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“The Spanish Isn’t There”: The Beliefs and Instructional Technology Practices of Three Graduate Student Instructors of Spanish

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**“The Spanish Isn’t There”: The Beliefs and Instructional Technology
Practices of Three Graduate Student Instructors of Spanish**

by

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Dedication

For Sam, Ruth, and Sarah who invited me into their classrooms and taught me.

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“The Spanish Isn’t There”: The Beliefs and Instructional Technology Practices of
Three Graduate Student Instructors of Spanish

Michelle Dion Matthews, Ph.D.

The University of Texas at Austin, 2011

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Our nation’s first Chief Technology Officer, Aneesh Chopra, has said that “technology in education is less about hardware and software and more about what we teach, the method in which we teach it, and professional development and support for educators” (Fletcher, 2009). While technology reform continues to provide schools and colleges with hardware and software (Kern & Warschauer, 2000; Kessler, 2006), the amount of technology teachers use remains low (Barron et al., 2003; Cuban et al., 2001). If our efforts are to reform, as Chopra suggests, what we teach and how we teach it, our instructional technology research must incorporate the voices of teachers who determine what happens inside the classroom. One theory regarding limited technology use has been that teachers’ beliefs and their relationship to practice might provide us with insight that will allow us to aid teachers in their craft (Becker & Riel, 1999; Ertmer, 2005). This

qualitative case study examines three Spanish teachers' pedagogical beliefs and how those beliefs relate to their instructional technology use. Data include interviews, observations, field notes and documents analyzed using a constant comparative approach (Lincoln & Guba, 1985). Findings show that beliefs about the classroom environment most influence their choices regarding instructional technology.

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Chapter 1. Introduction

CONTEXT OF THE PROBLEM

With the surge of technological development throughout the 20th and into the 21st century, technology has now become an integral part of our lives. The field of education is continually affected by such advances as learning must become more efficient and entertaining through the use of high-tech tools. This reform has ushered technology into classrooms at the K-12 and university levels in the form of document cameras (henceforth *doc cams*), video cameras, laptops, DVD Players, and iPods. The foreign language classroom is no exception. It has had a lengthy history with technology in the form of audio-visual media and language labs, which were intended to expose students to authentic language, pragmatics, and culture (Blake, 2008).

Our nation's first Chief Technology Officer, Aneesh Chopra, has said that "technology in education is less about hardware and software and more about what we teach, the method in which we teach it, and professional development and support for educators" (Fletcher, 2009). While technology reform continues to provide colleges with an abundance of hardware and software (Kern & Warschauer, 2000; Kessler, 2006), the amount of technology teachers use remains low (Barron, Kemker, Harnes & Kalayajian, 2003; Cuban, Kirkpatrick & Peck, 2001; Zhao & Czik, 2001). If our efforts are, as Chopra suggests, to reform what we teach and how we teach it, instructional technology research must incorporate the voices of teachers who determine what happens inside the classroom. One theory has been that teachers' beliefs and their relationship to practice might provide us with insight regarding limited technology use (Becker & Riel, 1999;

Ertmer, 2005). This qualitative case study examines the pedagogical beliefs of three Graduate Student Instructors (henceforth *GSI*s) of Spanish and how those beliefs relate to their instructional technology use. Data include interviews, observations, field notes and documents.

In 2002, the Information Technology Advisory Committee at The University of Texas at Austin (henceforth *UT*) requested a sum of \$510,000 to convert 17 classrooms into Smart Classrooms complete with both Macintosh and Windows computers, digital projectors, high quality speakers, doc cams, VCR and DVD players, and necessary security devices (*Joint Technology Classroom Proposal* p. 3-5). The justification for this purchase was twofold. First, the lower-division Department of Spanish and Portuguese is one of the nation's largest, serving approximately 3,500 students each semester that could greatly benefit from the technologically-enhanced classrooms. Second, the committee assumed that, unlike other subjects, "language instruction depends heavily on audio and visual materials. . . . The result are instructional programs in the languages that are heavily dependent on digital multimedia technology. These programs would seem to be prime users of the technology classroom systems" (p. 4).

Despite the funding of such technological advancements, more recent reports have noted the uncertainty of both the current and future role of technology within the university (*Technology Enhanced Learning Committee* 2004 p. 2). In the fall of 2009, the Strategic Information Technology Advisory Committee noted that the university had "no clearly articulated vision for the role of instructional technology" and "no campus-wide roadmap for classroom technologies" (p. 50). This is to say, UT is equipped with the

technological tools, but is still uncertain how they are used for language teaching and what might prompt their use.

While UT is not certain of the role that instructional technology plays on campus, the university does aim to “[develop] the next generation of technology-savvy faculty and students and move [the university] toward a national and global leadership position” (SITAC, 2009, p. 7). In order to cultivate these tech-savvy faculty members, we must determine the nature of the current practices of GSIs who teach a majority of undergraduate foreign language classes and will perhaps fill tenured-faculty positions in the future. Previous reports have envisioned UT’s promising future as a competitive Tier 1 University with prominent scholars who use cutting-edge practices (*The Commission of 125*). More recently, UT has admitted: “It is difficult to plan for such a future without fully embracing the very best in instructional technology—including the technology itself, faculty use of technology in the classroom, and the ways students benefit from these new methods of teaching and learning” (SITAC p. 50). As of yet, it is unknown how much faculty have embraced these tools. More specifically, we do not know how technology is used by GSIs of Spanish—those that UT deemed “prime users” of technology in their initial arguments for reform (*Joint Technology Classroom Proposal* p. 4). Determining the beliefs of foreign language GSIs is essential if these visions are to become a reality. Exploring the beliefs-practice relationship will help us assist and train GSIs who will be asked throughout their careers to use technology to enhance students’ learning.

RATIONALE

The following three sections explore more thoroughly the rationale for investigating three topics relevant to this study: 1) instructional technology, 2) GSIs, and 3) teachers' beliefs.

Why study instructional technology?

The U.S. Department of Education has claimed that “technology is an essential tool for learning” (OTA, 1995). This widespread assumption has affected schools and colleges as they continue to allocate funds to create up-to-date classrooms that will aid their students' learning. Technology continually remains a high priority of institutions even in the face of budget cuts (Zemsky & Massy, 2004). In 2005 alone, colleges and universities spent a total of \$2.4 billion on hardware, \$1.3 billion on software, and \$242 million on training, and it is likely that these numbers will continue to rise (Kiernan 2005). All of these efforts are to ensure that students are able to compete in a progressively high-tech world.

Once schools acquire the funding necessary for technology, the pressure shifts to teachers who must be “able to apply [technology] appropriately, and [be] conversant with new technological tools, resources, and approaches” (US Web-based Education Commission, 2000, p. 39). With technology reform on the forefront of institutional agendas, it is no surprise that references to technology are found in mission statements across campuses. The mission statement for the College of Liberal Arts asserts that students will graduate with “a skill set that includes . . . sophistication in using information technology” (Liberal Arts Mission Statement). The mission statement for the

Department of Spanish and Portuguese “guarantee[s] that every student receives the highest quality education” which is achieved by “creatively incorporating technology into our teaching” (Dept. of Spanish and Portuguese Mission Statement). Appropriating funds for hardware and adding phrases to mission statements, however, does not ensure that technology is used to advance teaching or learning (Cuban et al., 2001). These goals are but idle words if we do not continually measure our progress in accomplishing them. We must evaluate how much technology has truly revolutionized education and how well we have incorporated teachers’ beliefs into the ongoing reform they are charged to enact.

Now is a time when technological innovations are moving faster than their implementation. This constant change requires new studies that analyze technology’s impact within a variety of schools and disciplines (Lim 2002; Raschio & Raymond, 2003). UT’s 2004 report from the *Technology Enhanced Learning Committee* to the Provost asserts: “Although the computer revolution moves at its own rapid pace, it is the duty of the educational community to stay in lockstep with these advances, evaluate the changes and incorporate the best of these into the learning environment” (Quoted in SITAC p. 51).

While UT insists the educational community stay in lockstep, they, through their own admission, cannot maintain the pace of technological change. As recently as 2009, they admit to having no vision “for the role of instructional technology” and no “road map for classroom technologies” (SITAC p. 50). How are teachers to “keep pace” with innovations within a university that has not done the same? And if we are not certain how or why technology may be used for instruction within the university, is there reason to

“stay in lockstep”? It is time we explore the actual uses of these advances by teachers who comprise the educational community. It is ultimately the teachers who are tasked with effectively rallying the technological revolution into their lives and classrooms. Only through this evaluative pause will we be able to determine how best to support our teachers in their courageous efforts to “stay in lockstep.”

Why study Graduate Student Instructors of Spanish?

Studies have shown that graduate education does not adequately prepare graduate students to fill faculty roles (Golde & Dore, 2001; Smallwood, 2001). A report entitled “America’s Academic Future” states:

In large measure young faculty are left to their own devices and therefore doomed to repeat mistakes of their predecessors due to inadequate instructional preparation, lack of senior faculty guidance and insufficient financial support. (National Science Foundation, 1992)

Without preparation and guidance, GSIs are, for better or worse, destined to teach the way they were taught. As innovations progress, so do the requirements of faculty to demonstrate a technological literacy that demands years of development throughout their graduate careers. This training is often ignored until newly minted Ph.D.’s enter the job market and are asked to illustrate how they teach with technology in one interview after the next. If, as GSIs, they are fortunate enough to be supplied with a Smart Classroom, they may lack the training or the beliefs necessary to fully apply those tools to their teaching and land a tenure track position. The graduate student experience then offers us a window of a few precious years where soon-to-be faculty are developing and honing their technological skills and further modifying their beliefs about teaching and learning.

Unlike K-12 teachers, GSIs and faculty do not have an abundance of opportunities to develop their teaching skills. Before being assigned their own classrooms, K-12 teachers must complete a teacher preparation program. During these programs, future teachers often work with a mentor in their discipline and acquire classroom hours. For future college faculty, however, teacher preparation consists of the GSI experience during which they are already teaching. Often, we do not know what beliefs GSIs have about teaching and learning before we entrust them with a class.

While scant research exists about the beliefs and practices of GSIs, they remain a crucial factor of the undergraduate learning experience. At most Tier 1 universities, a majority of introductory language courses are taught by GSIs. Most undergraduates need only a handful of introductory courses to fulfill their language requirements, which means they will only be taught foreign languages by GSIs. While playing a crucial role in undergraduate learning, GSIs are also at a critical point in their development as teachers. They are not entirely faculty, nor are they students. In this liminal position they are “often faced with ethical conflicts between their competence to teach and their need for funding” (Kuther, 2003, p. 219). The richness of the GSI experience has yet to be explored. By investigating GSIs’ beliefs and practices with instructional technology we can begin to match the breadth and depth of those studies conducted at the K-12 level. This information will allow us to aptly provide GSIs with the training and support they need to enhance their students’ learning.

Why study beliefs?

The study of teachers' beliefs has continually flourished since the '70s (Borg, 2006). The rationale for such research was that understanding how teachers think would allow us to better understand the process of teaching and thus improve student learning. Research has shown that teachers' beliefs about teaching and learning largely influence their classroom practices (Ertmer, 1999; Niederhauser & Stoddart, 2001; Ravitz, Becker, & Wong, 2000; Zhao & Cziko, 2001). The reason for this continued study is that teachers' beliefs are the chief factor behind the "implementation of innovations" (Munby, 1982). If we want teachers to adopt new practices (i.e., new technologies), we must first understand the beliefs they hold and how those beliefs are enacted in the classroom.

Because innovations in curriculum, tools, and methods are ever-changing, there has been a call for more beliefs-practice research within a variety of school cultures and contexts (Aguirre & Speer, 2000; Borg, 2006; Hamilton, 1993; Phipps & Borg, 2009). Understanding the relationship of teachers' beliefs and practices is imperative if the computer revolution is to have the effects we desire. Doing so will bring us one step closer to understanding teachers' behavior and ultimately what happens in the classroom and why.

PURPOSE OF THE STUDY

The aim of this research was to describe how teachers use instructional technology and how teachers' beliefs relate to their classroom technology practices. Because the principal goal is to develop a descriptive theory, this qualitative dissertation took the form of a descriptive case study. The questions guiding this study were:

- 1] How do Graduate Student Instructors of Spanish use instructional technology?
- 2] How these Graduate Student Instructors' stated pedagogical beliefs relate to their instructional technology use?

To address these questions, interviews, observations, field notes and documents were collected and analyzed using the constant comparison approach (Lincoln & Guba, 1985).

SIGNIFICANCE OF THE STUDY

First, this study aimed to capture the teaching experiences of GSIs from their point of view and in their own words. By seeing the classroom experience through their eyes we are better able to understand their beliefs about teaching and learning and their pedagogical choices regarding technology use. Second, this study aimed to inform administrators and department heads of the nature of the GSI experience. GSIs stand at a critical point in their lives as they balance the identities of being both an instructor and a student, often working as a teacher within their department of study. Acknowledging the complexity of this position may allow administrators to better provide GSIs with the resources they need to instruct undergraduates. Finally, it was my hope that this work would begin to inform the trajectory of the technological revolution within this department. This would allow our continual investments in instructional technology to be sound ones that improve the lives of teachers and the lives of those they teach.

LIMITATIONS OF THE STUDY

Time and money necessary for the completion of this study were necessarily finite. Because of these constraints, only three participants were interviewed and observed throughout the course of one semester. The participants consisted of two non-

native Spanish speakers: a male GSI and a female GSI from Texas, and one native Spanish speaking female GSI from Spain. The most evident limitation is the lack of a male international participant whose perspectives and insight could have greatly enriched this inquiry. Although these limitations imply that this study is not generalizable, what it lacks in breadth it gains in depth, as each participant's practices and beliefs are described in vivid detail to provide the reader with the experience of being in Sam, Ruth, and Sarah's classrooms.

Chapter 2. Literature Review

Light (2001) professes that “technology is not a neutral tool with universal effects, but rather a medium with consequences that are significantly shaped by the historical, social and cultural context of its use” (p. 171). Given this assertion, this chapter explores the history of technology in foreign language teaching and the history of teachers’ beliefs, beginning with a look at the history of technology use in the foreign language classroom. This history is followed by the current state of foreign language learning at the university level and the experience of GSIs who teach a majority of introductory foreign language classes.

