauthorized generation, access, modification, disclosure, transmission, or destruction. Specifically, this Policy Statement establishes important guidelines and restrictions regarding any and all use of *data* at, for, or through Louisiana State University. This policy is not exhaustive of all *user* responsibilities, but is intended to outline certain specific responsibilities that each *user* acknowledges, accepts, and agrees to follow when using *data* provided at, for, by and/or through the University. Violations of this policy may lead to disciplinary action up to and including dismissal, expulsion, and/or legal action. It is recommended that all personnel on your project be familiar with these policies and requirements for security of your data.

In addition it is recommended that PIs review any grant, non-disclosure/confidentiality agreement, or restricted data agreements before publishing articles using the data.

I certify that I have read and understand these policies

Name: Michael B. Smith
Date: 07/30/2014

Vita

Michael B. Dettinger is the Director of the Foreign Language Lab and German Instructor at Louisiana State University (LSU) in the Department of Foreign Languages & Literatures. He is also an instructor for LSU's School of Continuing Education, where he develops online distance learning courses for German. Mr. Dettinger is currently a Ph.D candidate in Educational Research in the School of Education at LSU. His research interests include Educational Technology, the study of Web 2.0 technologies and their impacts on enhancing language instruction.