TECHNOLOGY AND FOREIGN LANGUAGE EDUCATION

Foreign language education and technology have developed in tandem in several distinct historical stages throughout the 20th and into the 21st century. Although new innovations offer foreign languages a wealth of resources for language teaching, those advancements have not always been integrated effectively while remaining true to the interactivity and authenticity necessary of the discipline. Despite our continual inability to reap the benefits from these resources, investments in technology continue to rise (Kiernan, 2005). As we struggle to make the potential of these resources a reality within classrooms.

Early Audio Technologies

The phonograph, invented by Thomas Edison in 1877, was being used in the foreign language classroom by the early part of the twentieth century. The phonograph was used for its potential to teach students pronunciation and intonation. It was believed that repeating phrases played by a phonograph could “stimulate memory” and thus promote more language learning more so than repeating a teacher’s phrases (Clarke, 1918). It was also noted that the novelty of tool might further motivate students’ desire to learn a foreign language (Clarke, 1918).

The advent of the radio created the potential for distance learning (Salaberry, 2001). It allowed a wider population to have access to materials that were more concrete than the printed materials commonly used in language teaching (Garfinkel, 1972). Wipf (1984) noted several pedagogical benefits of using the radio in language classes. The radio increased access to the target language. Students could now hear people other than their teacher speak the foreign language in a variety of accents. And, much like the phonograph that preceded it, it was thought that the novelty of the medium and the current broadcasts of world issues would increase student motivation.

Language Labs

Language labs represented the first wide-spread institutionalization of technology in language learning. Initially established to instruct military personnel during WWII (Keating, 1963), the labs consisted of “highly controlled exercises and patterned drills in order to instill an immediate conditioned response” (Chism, 2000, p. 21). Through funding from the 1958 National Defense Act, language labs were installed in high

schools and colleges across the US throughout the fifties and sixties (Salaberry, 2001). By the seventies language labs were an integral part of the language learning experience as they supplied students with opportunities to hear authentic language samples and produce automated responses.

Initially, language labs were viewed favorably because they exposed students to the target language and prompted a response. The appropriate responses, however, were often a repetition of just-heard phrases. The language produced was not always authentic and could not be transferred to real-life situations. The labs themselves were often disconnected from the classroom and could be seen as an impromptu addition to language learning (Chism, 2000). Keating (1963) conducted a landmark study of 5,000 students learning French in language labs in New York City high schools. After comparing student scores on reading, listening, and speaking tests, Keating found that students who did not participate in the labs obtained higher scores than those who had participated. These results led Keating to conclude that the labs were “a waste of tax dollars” (Salaberry, 2001). Keating’s report was so controversial that *The Modern Language Journal* published an article that discredited his findings based on faulty statistical analyses.

Visual Media

The use of visual media in second language learning was a natural successor to the language lab because visual media made it “considerably easier for students to absorb both the abstract material given in lectures and the visual aids used to illustrate these abstract materials” (Gottschalk, 1965, p. 86). Students could now see interactions

between native speakers which included their proximal distance, gestures, and facial expressions essential to the learning of pragmatics and the understanding of culture. The once-essential headphones and cassette tapes in language labs were slowly replaced by televisions and video cassettes throughout the eighties. These media improved the availability and cost of instructional materials and would later make way for a new wave of computer technology.

Computer Assisted Language Learning (CALL)

The use of computers in foreign language teaching has been conceptualized in three stages: behaviorist CALL, communicative CALL, and integrative CALL (Warschauer, 2000). Behaviorist CALL allowed for “drill and practice” exercises once led by the teacher now to be led by a computer. These exercises were meant to expose students to material in the target language. These drills were seen as beneficial because students could practice basic skills repeatedly while receiving individualized correction or praise (Warschauer, 2000).

Within Communicative CALL, the computer was initially conceptualized as a tutor that aimed to focus on the development of skills rather than the administration of drills (Healey & Johnson, 1995). Over time, the computer was viewed as a tool (Taylor, 1980). In this stage, the computer was meant to aid the production of the target language through word processing programs. Much like language labs, the use of computers in this way was viewed as ‘disconnected’ from the learning of central concepts. As Kenning and Kenning (1990) note, CALL made a “greater contribution to marginal rather than to central elements” of language learning (p. 90).

Integrated CALL was made possible by two technological innovations: multimedia computers and the internet. The CD ROM was the first variation of multimedia which allowed for different modalities (i.e., text, graphics, sound, video) to be accessed simultaneously. This combination of modalities provided the learner with a more authentic language learning context, while allowing for the integration of reading, writing, speaking and listening skills.

The advent of the internet led to Computer Mediated Communication (CMC) which has had a profound effect on language teaching (Warschauer, 2000). The internet alleviates the constraints of space and time, allowing students to have contact with a variety of people and cultures. Their contact may occur through asynchronous communication (e.g., e-mail or message boards) or synchronous communication (e.g., instant messaging, chat rooms). The internet has also allowed for increased creation and sharing of written and spoken files, leading to an integration of skills. Students can access magazines, books, and videos in various languages, collaborate with native speakers and other language learners, and publish their own work for a global audience.

Prior studies in foreign language education have explored the internet's potential to enhance language teaching and learning. The following studies illustrate technology integration from the teacher's perspective. They explore teachers' reported technology use and the motivations and complexities inherent in that use.

Moore, Morales, and Carel (1998) conducted a likert-based survey to investigate how 388 K-12 foreign language teachers in Texas used technology to teach culture. The internet, videos, and audio cds were the most widely used mediums regardless of the

language or grade level taught. And those teachers with more advanced degrees claimed to use technology more readily than their less-experienced counterparts. Few teachers chose to participate in the open-ended portion of the survey. Those that did participate explained that they used technology to prompt richer class discussions or to stimulate listening and speaking activities, though no specifics were provided regarding the nature of these discussions or activities.

Arnold (2007) conducted a survey of 173 college foreign language teachers at 32 different four-year institutions in the south. A majority of the respondents taught Spanish (41%), French (32%), and German (19%). Results reveal teachers' motivations for using technology in class. Teachers reported that their primary reason for using instructional technology was its convenience. The pedagogical benefits were secondary. This means that when choosing technology, teachers do not first consider the tool's pedagogical benefits. Findings show that professors' technology use is similar to that of teachers in other disciplines at other educational levels.

Osuna (2000) examined the social and emotional factors involved in teaching culture through technology in second-year Spanish course at the university level. In this class, students were learning about culture through internet research of individually-selected topics. Their web searches inspired many class assignments including, journals, essays and presentations. Qualitative data included student journals, class observations, informal conversations and pre and post surveys. Findings show that there is a wide variety in the quality and quantity of materials for different cultures and that technology

integration is more successful if it is in line with the program's design and the students' needs.

Burnett (1999) explored the practices of Leslie, a GSI in French at a private university who was attempting to incorporate technology into her third-semester course. The class met three times a week in a traditional classroom and once a week in an electronic classroom. Qualitative data consisted of three, one-hour interviews, lesson plans, and seven observations. Results found that Leslie wanted technology that was more tailored to her needs as a teacher, and that she was not willing to change her teaching methods to incorporate the technology. Leslie said, "I don't think we should take French to the computer. I think the computer should be brought to French" (Burnett p. 290). Burnett's study highlights the importance of including teachers' voices in the research regarding technology integration.

These studies have contributed to our knowledge base regarding internet use in foreign language classrooms. If technology is instantiated into the classroom lessons, it is not always integrated in the most effective ways. Deciding to use technology is not necessarily pedagogical as much as it is a decision of convenience (Arnold, 2007). And in order for teachers to use technology in class, they must understand how the technology can be used to support their content (Burnett, 1999) and their students' needs (Osuna, 2000). Yet much remains to be discovered about teachers' technology use. Of these four studies, two of them equate teachers' self-reported data with behavior (Arnold, 2007; Moore et al., 1998). Without classroom observations, we do not know if what teachers report in terms of technology use is the same as what they actually do. Secondly,

observations can provide us with a more detailed understanding of what “teaching with technology” means to a particular instructor. As these elements are hard to gauge with a survey tool, classroom observation provides us a window into teachers’ classroom lives.

Web 2.0

Web 2.0 refers to the highly collaborative internet environment that includes podcasts, blogs, and social networks such as MySpace and Facebook. Podcasts are audio files that are recorded in MP3 format. These files can be shared through the internet and listened to on a computer or iPod. The advantage of podcasts is that they cover a variety of socially-relevant topics, and they can be listened to anywhere. Blogs (short for “Web log”) are electronic diaries posted on the internet for public consumption. They often include pictures, video or audio media, and links to other websites. The chief advantage of a blog is its interactivity as readers can post comments in response to entries.

Maloney (2007) praises these applications for allowing students to create information (e.g., a blog post, a video, a social profile) and respond to and edit the creations of others. He also asserts that users of these applications have more options in expression and more control over information as they are both creators and consumers of it. The collaboration that Web 2.0 requires could make it a vital part of active learning. It provides college students with a social outlet within a medium they are comfortable and familiar with as “digital natives” who are native speakers of the language of technology (Ferdig, 2007; Prensky 2001).

The success of any educational technology is largely dependent on the teachers charged to instantiate new tools and new techniques in their classroom practices with

little training or support. Our efforts have brought technology to the language classroom, but we have not observed how these teachers bring the language to the technology. Without further research, we may never understand why, as tools progress, they are not necessarily implemented in the name of “progress.”

For almost a century, we have seen innovation in terms of the development of educational tools in foreign language education. These tools have not always been successfully integrated in classroom settings. While technology will continue to change the possibilities available to teachers, it is necessary to involve them, along with their pedagogical beliefs, in the conversation regarding innovation. Garrett (1991) states:

As the classic joke format has it, there’s good news and bad news. The good news is that the technology does offer the potential for enormous enhancement of foreign language learning. The bad news is that that potential cannot be easily realized. . . . Deciding what is best in any particular situation will always require a teacher’s considered analysis of that situation and detailed information on the currently available options.
(p. 95)

TEACHER TRAINING AND TECHNOLOGY

A teacher’s ability to analyze a given teaching situation, process it, and select from multiple options can be greatly enhanced by the training received. In terms of technology training for educators, research at the K-12 level has found that some training methods have proven effective, while others have been less successful. Effective training allows teachers to work in small groups of three or four within the classroom environment (Makrakis, 1991). These group trainings are run by peers rather than administrators (Clouse & Alexander, 1997; ACOT, 1995), and are sustainable throughout the school year (Garavaglia, 1996). During these trainings teachers must have the

opportunity to use the technology themselves to relate it to the curriculum, and experience specific examples of what is possible with technology (Fatemi, 1999; Pisapia, 1994). Successful training allows teachers to see how technology works in concert with their content instead of viewing technology use as a set of skills (Dall’Alba and Sandberg, 2006).

In contrast, ineffective models treat technology as an acquisition of a set of skills (i.e., turning on the computer, logging in). These models show teachers how to use hardware or software (Siegel, 1995), but there are not attempts to integrate technology into the curriculum in an effort to enrich it (Schofield, 1995). Also ineffective are one-day workshops in which teachers are bombarded with information, and then left to their own devices in their classrooms without sustained support (Ertmer, 2005; Ertmer et al., 2001). Ronnkvist, Dexter and Anderson (2000) found that technology-based professional development was often directed by a “computer technician.” These technicians were in high demand and thus could only spend an average of two minutes a week working with each individual teacher. They also found that these technicians focused on the “technical” side of integration and were not trained or prepared to assist teachers with “instructional” integration specifically related to their grade level or their content. For this reason, Ronnkvist et al. (2000) suggested that schools employ a technology curriculum specialist who is knowledgeable of both technology and the content and could thus aid and instruct teachers how to best use tools to support their subject matter.

THE PRESENT DAY: FOREIGN LANGUAGE STUDY AT THE UNIVERSITY LEVEL

In 2007, The Modern Language Association (MLA) published a report regarding the state of foreign language study at the university level. Two topics from that report are relevant to the present study: the need for foreign language students to have more cultural exposure and the need to provide graduate student instructors (GSIs) with more training.

According to the MLA Report, in order for students to succeed in a multi-lingual world outside of the language classroom, students must acquire:

a basic knowledge of the history, geography, culture and literature of the society or societies whose language they are learning; the ability to understand and interpret its radio, television and print media; and the capacity to do research in the language using parameters specific to the target culture. (p. 4)

Although studying abroad might be the most expeditious way to achieve such understanding, relatively few students study abroad due to commitments outside of academia (MLA Report p. 7). This implies that most students' exposure to the history and culture of the target language will occur within their home universities. Blake (2008) suggests that technology may be one method of providing access to the target language: "Technology if used wisely, could play a major role in enhancing L2 learners' contact with the target language, especially in the absence of study abroad" (p. 12). Others have shown the internet's potential to teach culture and prompt students to draw comparisons and connections between cultures (Kramsch, A'Ness, & Lam, 2000; Thorne, 2003). The internet also provides access to the most current information and news as well as access to global communities, thus bringing otherwise unattainable experiences into the classroom (Mohammed, 1994; Surry & Land, 2000).

The GSI experience within four-year universities is a unique teaching context. GSIs are doctoral students who also serve as primary instructors for undergraduate courses within their department. In their dual roles as teacher and student, they are tasked with planning class activities and maintaining students' grades while completing their own course work and research. Contracts for GSIs are often renewed on a semester basis, and tenure cannot be granted. According to the MLA Report, within doctoral-granting institutions, GSIs teach 57.4% of undergraduate foreign language courses (p. 6), yet these instructors have very little power within their departments (p. 3). The report suggested that departments focus on the training of graduate students who, upon graduating, will seek full-time employment in similar language departments: "graduate studies should provide substantive training in language teaching and in the use of new technologies" (p. 7).

Unfortunately, we do not yet possess the knowledge base necessary to address these suggestions. Little is known about the general teaching practices of foreign language GSIs. Even less is known about how they might use technology in their teaching. Research regarding GSIs' current practices and how those practices are influenced by their beliefs would inform us what types of training would be most beneficial. The present inquiry seeks to fill this gap.

TEACHERS' BELIEFS

Teacher-belief research has consistently flourished since the late seventies when emphasis was placed on viewing teachers as "active, thinking decision makers who play a central role in shaping classroom events" (Borg, 2006, p. 1). The reasoning behind such

research was that understanding teachers' beliefs was vital to understanding teaching. Investigation has covered a broad range of beliefs that teachers have about the subject matter taught, student ability, and the process of learning (Becker & Riel, 1999; Calderhead, 1996; Fang, 2006). Specific to the field of foreign language teaching, research has explored beliefs about grammar instruction (Andrews, 1994; Johnston & Goettsch, 2000; Phipps & Borg, 2009), beliefs about writing (Burns, 1992; Tsui, 1996); beliefs about reading instruction (Collie Graden, 1996; Tercanlioglu, 2001), and beliefs about correction (Cathcart & Olsen, 1976; Schulz, 2001). Only one extant study (Lam, 2000) has explored foreign language teachers' beliefs and classroom technology use at various levels of instruction. To my knowledge, no study has explored graduate student instructors' beliefs and classroom technology use. According to Clark and Peterson (1986), the field of teachers' beliefs will continually warrant investigation until we thoroughly examine how teachers' beliefs and classroom actions relate to one another. This sentiment has not gone unnoted, as several have called for further exploration of teachers' beliefs in relationship to classroom behavior (Borg, 2006; Borg, 2003; Borko & Putnam, 1996; Nespor, 1987; Pajares, 1992; Richardson, 1994; Woods, 1996).

Difficulties with definition

As the field of teacher-belief research continues to grow, so does the number of terms used to describe teachers' cognitive processes. These processes have been referred to as "conceptions" (Freeman, 1990), "preconceptions" (Wubbels, 1992), "images" (Johnson, 1994), "theories of practice" (Burns, 1996), "maxims" (Richards, 1996), "personal theories" (Sendan & Roberts, 1998), "pedagogical principles" (Breen, Hird,

Milton, Oliver, & Thwaite, 2001), “perspectives” (Tabachnick & Zeichner, 2003), and “cognitions” (Borg, 2006). While the creation of terminology is common as a field flourishes, the confounding issue concerning teachers’ beliefs is that previously ill-defined terms prompted the coining of new ones. Thus it may be the case that researchers are using two (or more) terms to describe the same concept. Or—in contrast—researchers may be using the same term, but define it differently. This confusion inspired Pajares’ (1992) now (in)famous description of the field of teachers’ beliefs as a “messy construct.”

One of the chief reasons behind the creation of new terms for teachers’ beliefs was that researchers were attempting to coin a term that illustrated the beliefs-knowledge relationship. Some view beliefs and knowledge as synonymous. As Grossman, Wilson and Shulman (1989) explain “it is frequently the case that teachers treat their beliefs as knowledge” (p. 31). Woods (1996) in his study of an eight ESL teachers’ cognitions, planning and decision making found that “beliefs,” “attitudes,” and “knowledge” were inherently intertwined. This finding prompted his coining of “BAK” a term that encompassed all three terms while simultaneously representing their relatedness.

Some view beliefs as a subset of knowledge, deeming knowledge more significant. The reasoning behind this perspective is that knowledge is more factually based (Gess-Newsome, 1999) while beliefs are purely emotional (Bryan, 2003). Others view knowledge as a subset of beliefs. Leathem (2006) explains the rationale behind this perspective:

Of all the things we believe, there are some things that we ‘just believe’ and other things that we ‘more than believe—we know.’ Those things we ‘more than believe’ we refer to as *knowledge* and those things we ‘just believe’ we refer to as beliefs. Thus beliefs and knowledge can profitably be viewed as complementary subsets of the things we believe. (p. 92)

Nespor’s (1987) seminal piece clearly delineated the difference between beliefs and knowledge and described how significant beliefs were in terms of practice. First, Nespor asserted that beliefs require no consensus, while knowledge does. This explains why two teachers could have the same knowledge regarding instructional technology but have very different beliefs about whether or not it is beneficial to use it during class time. Second, he noted that beliefs, in contrast to knowledge are more emotionally based rather than factually based. This affective component of beliefs makes them more influential over action than knowledge (Nespor, 1987; Pajares, 1992; Rokeach, 1968). Third, while knowledge is stored semantically, beliefs are stored episodically like experiences. This means past experiences as students greatly inform our beliefs about teaching, learning and technology’s role in the two. Nespor (1987) concluded that “beliefs are far more influential than knowledge in determining how individuals organize and define tasks and problems and are stronger predictors of behavior” (p. 311). For the purposes of this inquiry, Nespor’s differentiation between knowledge and beliefs is used.

Like Nespor, Rokeach (1968) espoused that knowledge was a subset of beliefs. To illustrate his theory, he developed an architecture for describing belief systems. According to Rokeach (1968), beliefs are highly organized into “architectural systems having describable and measurable structural properties which, in turn, have observable behavioral consequences” (p. 1). Within these organized systems, beliefs “vary along a

central-peripheral dimension” (Rokeach, 1968, p. 3). Core beliefs are more essential to the system and greatly influence action, while peripheral beliefs have less of an impact on action. Rokeach’s concept of “core beliefs” will be used to explore the beliefs and practices of these GSIs.

Drawing upon Rokeach’s theory of centralization, Green (1971) further expanded on notions of belief strength and the relationship between beliefs. He claimed that core beliefs were those that were held with “passionate conviction” (p. 53). These core beliefs were formed earlier in life, and therefore were less susceptible to change. Peripheral beliefs, in contrast, are not as psychologically strong and thus could be changed with experience and examination. Consistent beliefs are held within the same cluster, but it is possible for individuals to hold contradictory beliefs in different clusters. Green (1971) theorized that in order to change beliefs, it is necessary to form beliefs based on evidence and reason and eliminate the number of core beliefs. Decreasing the number of core beliefs will increase the connections between the remaining beliefs and their clusters.

According to Kagan (1992) we are not precisely certain how beliefs change. Because beliefs influence practice, it might seem logical to change one’s beliefs first, and then those beliefs would prompt a change in practice. However, it also appears that altering one’s practices would provide an individual with the relevant experiences that would prompt a shift in one’s beliefs about teaching (Fullan, 2001). Richardson (1994) claimed that changing either beliefs or practice first would most often result in belief change, as beliefs and practices are reciprocal and interactive. In a similar vein, Dwyer, Ringstaff, and Sandholtz (1991) noted that belief change can begin with either beliefs or

practices as long as teachers have ample opportunities to express and confront their beliefs and determine the implications those beliefs have for action: “teachers increasingly need opportunities to think about instruction and learning; to confront their actions and examine their motives to bring their beliefs to the surface; and to critically reflect on the consequences of their choices, decisions, and actions” (p. 51).

Beliefs and Practice

Evidence has shown that teachers’ beliefs play a significant role in teacher practice (Albion, 1999; Albion & Ertmer, 2002; Calderhead, 1996; Clark and Peterson, 1986; Cuban, 1986; Ertmer, Addison, Lane, Ross, & Woods, 1999; Ertmer, Gopalakrishnan, & Ross, 2001; Fenstermacher, 1979; Fullan, 2001; Fullan, 2003; Guskey, 2002; Mumtaz, 2000; Palak & Walls, 2009; Pajares, 1992; Pintrich, 1990). Kagan (1992) stated “empirical studies have yielded quite consistent findings: A teacher’s beliefs tend to be associated with a congruent style of teaching that is often evident across different classes and grade levels” (p. 66). Clark and Peterson (1986) went so far as to say that teacher behavior was not merely influenced by beliefs, but rather entirely “determined by teachers’ thought processes” (p. 255).

Because beliefs influence practice, teachers’ beliefs will also affect their implementation of technology in the classroom. Munby (1984) argued that “teachers’ beliefs and principles are contextually significant to the implementation of innovations” (p. 28). Specific to the field of language learning, Warschauer (2000) stated that exploring teachers’ beliefs “could provide valuable information for implementing technology and further enrich our knowledge of the language learning process” (p. 264).

Prior studies regarding teachers' beliefs and classroom technology use support this claim. Teachers with positive beliefs about technology and its ability to assist in the attainment of pedagogical goals use it more often during class (Ertmer et al., 1999; Myers & Halpin, 2002; Palak & Walls, 2009; Yildirim, 2000). The following two studies illustrate the relationship between teachers' beliefs and their technology practices.

In their three year case study of the classroom technology use of six elementary school teachers in Israel, Levin and Wadmany (2006) found that teachers' beliefs about the definitions of "learning" and "technology" greatly influenced how teachers chose to use technology during class. Initially, teachers viewed learning as an accumulation of knowledge, and they viewed technology as a series of technical instruments that supported teaching. In this stage, teachers employed little technology and taught through direct instruction in which knowledge was transmitted and then practiced through a series of drills. Near the close of the study, teachers viewed learning as a transformation of knowledge, and they viewed technology as a dialogical tool that empowered the students and the teacher. Their shift in beliefs about "language" and "technology" prompted them to use technology for collaborative learning in which groups of students worked toward a common goal. These differing beliefs about the terms led to unique patterns of behavior around classroom technology. As teachers' definitions of "learning" and "technology" changed over the three-year period, so did their beliefs about the role the student, the teacher, and the technological tool play in learning.

With respect to foreign language teachers' beliefs and technology integration, Lam's (2000) qualitative study explored factors that affected the classroom technology

use of ten foreign language instructors who taught at various grade levels. Analysis of questionnaires and semi-structured interviews revealed that second language teachers' beliefs influence their classroom technology use whether they decide to use technology in the classroom or not. Those that used it preferred to use technology to expose students to authentic and challenging language samples and to keep students more engaged in the material, both of which teachers believed were important to language learning. However, if teachers did not see the immediate pedagogical benefits of technology, were unable to use it to achieve their teaching and learning goals, or believed that technology promoted a teacher-centered classroom, they were less likely to use it during class. The chief deciding factor in teachers' use of technology was the teachers' beliefs regarding how beneficial they found technology was for language acquisition. Unlike Levin and Wadmany's (2006) study, Lam's (2000) study used interviews as the chief data-collection method. What teachers stated during interviews was equated with their classroom behavior.

Understanding teachers' beliefs is essential to improving practice. As of yet, we need more research about GSIs' beliefs and practices with technology. This research will supply us with the knowledge base necessary to provide them with the appropriate training and support as suggested by the MLA. We can ignore teachers' beliefs only at the detriment of the innovations we wish to integrate.

SUMMARY

This literature review has explored many topics relevant to the present study. Technology reform efforts have played a major role in the history of foreign language

education. Along with each technological invention, came efforts to use it to increase exposure to authentic language and culture and increase student participation. After a long history of development with technologies, we are still largely unaware of how and why they are used.

GSI's who are charged to enact technology-based mission statements need more training regarding teaching and technologies. Although we have some information regarding instructional technology use and teachers' beliefs at the K-12 levels, other educational contexts remain unexplored. This inquiry was motivated by the lack of literature regarding foreign language GSI's instructional technology use and the ways in which particular beliefs might influence those practices. While teachers' beliefs research is fraught with challenges, these challenges should not dissuade our exploration. Rather, these tensions should stimulate further investigation of beliefs and practice of teachers from a variety of disciplines (Pajares, 1992). The present study aims further inform the nature of the beliefs-practice relationship from the perspective of teachers.

Chapter 3. Methodology

PURPOSE AND RESEARCH QUESTIONS

The aim of this research was to describe how teachers' beliefs relate to their classroom technology practices. Because the principal goal is description, this qualitative study took the form of a descriptive case study. The questions this case study explored were:

- 1] How do Graduate Student Instructors of Spanish use instructional technology?
- 2] How these Graduate Student Instructors' stated pedagogical beliefs relate to their instructional technology use?

RATIONALE FOR QUALITATIVE METHODS

This investigation used a qualitative approach that explored how individuals assign meaning to events in their lives. The goal of any qualitative researcher is "first and foremost to gather data, not change people" (Patton, 1990, p. 354). The result of this data collection was a vast amount of interviews, observations, and documents that illustrate the world from the point of view of the participants.

This qualitative inquiry took the form of a case study, the reasons for which are three-fold. First, a case study is an appropriate research strategy when "a 'how' or 'why' question is being asked about a contemporary set of events, over which the investigator has little or no control" (Yin, 2003, p. 9). This research explores how GSIs of Spanish employ instructional technology and how their beliefs influence that use. Since

classrooms are intricate social systems influenced by uncontrollable variables, the case study approach was most suitable.

Second, a case study differs from other forms of qualitative research in that it is based on a bounded system which is examined through the use of cases (Merriam, 1998). In this particular study, the bounded system is the Department of Spanish and Portuguese at UT, and the GSIs serve as individual cases. Third, the primary aim of this inquiry was to provide a description of the GSI experience. This goal of description is facilitated through the form of a descriptive case study which results in a descriptive theory that illustrates the complexities of the specific issue to be explored including the interaction of various factors (Yin, 2003).

DATA COLLECTION

Researcher's Positionality and Bias

Qualitative research, unlike quantitative inquiry, places the researcher—her lived experiences, her opinions and her world view—at its center. She is subjectively immersed in her subject while simultaneously attempting to maintain an objective stance as she gathers, analyzes, and explains the data. Louis and Barton (2002) coined the term “positionality” to refer to this unique position between the researcher and the other social, historical, educational, and economic contexts of her life.

I began my doctoral studies in education and my appointment as a GSI in the Department of Spanish and Portuguese in the fall of 2006. While I had read about technology reformation, I had never experienced it firsthand as a teacher. That semester I was assigned to teach in a Smart Classroom that had a console equipped with computers

and a doc cam. While I marveled at the probable cost of this equipment, I could not help but wonder if and how teachers might conduct their classroom activities with it. I wanted to know how often teachers in my department used instructional technology and what beliefs they held that might influence them to use technologies in a particular way. In essence, I wanted to open the classroom doors and explore the nature of and the extent to which teachers used technology and how their beliefs informed that use.

Researching the department in which I formerly taught could give rise to potential biases (Yin, 2003). I have preconceptions about what beliefs might be “best” for a foreign language teacher to have, and I also have biases about what those beliefs look like in the classroom setting. My experiences within the department as a GSI will filter what I focus on in interviews and what I notice during classroom observations. It is essential that I am aware of these biases and realize that my experiences as a language learner or teacher are not typical of everyone.

Securing Permission for the Study

Permission to conduct this study was provided by the Institutional Review Board (IRB) and the Department of Spanish and Portuguese. Prior to applying for this permission, I completed the required online training modules and quizzes through the IRB website. The IRB approved the study on December 9, 2009.

Gaining Entry to the Setting

Potential participants were recommended by course supervisors through e-mail. Because course supervisors consistently observe all the department’s GSIs, I felt they were fit to recommend teachers whose technology use and instructional methods were

worthy of observation. I then e-mailed the potential participants, introducing myself and my study. I met with those who responded to the e-mail and further explained the nature of my study as well as what was expected of participants. Participants were informed that interviews would occur at a time and place of their choosing and that the observations would be arranged in advance. Each participant signed a consent form before his/her initial observation (Appendix A). Each participant kept a copy of the consent form. No names were used during the data collection process as all participants chose pseudonyms.

Description of UT

UT is located in Austin, a Central Texas city with a population of approximately 780,000. According to the Office of Information Management Analysis, as of fall 2009, the university provided education to approximately 50,000 students. Of these 50,000, 14,000 were graduate students and 36,000 were undergraduates. The dominant demographics were: White (54.5%), Hispanic (15.9%), Asian American (15.1%), foreign students (9.1%) and African American (4.4%). 92% of the entire student population attends full-time. GSIs comprised 15.5% of the total faculty in the fall of 2009 (Office of Information Management, Common Data Set 09-10).

Description of the Department of Spanish and Portuguese

The lower-division Spanish language program provides instruction for approximately 3,500 students each semester. A majority of the undergraduate language courses are taught by GSIs who are also full-time doctoral students at UT. In the spring of 2010, the Department of Spanish and Portuguese employed seventy-one GSIs who each taught one undergraduate language course.

Classrooms

All of the classrooms in this study are Smart Classrooms. These classrooms are equipped with a console at the front of the room that holds both Macintosh and Windows computers, high quality speakers, a doc cam, VCR and DVD players, and necessary security devices. Although some technological applications such as a PowerPoint Presentation could be controlled from anywhere in the classroom with the use of a remote clicker, most applications require that the teacher is stationed in front of the console. This is to say that to start and stop audio or video clips the teacher must be remain behind the console.

Blackboard

All three courses were assigned a Blackboard course organization web page. On this site, teachers can post documents, video and audio clips or links to other websites. Blackboard is of particular interest to the present study as teachers used it to send class e-mail to every enrolled student. These e-mails often detailed homework assignments or instructions for lengthier class projects. These teachers believed their e-mailed served to enhance their immediacy by demonstrating their availability, approachability, and willingness to provide feedback.

Purposeful Sampling of Participants

Three GSIs of introductory-level Spanish courses served as participants. My selection of these participants was deliberate as they had to fulfill various criteria. Provided that UT was the IRB-approved research site and that the quality of research conducted was dependent on my understanding the foreign language used, participants

had to be employed as UT Spanish teachers during the spring 2010 semester. These teachers also had to be assigned to teach in Smart Classrooms and had to be recommended by course supervisors as stellar teachers who used technology. Participants had to teach at times convenient for me to repeatedly observe, and they had to agree to participate in the study.

Recruiting participants for this study proved challenging. Of those GSIs recommended for the study, two taught after 4:00 pm when I was unable to observe. Of the potential participants I e-mailed (Appendix B), five declined to participate citing prior commitments. Four failed to respond. Two claimed they did not use technology that often. One refused to be digitally recorded during interviews, and another did not want to be observed. Three GSIs of varying backgrounds agreed to participate in the study.

Participant Descriptions

Sam was born in Texas. As a non-native Spanish speaker, he learned the language in high school and as spoken in its natural environment in California. His time spent in California further stimulated his desire to study languages. Sam stated “That’s when I got into Spanish really intensively. I got so interested that I wanted to do it for my graduate work as well” (Interview 1, 12-13). While pursuing his Master’s degree in Hispanic Literature, he taught introductory Spanish courses. He is currently a full-time Ph.D. student. At the time of the study, it was his fourth semester teaching at UT and his second time teaching a third-semester Spanish course.

Ruth was born in Texas. As a non-native Spanish speaker, she learned Spanish throughout junior high and high school. These studies would continue throughout her

college career. In between her junior and senior year of college, she participated in a study abroad program. Ruth described her first experience living in a Spanish-speaking country as “Amazing! I mean, I fell in *love* with Latin America” (Interview 1, 18). She has taught Spanish at a Texas high school for two years. She worked as a teaching assistant in the language lab while pursuing her M.A. in Spanish. She is currently a full-time Ph.D. student. At the time of the study, it was her fourth semester teaching at UT and her first time teaching a fourth-semester Spanish course.

Sarah was born and raised in Spain where she learned English from the time she was a child. She described teaching as “what I like best” (Interview 1, 40) and this affinity for teaching inspired her to pursue a Master’s in Teaching Spanish as a Foreign Language. Upon completing her Master’s course work, she moved to the U.S. to teach Spanish to English speakers and work on her Masters’ thesis. Throughout her undergraduate and graduate studies, Sarah studied both French and Italian. She completed her Master’s degree in 2007, and entered UT as a full-time Ph.D. student the following fall. At the time of the study, it was her sixth semester teaching at UT and her third time teaching a third-semester Spanish course.

Methods of Data Collection

Data were collected through interviews, observations and field notes, documents and memos. Each of these methods is detailed below.

The Interviews

I conducted six interviews with Ruth and Sarah and four with Sam throughout the spring 2010 semester. The first interview focused on the participants’ beliefs and

experiences as language learners and language teachers. Subsequent interviews were used to further explore the nature of their beliefs, their technology use, and how beliefs informed their practices. Interviews also allowed participants to clarify and explain statements in previous interviews as well as participate in member checking.

Transcriptions were completed word for word. However, when quoting transcriptions throughout this document, I deleted words if they did not add significant information to the utterance. Stutters, restarts and repetitions are examples of these instances. The following excerpt illustrates an example in which words were deleted from the original transcript:

Original Transcript: You know, I think, . . .with technology, . . .I mean, it's quality over quantity (Sam Interview 4, 1152).

As Quoted in this Document: With technology, it's quality over quantity. (Sam Interview 4, 1152).

Aside from deleting unnecessarily stutters and pauses, there were instances in which words had to be added to enhance the clarity of the quotation. In most of these cases, pronouns (e.g., they, them, it) are being used to reference a previously mentioned noun. The following excerpt illustrates what was said in the original transcript and how it was quoted:

Original Transcript: They must be at ease with me and feel close to me (Sarah Interview 3, 632).

As Quoted in this Document: [Students] must be at ease with me and feel close to me (Sarah Interview 3, 632).

Finally, in some cases, it was necessary to convey not just what was said in the transcriptions, but also how it was said. Words stated emphatically are noted in italics: "I

am teaching [Spanish] because I want them to learn to *speak* it!” (Ruth Interview 6, 2244). And any relevant body language is noted in parentheses: “Sometimes, it’s like prying something open with the Jaws of Life to get students to speak (laughs)” (Sam Interview 1, 180).

All interviews were semi-structured. Questions were loosely formulated to guide the interview yet still allow for participants to express themselves freely and steer the interview as needed. The goal was to allow the interviewee to take the lead, while I probed for clarification and expansion. Interviews were 45 to 60 minutes in length and occurred at a mutually agreeable time and place. All interviews were digitally recorded, transcribed, and later presented to participants for member checking.

The Observations

This study aims to capture teaching practices from the perspective of GSIs, while taking their beliefs into account. Borg (2006) states that interviews “reveal stated beliefs and intentions, but on their own do not allow us to draw conclusions about what teachers actually do. It is for this reason that interviews are often combined with classroom observation in studies of language teacher cognition” (p. 194). My reasons for observing each of the participants in the classroom setting are threefold. First, observation allowed me to collect large amounts of descriptive data. This data helped support the creation of a descriptive theory regarding classroom technology use. Secondly, observation allowed me to see how teachers use technology within a natural teaching context and to collect evidence of their classroom practices. Thirdly, these observations served as a guide for

future interviews, which focused on teachers' pedagogical beliefs and how those beliefs inform their use of technology in the classroom.

According to Borg (2006), there is "no 'correct' figure to aim for in making decisions about the number of observations which are required in a study of language teacher cognition" (p. 246). My choice to initially observe each teacher on six occasions was arbitrary. Although I observed Ruth's class on six separate occasions as planned, Sarah and Sam invited me to observe as often as I liked. I observed Sarah's class on eighteen occasions and Sam's on seventeen occasions. Each observation lasted 50 minutes, the length of a class session. Field notes were taken during each of the observations and tutoring sessions to capture what occurred. After each observation, these field notes were typed and further developed with relevant details (Emerson, Fretz, & Shaw, 1995).

Analytic Memos

Throughout the study, I wrote analytic memos (Glesne, 1998). While my field notes were a recording of what occurred in the field, my memos provided me space to analyze my history as a teacher and explore the influence of those identities on my data collection process. These memos also assisted with the interviewing and coding as I recorded any relevant questions or future interviews and noted any tentative patterns of behavior or speech that might inform coding procedures. Maintaining these memos required intimate contact with the data. This contact prompted further refinement of my understanding of each participant's beliefs and practices.

The Documents and Artifacts

My intent to explore GSIs' beliefs and teaching practices suggested I collect documents relevant to their technology use. Therefore, I asked the participants to provide me with copies of syllabi, class calendars, handouts, lesson plans and other relevant documents that would enrich the data set and help me to better understand their practices. All three participants added me to their Blackboard course organization website. This provided me access to posted documents, homework assignments, and e-mails that participants sent to their entire class. I also collected relevant documents such as the mission statement of the language department, the mission statement of the College of Liberal Arts, and UT reports regarding technology reform. These documents were used to gain a better understanding of the Department and College in which the participants worked.

For organizational purposes, a binder was compiled for each participant that contained transcripts from their interviews, relevant documents from their observations and field notes. Three master binders were also compiled. One contained all the interview transcripts color coded by participant for quick identification. Another contained all the field notes from observations, also color coded by participant. The third contained all the miscellaneous documents.

DATA ANALYSIS

Data were analyzed using the constant comparison approach in order to develop a descriptive theory that was grounded in participants' beliefs and practices. Analysis of this qualitative data occurred in three steps: identifying, coding, and categorizing (Patton,

1990). This iterative process requires continually “reading and analyzing” the data, identifying the salient information, coding it, and then categorizing groups of codes (Dey, 1993, p. 99). These processes occur simultaneously as analyzing a new a piece of data may require a reconceptualization of codes or categories. While cycling between identifying, coding, and categorizing, one must make “carefully considered judgments about what is really significant and meaningful in the data” (Patton, 1990, p. 406). Of these three parts, categorizing requires the most time as it is entirely dependent on requisite identifying and coding. Throughout the analysis, categories may expand to include more codes, break into multiple categories with different codes, or be eliminated due to lack of codes. Continual choices must be made regarding which data can or cannot belong to a category. The process demands a constant refinement of one’s conceptualization of the data and a flexible perspective of the data’s message (Dey, 1993).

Analysis of this data occurred in three phases. Phase one focused on identifying and coding the data for each individual participant. Phase two focused on developing categories across all three participants. Phases three focused on a further refinement of categories¹. Each of these phases is explored in detail.

Throughout the data analysis, I wanted to maintain intimate contact with the data. For this reason, I made the choice not to use any data analysis software in order to demand that I keep a thorough paper trail of my conceptualizations. During the first

¹ Phase two and three necessarily included identifying and coding procedures as well, although these procedures were not the chief focus of analysis in these particular phases.

phase of analysis, my aim was to gain a general understanding of each participant's experience as a GSI and to capture the essence of their experiences in codes. Rather than imposing a preconceived set of codes upon the documents, I allowed the data to speak for itself. This open coding method resulted in codes mentioned by the participants, thus better capturing their beliefs about teaching, learning and technology. I read through interview transcripts, observations and documents, and made notes in the margins. Then, I re-read my marginal notes and began coding. While coding, I attempted to avoid attaching a code to less than one line, as a short quotation requiring a lengthy explanation would not be useful in the writing process. At the same time, I resisted assigning more than ten consecutive lines with the same code. The result was a list of codes that were participant specific. Coding for each participant was done individually to ensure I did not jump to conclusions and prematurely condense data. The result was that each participant had his/her own set of codes. In this phase, no efforts were made to group instances of the same code for one participant or across multiple participants.

In phase two, I began by grouping instances of the same code for each participant. For example, every instance in which Sarah referenced her heritage students (i.e., their abilities, their preferences) were all grouped together in one document. If there were multiple instances across Sarah's interviews, observations and documents, this code for "heritage students" became a tentative category. Then axial coding was used to determine if "heritage students" was a category supported by all participants' codes. This coding requires that two or more documents are compared to see if there is (dis)confirming evidence for the emerging categories. The process continued as I collected instances of

similar codes for each participant. Then I compared potential categories across participants. This constant comparison approach allowed for a progressive development of categories.

The aim of phase three was to further refine the categories that were created in phase two. By this phase, some categories contained a few seemingly unrelated codes, while larger categories had more codes within them. The largest categories became core categories. A core category was either divided into smaller subcategories or subsumed other smaller related categories. Over time, after cyclical identifying, coding and categorizing, the categories became “saturated.” At this stage, constant comparison no longer provides new information regarding the nature of the categories or their relationship to other categories.

RESEARCH QUALITY AND ETHICS

In applied fields such as education, it is important to assure the trustworthiness and accuracy of the data and its subsequent analysis (Creswell, 2007; Merriam, 1998). Efforts to enhance the trustworthiness of this data have taken the form of triangulation, member checking with each participant, and thick descriptions of observations in the field.

Triangulation

According to Denzin (1989), triangulation can be achieved by using both multiple methods and multiple sources, and such triangulation lends trustworthiness to the data collected. In this study, interviews, in-class observations, field notes, and documents were collected as data. Triangulation was also facilitated through the constant comparison

method of data analysis which required simultaneous interactive comparisons between the data collected and the analysis (Strauss & Corbin, 1998). These analyses presented to participants for member checking so they could confirm, refute, or further clarify the researcher's analysis.

Member Checking

Member checking requires that data, observations, reoccurring themes or interpretations be checked by the participants involved (Creswell, 2007). This collaborative process between the participants and the researcher allows the participant to clarify misinterpretations of her words or actions, to question the validity of the data, and to offer any additional information that might enhance the data sample. Participants in the current study were provided with interview transcriptions and were invited to add additional comments or clarifications to their statements as they saw fit. Later interviews provided opportunities for me to return to participants' previous statements and classroom practices that required more elaboration. Any amendments or additions noted on behalf of the participants were incorporated into the final product to ensure that analyses of the data were valid.

Thick Description

In the portrayal of each teacher's classroom (Chapters Four through Seven), I used thick description to accurately capture the interactions and practices of my participants and their students. According to Merriam (1998) providing thick description assists readers in understanding the complexity of the phenomena studied and allows readers to determine if the context described is relevant to their own experiences. In the

findings (Chapter Seven), specific quotations provided by participants during their interviews and field notes from observations are used to further enhance the thick description of these teachers' beliefs.

LIMITATIONS OF METHODOLOGY

The chief limitation of this study is the difficulty inherent in studying what Pajares (1992) deemed a “messy construct.” Researchers have noted the difficulty in distinguishing between what teachers believe, what teachers know, and the extent of the similarities between the two (Calderhead, 1996; Clark & Peterson, 1986; Fang, 2006; Woods, 1996). Despite these conceptual challenges, there are continual demands for researchers to explore how pedagogical beliefs inform the teaching of various subjects (Ertmer, 2005; Slough & Chamblee, 2000) and how pedagogical beliefs inform classroom technology use (Ertmer et al., 1999; Margerum-Leys & Marx, 2002; Martinez & Sanz, 2008; Myers & Halpin, 2002). While I do not intend to clean up this “messy construct,” I do intend to provide a rich description of technology use in these GSIs' classrooms. In gathering information, data, and observations to enhance such a description, I must remain aware of my inherent biases as a language teacher myself and take responsibility in advance for any oversights.

Chapter 4. Sam's Classroom

INTRODUCTION

Chapters four, five, and six aim to introduce the reader to Sam, Ruth, and Sarah. Each teacher is introduced with a vignette, a literary illustration comprised from the field notes of one class observation². These particular observations were chosen because they most accurately captured the essence of what it was like to be a member of these teachers' classrooms. Aside from allowing the reader to experience these classrooms, these vignettes allow the reader to see each teacher's in-class technology use and well as the students' reaction to that technology. They also allow the reader to experience how each teacher navigates the complexities of the classroom by establishing pacing, introducing activities, and mediating students' questions. The information provided in each vignette serves as background information for the succeeding data analysis (Chapter Seven) that occurred throughout several observations.

Each vignette is followed by a response to the first research question regarding how GSIs use technology. A description of the types of technologies used by these GSIs is provided. A distinction is made between in-class technologies (i.e., audio, video, music, doc cam) and outside-of-class technologies (i.e., e-mail). For in-class technologies, this description includes the frequencies of technologies used, the details of the technology used (i.e., length of file, topic), and field notes regarding student reaction

² In each vignette, most exchanges were in Spanish. English exchanges are denoted with an <E> for brevity's sake. If code switching occurs, the Spanish portions are denoted with a <SP>. All students' names are pseudonyms.

to the technology. For e-mail, this description includes the number of class e-mails³ sent and a discussion of how teachers exhibited immediacy behaviors within them. The chapter concludes with a summary of how all three instructors used technology.

³ “Class e-mail” refers to an e-mail sent from the teacher to his/her entire class.

SAM'S VIGNETTE: "I'LL BET YOU NEVER THOUGHT YOU'D DO MATH IN SPANISH."

This is the last anxious week of the semester. All across campus, there is a distinct hum of uncertainty about what remains to be learned in these last few days. Depending on the corner of the campus, you will hear students squabbling over answers on an Organic Chemistry test or making plans to rehearse their final presentation for American History. Signs of these struggles to learn more and more information in a short amount of time are littered across campus. The undergraduate library has no empty computer and no seats free. Those students who arrive later than nine in the morning are doomed to study on the itchy carpet. A 3x5 card pokes out from the sharp blades of grass along with gum wrappers and Starbucks cups. A card that once held all the answers needed has now been cast aside: from omniscient to unnecessary.

Sam enters the room with a smile, "How are all of you?" And you have a sense that he really wants to know.

A few students reply, "Tired . . . Very tired!"

"Ah, a lot of exams and final projects. I know how you feel." He sets down his black bag at the front of the room. Then he begins to circulate in between the rows of students. "If you haven't turned in the homework, please give it to me." Students hand him their work, and he acknowledges each of them by name, "Brenda, yes thank you."

"You're welcome."

". . . and one from Ethan, Thank you."

"You're welcome, Sir."

One student apologetically shows Sam her half-finished page. Sam smiles and says, “Better a little than none at all. Right?”

The bell rings signaling the start of class. Nineteen students are seated in rows facing the front of the room. Sam stands front and center. “Today is the last day of class and Friday is the exam. Do we all have a copy of the study guide?” He waves his copy of the study guide.

“I have it on my laptop, if that’s ok with you.” A female student half asks.

Sam responds, “That will work; use your laptop if you need to.”

Then he addresses the class, “We’ll start with section B. I’ll read each sentence twice.” Sam reads number one twice and students answer in unison. He reads number two twice and fewer students answer in unison. There is a faint murmur throughout the class.

Sam pauses, “Do you have questions? Please ask. Always ask. Don’t be scared.”

A student from the back of the room blurts out, “Do you have a stapler?” Students laugh as that’s not the question Sam was expecting.

“Ok course.” He digs in his bag and fishes out a miniature stapler, holding it up for the class to see. “It’s an itty-bitty stapler!” Students laugh. He passes it to the back of the room.

He continues with the activity, reading number three twice before his students answer in unison. “Any questions here?” He scans the class looking at each student individually before moving on. “All right, let’s move onto activity two.” This is a listening activity in which Sam reads sentences, and students must identify the tense in

which the verbs are conjugated. “I know you don’t like this activity much, but it will help you a lot on the exam.”

Sam reads number one twice. Students talk with a neighbor to confirm their answers and then tell Sam the answer in unison. This pattern repeats for number two.

Jon enters late. Sam addresses him happily, “Good morning Jon! Please sit with Ethan, his group is too big.” Ethan removes his backpack from a nearby seat and Jon sits down whispering “Good morning” to his nearby classmates.

Sam reads sentence number three twice. Students talk with their partners, but arrive at different answers.

“Future.” Ethan offers definitively.

“Past?” Abby suggests with a question.

“It’s the future—not the past.” Nicole says.

“No, it’s definitely the past.” Derek asserts.

Sam chimes in, “I like to see all this discussion. We have to be careful. A verb like ‘llevaré’ which is in the . . .” He trails off signaling his students to provide the answer.

“The future.” Brenda offers.

“Yes, Brenda is telling us it’s in the future. But it sounds a lot like ‘llevé’ which is in . . .”

“The past.” The class answers in unison.

“That’s right, so we must listen very well.”

Sam ushers them along to the next activity, “<E>How many of you have done the whole story guide?” Ten students raise their hands. “<E>And how many of you have done the paragraph?” Four students raise their hands. “Ok, get into a group with someone you will work well with. I’ll be around if you need me.” Students scoot their desks together into clusters of three. Others move across the room to join a group of two. There is a soft buzz of Spanish as they work in their groups. Three more students have taken out their laptops in addition to the young lady who initially asked permission.

Sam circulates around the room. A student who has his laptop open to the Blackboard Gradebook page stops him, “<E>Have you dropped the lowest quiz grade on Blackboard yet?”

“Yes, I dropped it.”

The student points at his laptop screen, “<E>But I still see it when I look at Blackboard. It’s still there. I don’t want it to ruin my grade.”

“It shows up, but it is not counted in the grade.” Sam assures him.

“Ok, thanks.”

Sam continues circulating in between rows of students. He is careful to be close enough so they can ask him questions, but not so close so as to intrude upon their conversation. After students have worked in groups for about ten minutes, Sam interrupts their work. He is now poised at the front of the room, “Any questions about this?” A few students shake their heads, “Ok then. Let’s move onto audio.” Students flip through the exam guide to find the page he is referring to. The simultaneous flipping of pages sounds

like the flap of bird's wings. He walks behind the computer console and logs into the computer and into Blackboard.

"I really like these recordings with Ben and his wife Marina. They are very interesting. How many of you have listened to this one?" A few students raise their hands.

A student asks, "<E>Are we just listening to this one because it's like the exam?"

Sam responds, "<E>Yeah, they're pretty good at matching reviews to the exam." He brings up the audio file and hits play.

In this podcast, Ben and his wife are discussing immigration. Students are supposed to listen and respond to multiple choice questions in their exam review packet. Most appear to be taking notes as the audio file plays. Others are listening and eliminating potential answers with a written "X" in their study guide.

Sam is careful to stop the audio to check for students' comprehension. He lets the file play until he hears the answer for number one, then he pauses it and asks students for the answer. Students offer the same answer in unison. Sam then re-starts the file from where it left off. This pattern continues until they get to number four, which requires a bit of subtraction to arrive at the correct answer. Students offer several conflicting answers that sound like alphabet soup, "A, D, C, B, D, A, C!"

"Ah, ok. Let's talk about this." Sam grabs a piece of chalk and turns to the small patch of chalkboard directly behind the computer console. "In 1995 there were 600,000 immigrants." He writes '600,000' on the board, "Ok, a six and five zeros. And in 2005

there were 4,000,000.” He writes ‘4,000,000’ on the board above the ‘600,000.’ “That’s a four with six zeros. There. So 4,000,000 minus 600,000. You get 3,400,000.”

While most of the students are engaged with Sam’s explanation, Jon scoffs, “<E>Uh, this isn’t a math class!” And students laugh.

Sam responds, “<E>I’ll bet you never thought you’d do math in Spanish, huh? Some people do it every day.”

Students nod and look at Jon for a witty comeback.

Jon admits defeat with open palms in the air, “Ok, you got me there!”

The class laughs louder than they did at Jon’s initial joke.

Sam starts the Ben and Marina audio file again, stopping it so students can answer numbers five and six. Then he asks “Any questions? If you don’t have any, we will continue.” There are no questions. Sam plays 20 more seconds of the audio before stopping it, and closing the Blackboard window.

He walks out from behind the console to the front of the room. “I really don’t want to spend the whole class time listening to audio. You can always listen to it at home. I’ll put the answers on Blackboard for you.”

Sam transitions to English, “I requested in e-mail that you bring questions to class. So, I am all yours, ask me anything you like.”

“<E>Do we have to write accents on the exam?”

“<E>It’s multiple choice, so you have to choose the correct answer. You don’t have to write anything in. Other questions?”

“<E>Is that, ‘I have eaten, you have eaten...’ stuff on the exam?” Ethan asks.

“<E>Yes, Ethan, I am sure it will be. That’s called the present perfect. He finds a piece of chalk and writes on the board as he explains. “<E>First, we need the verb ‘haber’ in the present tense. Which would be, . . .”

Abby answers, “<E>It’s like he, has. . . .”

And the rest of the class chimes in, “ha, hemos, han.”

“That’s right. Thank you very much Abby.” Sam writes the conjugation on the board. “<E>Then we add the past participle to that. So for an ‘AR’ verb like ‘Bailar’ the ending will be. . . .”

“Ah. . . .Do. Ado?” Derek answers.

“<E>Very nice Derek. Yes, it’s ‘ado.’ And for ‘ER’ and ‘IR’ verbs it’s going to be, . . .”

A few students respond “Ido!”

“Exactly. Now, there are some irregulars on page 265 in your textbook. So be careful with those. But you can see, this very much like English, ‘I have eaten,’ ‘I have danced.’” He looks at his class “Any more questions? About anything?” The class is silent. “None? I am surprised! Ok, Continue with the reading in your review packet. Do it in groups, and then we’ll review.”

Students begin talking and Sam circulates. This part seems quick and easy for students who are sharing their answers and coming to a consensus fairly quickly. “<E>That’s what I got. . . .” “Me too. . . .” “Ok, then number 2. . . I got. . . .”

After the students have worked in their groups for a few minutes, Sam addresses the group “Let’s review together please. We only have a few minutes left.” He reads the

sentences and students shout the answers in unison. One of the sentences has a “no” in it and Sam punctuates the “no” by jabbing his fist in the air. Students laugh at his enthusiasm. The review is brisk, as students agree on the answers. As they finish, students begin cramming their books and binders into their backpacks. Some are checking their cell phones.

“<E>You can still e-mail me your paragraphs if you want help. You know how much I like e-mail. Or if you want, you can come to my office hours and we’ll talk. It’s been a good semester for me. You’ve been a great class!”

This last comment pulls students away from the distraction of leaving class. They respond simultaneously and in Spanish, “Yes, you’re a good teacher. Good. Very good. I liked it.”

“Thank you all. Good luck on the exam.” As students filter out of the classroom, one pauses and looks at Sam and says in careful Spanish, “Thanks for everything.” Sam, smiles at his shoes and mumbles, “You’re welcome.” The student walks out, holding the door for students in the next class who rush inside.

RESEARCH QUESTION 1: HOW DOES SAM USE INSTRUCTIONAL TECHNOLOGY?

How Sam Used In-Class Technologies

In class, Sam's technology use was limited. He used technology during 4 out of 17 observations. During two of these observations, he used audio. And during the other two, he used video. A summary of the type of technology that Sam used in class is illustrated in Table 1. All media used by Sam was provided by the Department.

Type of Technology Used	Frequency of Use
Department Audio ⁴	2
Department Video	2

Table 1. Sam's In-Class Technology Use Throughout 17 Observations

Use of Video

Both videos were introduced in the last 10 to 20 minutes of class. One two-minute video used during Observation 2 (2/17/10) was about youth groups in Guatemala. Sam introduced this video as the "last thing we're going to finish with." Students were instructed to answer questions in their textbook while watching. Sam started the video and stood behind the console as it played. Many students took notes without looking at

⁴ Throughout these charts the use of the term "department" refers to audio-visual materials made by the Department of Spanish & Portuguese for pedagogical use.

the screen. The following is a description of the student reaction after having watched the video:

When the video clip ends, a student leans to her neighbor and says—“womp womp”—as if imitating death in a game of Pac-Man. She does not think this activity went well. Other students laugh softly or turn around and smile at her. One is in agreement as he adds, “I was *just* going to say that!” (Field notes, Observation 2, 321-323)

The other three-minute video used during Observation 9 (4/19/10) was about a Puerto Rican woman reflecting on images, sayings, and people that symbolize her country. Before this video began, students first talked in groups to determine what images reflected their own culture (e.g., a Longhorn, an American flag, McDonald’s).

After sharing their findings with the class, they then guessed how a Puerto Rican might have responded to the same questions using a list provided in their text as a guide. The video would later allow them to see which of their guesses was correct. Sam pulls down the screen, but it doesn’t give the first time. He yanks on it a second time and it comes down, albeit only half way. Students snicker. Eventually, Sam pulls down and to the side, and the screen stays put. Sam has won the battle against the screen. He walks to the console and starts the video, and remains behind the console while it plays. Unlike the Guatemala video that had still pictures with a narrator, this one is an interview. Students watch the video without taking notes. The video ends, and Sam tells students, “Please compare your answers with your group.” And Sam begins to walk around the class slowly. As Sam walks around the following exchange occurs:

Brenda: <E>That was way too hard!

Nicole: <E>Yeah, did you think we would understand that?

Sam: Was it difficult?

Brenda & Nicole's groups: Yeeees!

Sam: It was good practice though. (Observation 9, 1801-1805)

Not only do students feel the activity is too challenging, but they question Sam's ability as a teacher when they ask, "did you think we would understand that?" This question suggests one of two possibilities in the students' minds. One possibility is that Sam knew the video was challenging for students but used it anyway. The other possibility is that Sam did not realize the video was challenging in the first place. No matter which one is true, students are questioning Sam's credibility as a teacher. Sam defends his choice of technology by telling students that it was good practice.

Use of Audio

Much like the video-based activities, audio activities were introduced at the end of class. One three-minute audio used during Observation 1 (2/10/10) was about the use of technology in education. With this audio activity, students had to take notes in their textbook; these notes would later be used to write a summary of the clip. Sam starts the clip from behind the console and allows it to play about half way through. He stops the track, and writes some of his own notes on the chalkboard that he has taken regarding the content of the audio recording. Students copy his notes feverishly. Sam tells students he will continue the audio again. They should take their own notes and add to the ones he supplied them. The last half of the audio plays to the end, and the students react:

The audio clip blares to a close and various students laugh nervously, heave a sigh, or shake their heads in frustration. One student looks at another with widened eyes as if frightened, his partner commiserates grimly, "Yeah, . . . I know how you feel." (Field notes Observation 1, 96-98).

The final five-minute audio used during the semester was detailed in the vignette (5/5/10). It featured Ben and Marina talking about immigrants living in Spain. With this video, students had to respond to a series of multiple choice questions regarding what they had heard. Much like the previous use of technologies, this one prompted a negative response from a student who wanted to know if they were “just listening to this one because it’s like the exam.”

There are several recurring patterns throughout Sam’s technology use. First, technology use is low. Second, when technology is used, Sam remains behind the console, removed from his students as he controls the medium. Third, the use of technology is always met with negative student reaction. They sigh, shake their heads, joke about their failure to understand the content and question Sam’s reason for using it.

Use of E-mail

Sam was an active user of class e-mails with a total of 59 sent throughout the semester. Because he used e-mail to assign homework after each class period, he sent more e-mail than both Ruth (29) and Sarah (38). Sam explains:

I send them the homework by e-mail after class. I don’t tell them what their homework is at the end of class. A lot of times there are students that are absent, and then they end up missing it. Then they end up e-mailing you anyway to get the assignments. (Interview 1, 311-312)

While some e-mails were of the logistical variety and detailed homework assignments, others, Sam believed, allowed him to enact immediacy behaviors of demonstrating availability, demonstrating approachability, and providing feedback.

In terms of availability, Sam used e-mail to establish out-of-class contact with students. He organized two review sessions through e-mail adding, “If you very much want a review session and can't make it at either of these times, please email me and we'll try to work something out” (Sam E-mail 6, 3/5/10). He also organized a conversation hour that “will be good practice for the test and [the] next ‘A Hablar’ that are just around the corner. Please email me if you plan to make it” (Sam E-mail 22, 4/1/10).

In addition to using e-mail to illustrate his availability to students, Sam also used e-mail to demonstrate his approachability by offering students support and encouragement throughout the semester. After students completed the second exam, he wrote: “I hope you all feel much better after having completed the second exam. There’s just a little bit left in the semester!” (Sam E-mail 10, 3/8/10). And near the close of the semester Sam wrote, “I wish you all the best during these last two weeks. We only have 4 more days of class left!” (Sam E-mail 45, 4/28/10). In the following e-mail, Sam praises a student for creating a mnemonic to help the class remember irregular verbs:

Abby has sent me a mneumonic device to help us remember irregular verbs in the future and conditional tenses. I invite all of you to create your own mneumonics. (E-mail 50, 5/5/10)

Finally, Sam consistently provided students feedback through e-mail, and requested they send him more work to review:

If you would like to receive extra feedback on assignments, always feel free to email them to me and I would be more than happy to review over them. I don't want anyone to feel that they didn't get needed feedback on something. (Sam E-mail 3, 3/1/10)

This e-mail shows that providing students feedback is important to Sam as a teacher. In this case, he is informing students that if they want more feedback than what they typically receive on written assignments, he is willing to take the time to provide it. He even states that he would be “more than happy” to review them. E-mail allowed Sam to readily provide students with feedback and allowed students to request feedback in a manner that may be more comfortable than asking for it in person.

Sam also mentioned e-mail in the vignette. Sam closes the class by telling students to e-mail him if they need help. Then he adds, “You know how much I like e-mail.” This statement, much like the previous ones, encourages outside of class technology use. He informs them that he is there to help and even pokes fun at how much he likes to receive e-mail from them. While in-class technology was relatively rare, Sam’s e-mail use was more robust and served to enact immediacy behaviors. He used e-mail to establish contact outside of class, offer students encouragement, and provide students with feedback.

Chapter 5. Ruth's Classroom

RUTH'S VIGNETTE: "WHAT DID Y'ALL DECIDE?"

I hurry across campus which seems busy for an early morning. Students crowd the quad with brightly colored tables advertising campus groups. Some shake fluorescent fliers or campus newspapers as you pass. Others attempt to entice passersby with the chant "Cupcakes! Cupcakes!" One young man in an Elmer Fudd ear-flap hat has changed his chant to "Hey, cupcake!" which he selectively shouts at women walking by.

I make my way to the building and find myself in a faintly lit hallway. The door slams behind me and echoes. The building is a deserted island compared to the commotion of the quad.

Ruth's classroom is brimming with a palpable energy. Even before class starts, everyone is at work—thinking, discussing, and debating. Students are huddled over their books. Spanish and English voices pop off the white walls. It is early morning, but there is no way you'd be able to tell by how awake and alive the students are.

The screen at the front of the room is pulled down, and covers most of the chalkboard. On the screen, is an e-mail that Ruth sent her students last Monday after having graded their homework. The class has yet to have an exam, and Ruth is concerned about low homework scores. Monday afternoon, Ruth posted their homework grades on Blackboard and sent a class e-mail that said:

Imagine that homework grade is your Exam #1 grade, or even your final grade for the class. If you are okay with that, great. If not, then decide what you need to change so that you can get the grade you want. (Ruth E-mail 1, 2/15/10)

This Wednesday observation is the first class meeting since Ruth sent the e-mail.

Ruth is moving around the room like a shooting star. She has mastered the balance of gracefulness and confidence that teachers dream of. A stack of graded homework she referred to in the e-mail is perched in the crook of one arm. She selects from the top of the stack, calls the student's name, and then darts to the area of the room where that student typically sits. "Carla,. . . here you go. Sabrina. You're Welcome. Nate,. . . Kevin, would you pass this to Nate, please? Thank you!"

Most of the class is already seated and talking about either the e-mail projected on the screen or the homework Ruth is returning. One wrestles with a granola bar wrapper while commenting to her neighbor, "<E>I do *not* want to see that homework. It will not be pretty. I'm just sayin'."

Her neighbor responds, "<E>Yeah, that e-mail was. . . whoa. You know I studied all yesterday after that."

As students receive their homework, they dig through the pages, check the points they missed and compare their answers and grades with nearby classmates.

"Good morning! We have quite a few things to do today. You can see our plan on the board." Ruth gestures to the patch of chalkboard not covered by the screen, it reads:

- 1) Michelita visits our class
- 2) Review homework
- 3) Grammar: Compound tenses (p. 78-85)
- 4) Audio: Activity (p. 83-84)

“<E>Now, this morning, I am going to be talking a bit in English to make sure that everyone understands. First, I’d like to welcome Michelita to the class. You remember I had mentioned on Monday that she would be with us. Remember, she is only here to observe me.” Students turn and look in my direction. A few even wave or say “Good morning” in Spanish.

“<E>Number two, the homework. You just received the homework that was mentioned in the e-mail. Did you all get this e-mail and think about it?”

Students respond simultaneously, “<E>Yes.” “Yes.” “<E>Yes Ma’am.”

One offers, “I already started studying!” A few students laugh at this, and Ruth does too.

“I think that’s a great idea. If that’s what you think you need to do. You know, we haven’t had a test yet. So I thought it was fair to grade this so you would know your overall grade. Now, let’s review it quickly. Beginning with page, . . . 60.”

She closes her e-mail account, switches from the computer to the doc cam, and shows the textbook on the screen. “Any questions on page 60? When the class remains quiet, she moves on. “Page 61?” She flips the page of the textbook so that page 61 shows on the doc cam. There are no questions for page 61 or page 62. “Remember, the answers for all these are on Blackboard if you need to double-check later on.”

They move onto page 63, which Ruth projects on the doc cam. On this page, students had to choose between one of two past tense verbs (i.e., the preterit or the imperfect) to fill the blank. This is particularly challenging given that English does not make the distinction between these two tenses. “The instructions for this page, were not

that clear. Really, the rules for the preterit and the imperfect are not black and white, are they?”

Students shake their heads. One offers, “The rules are neither black nor white!”

Ruth, “That’s right. There’s a lot of grey.” Ruth moves from behind the console and walks towards her students. It’s easier to see her face when she is not hidden behind the computer screen.

Another student admits, “<E>The rules kinda make sense. Sort of. But they don’t really *really* make sense.”

Ruth nods, agreeing with her students’ confusion. “Well, one way to think about it. . . is that it’s not about the verb itself. It’s not that some verbs are *always* conjugated in the preterit and that others are *always* conjugated in the imperfect. Any verb can really be conjugated in either tense given the context.”

Ruth looks to the ceiling for an example, “Hrm. Remember that video we saw last Monday in class?”

“<E>We aren’t watching it again are we?” a student quips. Ruth smiles before continuing.

“Remember when someone said ‘I was sick for three days.’? Typically, emotions in the past are expressed with the imperfect. But in this case, we’re focusing on the ‘three days’ part—the finality of the feeling.”

“So, . . . it has to be preterit.” A student follows her logic.

“That’s right.” Ruth pauses, perhaps waiting for student questions or comments before continuing. She walks behind the console and flips the textbook to page 66.

Pages 66 and 67 supplied students with a full paragraph in which students had to choose either the preterit or the imperfect conjugation. The second this page hits the doc cam, students revolt: “Ug!” “Oh no!” “Can we go over it. . . like *aaaaaall* of it?!” Everyone laughs at this suggestion, including Ruth.

Another student raises her hand, “Uh, I missed ten on this page, but there is no marking to show me which ones I missed.”

“Come see me after class and we’ll talk about that.” Ruth responds, then continues, “Ok, pages 66 and 67. Do you have specific questions? We do not have time to review everything.”

“<E>How about this sentence?” One student reads from the textbook, “We grabbed our weapons and went to the beach to see what happened or what was happening.” Several students have chosen “what happened,” while Ruth has marked “what was happening” as ‘correct’ in her textbook on the doc cam.

Several students chime in with their concerns about this particular sentence, which captures the complexity of choosing between the preterit and the imperfect.

“<E>Why is it ‘was happening’? That doesn’t make sense!”

“<E>How am I supposed to know which one is right?”

“<E>I know the rules, but I could still choose either one.”

“<E>I feel like I have to read the narrator’s mind.”

Ruth senses her students want to talk about this. “For the sake of time, take five minutes, and talk in English about your answers for pages 66 and 67. Ask each other questions. Explain your answers. Help each other figure this out. You can do this.”

Students break into groups quickly with those sitting around them. Now the class is a humming with students discussing the preterit and imperfect rules:

“<E>Ok, now I get # 3 but #4 is....argh!”

“<E>What if it were in the preterit, what then?”

“I don’t understand this sentence....”

Ruth circles around the room. A few students have their hands raised and are patiently waiting for her to come by. One asks, “my homework grade for this was pretty bad. What’s homework worth?”

“Homework and participation is 10%.” Ruth responds and then moves swiftly to another group. Then another. And another.

Students are still working in small groups, talking about grammar as fervently as they were in the beginning.

Ruth has now made a complete circle around the room. She visited students with their hands raised first. Now she wanders by each group separately. She lingers near each group, in case they have a question for her. But most groups are working independently.

After the designated five minutes have passed, Ruth walks to the front of the room. “If you’re still confused by the preterit and the imperfect, please come to my office hours. In my office hours, we have more time to talk about whatever you want. Let’s continue on with page 78.”

She shows page 78 on the doc cam and taps the page number to cue students. She calls on students by name to read portions of a diary entry. “Jamie if you would read for us please. . . Thank you. Kevin if you would continue, please.”

Students read aloud. Ruth corrects pronunciation by repeating words here and there. One student pronounces “justo” as “juice-toe” Ruth repeats after him “whose-toe.” And the student repeats “whose-toe.” Students are following along in their books. Some are looking at the screen although they have their textbooks in front of them.

After they read the diary portion together, Ruth tells students, “With your partner, conjugate the verb, ‘haber.’ 30 seconds!” The class is instantaneously boisterous and loud, but all students are on task. Two students next to me turn to each other and both simultaneously conjugate the verb with lightning speed, which results in giggles.

In thirty seconds, as promised, Ruth calls them together, “Ready, conjugate ‘haber!’” And the class responds in a dreamy monk-like unison: “he, has, ha, hemos, han.”

“Very nice.” Ruth approves. “These words came up during the diary entry, didn’t they?” She shows students the following textbook page, which has the verbs from the diary entry listed. Sure enough, there are a lot of examples of ‘haber’ always coupled with another verb. “See, look at all these examples: ‘I have written.’ ‘You have written.’ This is the present perfect. Now, compare that to the next tense we are going to see.” Ruth turns to the next page of the textbook and calls on students by name to read the speech bubbles. After they read, Ruth directs them, “Just like we did in the last activity, look at the verbs. And look at their meanings.”

A few students offer answers:

“... have started.”

“No—had started.”

“Had started.”

“Had written.”

Ruth allows students to offer their answers, some are responding to the class others are responding to their partner. “This is the pluscuamperfecto, the past perfect. Now, what’s the difference between, . . .” She flips the textbook on the doc cam to the diary activity, “the present perfect and. . .” she flips the textbook back to the speech bubbles activity “the past perfect?” Ruth leaves the textbook on the doc cam and walks in between the rows of students.

Students jump to answer Ruth’s question. All students face the middle of the room as they talk.

“<E>One is in the past and the other isn’t.” Sabrina explains.

“<E>No—they are both in the past, right?” Ben asks and nudges his partner sitting at the same bench. His partner shrugs.

“<E>No, that one is called present perfect. Doesn’t that mean it’s in the present?” Taylor asks.

“<E>But, ok, look.” Carla pipes up. “<E>If I say, ‘<SP>I have written’ that’s past. <E>Like, ‘I have written my essay that’s due today.’ I wrote it, . . .” She pauses dramatically, “this morning.” Everyone laughs. “But it’s done! That’s past!”

“<E>But it’s still morning.” Jamie adds. “<E>What if it like started in the past and it kept going?”

“<E>That almost sounds more like the imperfect.” Nate says.

“<E>“What if one is past and the other is past-past?” Kevin offers.

Ruth has been passing between rows of students throughout their discussion. She has not offered input until now, “You’re getting closer. Let’s talk in your groups.”

Everyone in class turns to their partner and begins talking. One pair next to me begins with, “Hey remember what Carla said about her paper. That’s the past, right?”

Ruth continues to move around the room. The technology abandoned at the front. Students do not raise their hands for help as they are busy talking to their partner. Several partners have joined another pair and made groups of four. The partner discussion continues for five minutes before Ruth addresses them from the front of the room, “Well, what did y’all decide?”

Students look around at each other, not wanting to interrupt anyone. Ben begins, “It’s like, . . . Kevin said. One is past, ‘I have written’ at some point in the past. And the other is past with time. Like, ‘By three I had done whatever. . . written something.’”

Ruth “Do we all agree with that?” Students look around at each other to and nod, making sure they are all in agreement. “Sounds good to me. Tonight’s homework is on the calendar.” She walks behind the console and shows the calendar on the doc cam. There’s a pre-reading activity and then a reading activity for you to complete. E-mail me if you have questions or come see me.”

Students pack up their belongings and head for the door telling each other “Good bye” and “Adios.” One student lingers behind like Ruth requested to talk about her homework grade. The class is unbearably quiet now. I realize how involved the students were in debating, talking, and sorting out that elusive thing called “grammar.”

RESEARCH QUESTION 1: HOW DOES RUTH USE INSTRUCTIONAL TECHNOLOGY?

How Ruth Used In-Class Technologies

A summary of the type of technology that Ruth used in class is illustrated in Table 1. Ruth used no technology in class apart from the doc cam and an e-mail as seen in the vignette.

Type of Technology Used	Frequency of Use
Document Camera	6
E-mail	1

Table 2. Ruth's In-Class Technology Use Throughout 6 Observations

Ruth used the doc cam during all six observations throughout the entire class period. It was used to project class objectives, handouts, and notes. She also used it to show students textbook pages in case students did not hear or understand the page number Ruth had said. In this respect, the doc cam was used in the same manner as an overhead projector or chalkboard.

Ruth planned two other audio activities that were later cancelled. One audio activity was planned for Wednesday, February 24, what would have been Observation #2. However the campus was closed that morning due to an inclement weather schedule. Since Ruth's class was cancelled, she posted the audio activity on Blackboard, rather than completing it in class. In the second instance, during Observation #6 (Friday, April 23),

Ruth had planned to complete an in-class audio activity. The night prior to the activity, her supervisor informed her that the recording was one they had previously used. The following paragraphs are field notes in which Ruth explains this situation to her class. Ruth stands immediately in front of the first row and addresses the class, “Now, today we were going to do a ‘conference,’ but the audio posted on Blackboard for me to use is the same as the one before with the professor from Jalapa and the one from Santander.”

A male student interjects, “<E>Yeah, that one was a lot of fun!” and his classmates laugh.

Ruth presses on, “I am giving you a choice. Option 1 is that we do the audio again in class and practice listening comprehension. Or, we could do option 2, which is review for the quiz next Wednesday.”

A female student clarifies, “<E>So, we’re repeating the old one again? I didn’t like it the first time.”

The male student from before chimes in, “<E>You know you did!” As the class laughs, Ruth asks for a show of hands. Option 2 wins by a landslide. (Observation 6, 680-689). Of particular significance from this observation is that Ruth cares greatly about the opinions and emotions of her students, so much so that she allows them to determine how class time should be spent. Also of note is students’ negative reaction to technology. Although none was used during this class period, the mere mention of a previous activity garners snide remarks about how “fun” it was and how much students did not like it.

Use of E-mail

Ruth was a frequent user of e-mail and sent 29 class e-mails throughout the semester. E-mail was used by Ruth to, “keep them up to date on things that are going on” (Interview 3, 1073). Like Sam, Ruth used also e-mail to enact immediacy behaviors.

She used e-mail to demonstrate her availability by scheduling meetings: “I won't have my normally scheduled office hours next week, BUT if you would like to meet with me, please send me an e-mail and we can set it up” (Ruth E-mail 27, 5/6/10). She demonstrated her approachability by joking with students about the difficulties they were having recording their Audacity audio projects, “yay for technology that makes our lives easier, right? Ha ha” (Ruth E-mail 13, 4/4/10).

Finally, within her e-mails she encourages student feedback and asks for questions with such consistency (E-mail 3, 2/26/10; E-mail 5, 3/1/10; E-mail 10, 3/26/10; E-mail 17, 4/12/10; E-mail 22, 4/30/10; E-mail 25, 5/3/10), that she jokes “if you have questions, well you know what to do! :)” (Ruth E-mail 2, 2/23/10). She also uses e-mail to compliment students telling them to: “Prove that you are the great students that I know you are!” (Ruth E-mail 1, 2/15/2010).

In the vignette, Ruth opened and closed class by mentioning e-mail. The e-mail told students to “decide what you need to change so that you can get the grade you want.” This message assures students they have a choice in their behavior and the consequences of that behavior. Students note how the e-mail motivated them, saying they “studied all yesterday” or “already started studying.” This e-mail serves as motivation, and reminds

students of their choices as learners. She also closes the class by telling students they can e-mail her any questions they have, reminding them that she is always available.

Chapter 6. Sarah's Classroom

SARAH'S VIGNETTE: "HOW DO YOU SAY 'GET USED TO IT' IN SPANISH?"

Today the whole world is playing an instrument in the sonata of February rain. The skinny drops go "pity pit, pity pit" on the side walk and "glop" into murky puddles. Candy colored rain boots go "pop pop" across asphalt and "squack squack" into the linoleumed buildings. Umbrellas of every shape and size open with a "whap" and close with a "clink." In a state that gets little rain, this is a song that most never hear.

The warmth of the classroom invites me in out of the rain. The screen is down and the computer is left on from the previous instructor. Much like the screen in Ruth's and Sam's classrooms, it covers most of the chalkboard. A few students are present, but they are not talking to each other. Two are on their cell phones. One is doing what appears to be chemistry homework.

Sarah enters briskly with a few other students, "Good afternoon! How are you?"

Students sigh, "Ok." "<E>All right."

Sarah notes the weather as she sets down her textbook and bright bag. "I guess it's not spring yet! Lots of rain." She looks around the room at students slumped in their chairs. "You all look a little tired."

A few laugh as half-heartedly as they had said "ok" and "all right" to Sarah's previous question.

"Well, good news, I have grades from your final task." According to Sarah's syllabus, these are written activities that occur at the end of every chapter. With these

tasks, students must “demonstrate [their] mastery of the chapter content, in terms of vocabulary, grammar and pragmatics” (Sarah’s Syllabus, spring 2010). Sarah gingerly sets the stack of final tasks on her desk. “You can collect them at the end of class.”

Most of the class is present, but the room is quiet except for Sarah’s talking. One student asks, “<E>Hey! Do you have those final task things?”

<E>“Uh, yeah she *just* told us that, bro. We get ‘em after class.”

Sarah addresses the class again, “Do you think it’s a little warm in here? Let’s open the door a bit.” She walks across the room and props the heavy door open with a plastic trash can. The door hits the can with a thump-thump each time a student enters.

Sarah walks back to the front of the room and addresses her students: “Do any of you have plans for the weekend?”

“<E>Studying!” The door hits the can with a thump-thump.

Sarah’s face lights up, and she is about to ask for details when another student interrupts. “<E>You know, it’s Friday. We should do something fun!” Thump-thump.

“Ah, that’s a great idea. We are going to do something fun.” She walks behind the console and begins to log in to Blackboard. “We’re going to watch a video!”

The student who suggested something fun sighs. “<E>That’s not exactly what I had in mind.” His neighbors laugh. Thump-thump.

Another student whines, her words all drawn out. “<E>Is it going to be depressing like the last one?” Everyone laughs. The bell chimes signaling the start of class.

“The videos might be depressing, but they show you other points of view, right?” From behind the console, Sarah has navigated through Blackboard to the appropriate video which shines on the screen at the front of the room as a large black rectangle.

Class has officially begun, and most students are in their seats. Sarah’s explanation is lost in the classroom clutter of students settling into their seats. Students rifle through their cell phone menus—beep boop beep—until they are turned to vibrate. Others are slapping their textbooks onto their desks and shuffling pages in their notebooks and binders. Several are turned around asking their classmates anything and everything, “<E>Has the homework been checked yet?” “<E>Are we on for tonight?” “<E>Can I borrow a pen?” “<E>Do you have any gum?” “<E>Did we have homework?”

Sarah moves out from behind the console and stands at the front of the room, a few inches from the students in the first row. “Today’s video should be fun because it’s about the reactions that immigrants had when they first arrived to the U.S. It’s good to hear this perspective because the U.S. is filled with immigrants, isn’t it?” The door thump-thumps against the can again as another student saunters in with his iPod turned up so loud everyone hear. As if set to autopilot, he walks to his usual seat, when he realizes it’s already occupied he jumps back dramatically, “<E>Whoa! Hey there!” Students laugh at this display and watch him carefully select a new seat. The room is packed full with twenty-five students. There is little room between the eight rows of desks. It is warm from the sheer amount of body heat.

Sarah presses on, trying to make the video relevant to the students. “The video will also prepare you for the exam that is coming up.”

“<E>When’s the next exam?” Tom asks looking at his classmates rather than Sarah.

Before Tom can get the question out, another student answers with shot-gun reflexes, “It’s the Monday after next.”

“Right before spring break?” Heidi asks.

“Won’t be studying for that!” Alicia jokes, and her neighbors laugh.

“Yeah, before spring break.” Mike confirms in a voice that sounds half asleep.

Sarah walks behind the console and brings up the “Announcements” page on Blackboard. “You see in the announcements I have posted that Monday there will be a quiz.”

A student in the middle of the room asks, “What’s gonna be on the quiz? What types of questions, I mean.”

“That’s a good question. I’ll give you an example.” She shuffles across the room to a swatch of chalkboard not covered by the screen. This is the only part of the board most of the class can see. She writes the following sentence in Spanish:

1] I (be) _____ happy that you (have) _____ a beautiful house.

The goal is for students to conjugate the verbs in parentheses to arrive at “I am happy that you have a beautiful house.” Two students in the front of the room begin working out the answer:

“I was, were. . . <E>no present, right?”

“<E>It’s present, <SP>so I am. . . I am happy.”

“That you had, has, have—”

“Have a beautiful house.”

Sarah listens patiently as they talk through the sentence and writes in the answer only once they both agree. “Very good. Thank you. Don’t forget, there might be some irregular verbs on the quiz too. It would be a good idea to review.”

The class sits. Although they have their notebooks out, no one writes anything down. Even the student who asked about the quiz seems to have lost interest. They are staring into space or looking at their books.

Sarah walks back to the console and brings up the Blackboard video. “Like I was telling some of you before class started, this video is about immigrants’ first impressions of the US.”

“<E>Will we be able to watch the video later? If I want. . .” Liz trails off.

Sarah responds, “Good question. All the videos are posted on Blackboard. So if you’re not in class, you can still enjoy them. And even if you attend class, but would like to review them you have that choice.”

Sarah turns off the lights from the console and starts the video. It shows a woman sitting in a dark office talking about her first impressions of the U.S. The video plays for 30 seconds until Sarah pauses it and asks the class, “Where is she from?”

One student was beginning to nod off. His head tilted all the way forward until his body jerked him awake from the sensation of falling. Other students look confused by the question: their lips curl; their brows furrow. No one responds.

“Let’s start it again. Listen for her accent.” Sarah starts the video from the beginning and plays it for 30 seconds before pausing it.

“<E>Is she from Spain?” Chris asks.

“<E>Spain.” Sean offers.

“<E>Spain.” Dana says.

“<E>You’re just saying that because I said that.” Sean teases Dana.

“<E>Yes, I am.” Dana jokes and a few students laugh.

“That’s right!” Sarah crows, excited for her students. “She *is* from Spain. Can you hear the ‘th’ sound when she says, ‘In the center of the city’? This is very much a Spanish accent.”

“We are going to continue with the video. Be sure to listen for two things: where the speaker is from, and what surprised them when they arrived in the U.S.” Sarah starts the video again. The first speaker finishes, and the second speaker comes into view. She says she learned English in England and thus was surprised by American-English expressions.

When the second speaker finishes, Sarah pauses the video and walks out from behind the console. Any time she wants to address her students and have a conversation with them, she moves closer. “Where do you think she is from?”

“<E>England!” A student says confidently from the back of the room.

“Mmmm” Sarah pauses. “Does anyone else think she is from England?” She uses one student’s response as fodder for conversation. Students do not seem interested in speaking. A few have their heads propped in their hands. Another is doodling a series of skulls. Most look at the floor or at their books.

Sarah treads gently, attempting to save the face of the one student who responded, “She said she *studied* in England, right?” She tries to clarify the student’s confusion while prompting others to provide the correct answer.

The student who so confidently offered the answer seems uncomfortable and shoots back confrontationally, “<E>She *could* have been born in England and *studied* Spanish there. *We* don’t know.” Nevermind that the information in the video contradicted this claim.

Sarah addresses the class, “<E>I suggest you look at clues in the speaker’s appearance and mannerisms and accent to determine where she is from. This is something they will definitely ask you on the exam.”

One student blurts out, “<E>Is she from Ecuador?” This watershed comment stimulates the rapid fire participation of the rest of the class.

“<E>She’s too pale to be from Ecuador!”

“<E>Yeah! Blonde hair *and* blue eyes. Why would *she* know Spanish?”

“<E>Is she from Mexico?”

In between the students’ guesses Sarah responds with a quick emphatic “No.” The rapidity of her response incites and more student guesses about where this speaker might be from.

“<E>Spain?”

“No.”

“Perú?”

“No.”

“Chile?”

“No.”

“Argentina?”

“No.”

“Bolivia?”

“No.”

The whole exchange feels like a tennis match and is equally as tiring for students. One expresses the group’s exasperation by asking, “What do we have left?” in a tone so pinched with frustration that students laugh.

“<E>Spain?”

“<E>We already said Spain.”

“<E>No, that was for the other chick.”

“<E>No, it was for this one dumbass.”

“Cuba?”

“No.”

“Puerto Rico?”

“No” Then Sarah pauses, “Maybe it would help if you knew she wasn’t a native Spanish speaker.” Students begin shouting out European countries in the same rapid-fire style. Each incorrect guess is punctuated with a “no” from Sarah. They eventually arrive at Switzerland, where the speaker is indeed from. By this time students are tired of the guessing game. Some are resting their heads on their desks. A few are texting and have

avoided the guessing game altogether. Others are sitting defensively with their arms folded across their chests and nothing on their desks.

One student quips “<E>Oh Switzerland! I totally see it now!” And the class roars with laughter. Once the laughter dies down, a student challenges Sarah, “<E>Were we actually supposed to *know* that?”

Another student agrees, “<E>Yeah, those people could be from anywhere in the world.”

Another pipes up, “<E>Yeah, were we *supposed* to know?”

Sarah smiles and responds “<E>No, not at all!” And the class roars with laughter again. Sarah moves back behind the console and starts the video again. Speaker three explains that the concepts of “punctuality” and “lateness” are defined differently in the U.S. and in her home country. Sarah stops the video and addresses the class, “What do you think? Is punctuality cultural?” The class is silent. Do they have an opinion about being punctual? Is this a topic they have ever considered?

Sarah tries again, “<E>Does anybody have friends from a Spanish speaking country?”

“<E>Uh, I have friends!” Chris jokes and a few students near him titter. “<E>I mean, I have a few friends from Spain.” Then he half-heartedly adds, “<E>I guess they are always late. I dunno.”

Sarah nods. “Absolutely. Time is the oddest thing about the U.S. in my opinion. Even the parties here have a schedule! They have a beginning and an end. The first time

I experienced this, I felt weird. <E>I wanted to ask, ‘are you kicking me out?’ ” A few students in the front of the class laugh.

“Ok, let’s turn on the lights so you don’t fall asleep.” She walks across the room and clicks the lights on. Students shift in their seats. A few look at the clock. Sarah returns to the center of the room away from the console. “Now that we’ve seen these immigrants and heard about their experiences, what recommendations could we give to them, to make their stay in the U.S. easier?”

“<E>Get used to it!” Someone jokes. The class laughs loudly.

Sarah takes the suggestion seriously “Ok, then. How do you say, ‘get used to it’ in Spanish?” She snags a piece of chalk and moves to the small square of chalkboard behind the console.

Students begin shouting out parts of the verb. Sarah writes down pieces as they suggest them.

“Is it custumbre.. or costumbre?”

“Acostumbrar....?”

“Acostumbrarse.”

Sarah, “Good so, there is our infinitive, make it a command.” Students interrupt with the answer before she can instruct them to make a command, “Acostum—Acostumbra—Acostúmbrate!”

“Good. There we have, ‘get used to it.’ Get used to what, exactly?” Sarah presses.

A few students at the front of the room offer commands: “watch movies in English,” “talk to English speakers,” “buy a map.” Sarah notes these commands on the board as they are suggested. Sarah peeks at the clock and moves back to the console.

“We do not have a lot of time left. Let’s look at page 95 in your textbook.” She switches the computer from the video to the doc cam, while commenting, “Let’s see if this works!” She places the textbook on the doc cam, focuses the image, freezes it. Page 95 shows on the screen. She then removes the book from the doc cam so she can hold it. She does all this deftly, while students are opening their books or scooting close to a partner. They already know what they will be asked to do.

“I hope you all did your homework. Please talk with a partner about the situations at the bottom of page 95.” Most students are already partnered up with whomever is sitting nearby. A few others scrape their desks across the floor moving even closer to their neighbors. Two groups next to me begin with one classmate admitting “<E>I didn’t even do the homework,” and their partners admit “<E>me neither.”

Page 95 provides students with a list of situations. Students must explain if they would “tolerate” these situations if they saw them occurring. These situations include:

- A few students are laughing at another student’s ethnic clothes.
- Someone says “Say it in English, you’re in the US.”
- You have a Saturday meeting and your boss is mad because one of your co-workers (an Orthodox Jew) could not make it.
- Your friend buys a product with a Nazi insignia.

The students are talking loudly about these topics. After three minutes of partner discussion, Sarah calls their attention to the front of the room.

“Let’s see what you have talked about in your groups.” Sarah reads the first situation and most of the class responds with “I would tolerate it.” Sarah reads the second situation and the entire class responds with “I would tolerate it.”

“You are all quite agreeable!” Sarah laughs with her students.

When they get to the third example about the Saturday meeting, the class responds in chorus once again with, “I would tolerate it.”

This time Sarah questions their response, “Why would you tolerate that type of behavior from your boss?”

“<E>Who cares what my boss does? I don’t!” Heidi says with a laugh that is met with the laughter of her classmates.

“<E>The boss was just mad about it, but he didn’t really *do* anything inappropriate.” Dana reasons.

“<E>It doesn’t matter anyway because a boss can do whatever he wants.” Sean adds.

“<E>And, uh who has a meeting on a *Saturday*?!” Liz asks. The class laughs. “<E>Raise your hands!” When no one raises their hand, Liz smirks triumphantly, “<E>No one? All right then!”

Taking a cue from Liz’s question, Mike asks, “<E>Who knows any Orthodox Jews in *Austin*!” The class bursts into peals of laughter so loud it is hard to hear the bell signaling the end of the period.

Sarah reminds the class, “Don’t forget, quiz on Monday!” Between the students’ laughter, the lengthy bell, and the shuffling of bodies, I am not sure how many have heard her. As students rush out into the rain under the low-slung clouds, Sarah adds, “I have your ‘final tasks’ to return to you.” A few students who are still in the room lag behind to pick up their work.

RESEARCH QUESTION 1: HOW DOES SARAH USE INSTRUCTIONAL TECHNOLOGY?

How Sarah Used In-Class Technologies

Sarah used some technology in class. A summary of the type of technology that Sarah used in class is illustrated in Table 3. She showed videos on four occasions. Two of these videos were a part of the Department curriculum, and two were from YouTube. She played one audio file. She was an avid user of both the doc cam and Pandora radio, which were used during almost every class observation.

Type of Technology Used	Frequency of Use
Department Audio	1
Document Camera	16
Music, Pandora	14
Department Video	2
YouTube Video	2

Table 3. Sarah's In-Class Technology Use Throughout 18 Observations

While Sarah tended to use more technology than either Sam or Ruth, the question remained as to whether its use had any instructional value. Playing Pandora radio while students completed grammar activities helped to establish a particular environment in the

classroom. She claimed during an interview that the value of this technology use was marginal in terms of teaching and learning: "The music I use in class doesn't have a teaching goal that goes with it. I just play it so it's not completely silent. Sometimes I play music in English instead of Spanish. So they are not necessarily learning Spanish from the music at all" (Interview 1, 580-583). Sarah's use of the doc cam was similar in style to Ruth's. She used it nearly every class observation, and it served as a way to show students what page of the text they were working on. While Sarah used more technology than either Sam or Ruth, its use was, more often than not, of limited instructional value.

Use of Video

Sarah used two videos from the Department curriculum. One four-minute video used during the vignette (Observation 5, 2/26/10) was about three immigrants discussing their initial reactions when arriving in the United States. And Sarah asked students to try to identify the speakers' countries of origin. This resulted in anxiety ridden behaviors as students cracked jokes, avoided eye contact, or remained silent altogether.

A second department video was used during Observation 14 (2/19/10) and included a woman talking about her native Puerto Rico. This same video was also used in Sam's class on the same date. The following field notes detail students' reactions to the video:

Sarah starts the video in which a Puerto Rican is talking about objects that typify her country of origin. The video plays for about 45 seconds when Sarah pauses it. The second there is silence, a student quips "Say whaaaat?!" as if he understood nothing that was said. The class roars with laughter. (Field notes, Observation 14, line 2684-2688)

Use of Audio

One two-minute audio file was used at the end of class during Observation 2 (2/8/10). This department audio file consisted of a conversation between a man who is asking a woman for advice regarding his personal finances. It seems he cannot decide between paying for his classes or buying his girlfriend an expensive gold bracelet. Sarah asks students to turn to page 41, and says, "Please take notes while you listen." She starts the audio from behind the console and stares at the class. Most are not writing. Several do not have their books open or even out on their desks. Others look around confused. The audio ends, and Sarah asks, "Ok, did you all understand?" Students avoid her eye contact and look at their books or the floor. A few shift in their seats. It is a long minute that seems even longer as no one says anything (Observation 2, 282-299).

Use of YouTube

One nine-minute YouTube video used during Observation 8 (3/22/10) was about robots. Sarah told students they would watch the video and then talk with a partner about what might happen in the future with robotics. When she suggests, "you may want to take notes," students dig into their bags for paper or ask a neighbor to borrow a piece. This is the loudest the class has been all period. One student asks,

"<E>Can we take them in English?"

Sarah responds "Sure. Why not?"

Sarah starts the video. Only a few students are taking lengthy notes. Most write what looks like one or two words and then drop their pencils dramatically against their desks.

Sarah stops the video about half way through and tells them, “The video is on our Blackboard site if you want to view the whole thing. It’s about 9 minutes long. But I don’t want to waste a lot of time on it. Get with your partners and begin talking,” Sarah then starts the Pandora music and students burst into chatter (Observation 8, 1495-1507).

The other YouTube video used during Observation 4 (2/19/10) was about the 2004 Spanish election. The video lasted about two and a half minutes. Before playing the video, Sarah explains that this film was made before the 2004 elections in Spain to show that immigration was an important issue that the candidates should address.

Sarah warns the students, “Some of the images you will see might be offensive, so feel free to leave, if you like.” No one stands up to leave.

One student asks, “<E>Should we take notes?”

Sarah responds from behind the console, “No.”

Sarah starts the video. There are images of immigrants getting on boats and putting on lifejackets. The male and female voice over enunciate traditional phrases learned in Spanish class: “Buenos días,” “¿Cómo estás?” “¿Cuánto cuesta⁵?” A few have a furrowed brow as they take in the images on the screen. The video ends and Sarah asks, “What do you think about immigration in Spain?” No one says a word (Sarah Observation 4, 530-551). When asked about the purpose of this video in an interview, Sarah stated, “More than anything, the video was an excuse to start talking about immigration, the topic of the chapter we were starting” (Sarah Interview 3, 833-834).

⁵ Good morning. How are you? How much does it cost?

Use of E-mail

Sarah was a regular user e-mail sending 38 to her entire class throughout the semester. Like Sam and Ruth, Sarah used e-mail to enact immediacy by demonstrating availability and approachability, and providing feedback. First, Sarah demonstrated her availability by adding extra office hours to her schedule: “Just letting you know, I’ll have an extra office hour this Friday from noon to 1pm” (E-mail 5, 3/2/10). She enhanced her approachability by using e-mail to encourage her students throughout the semester, when it came to grades: “I just finished grading your quizzes. You all did a great job!” (Sarah E-mail 6, 3/2/10). And with one month left in the semester, she tells them, “Keep it up! There’s just a little bit left =)” (Sarah E-mail 15, 4/1/10). As students experienced finals week, Sarah’s e-mails were peppered with, “take care, don’t stress, sleep at least 6 hours every night” (Sarah E-mail 36, 5/6/10) and “[I hope you] had time to concentrate [on] your finals and also rest” (Sarah E-mail 37, 5/9/10). Finally, much like Sam, she used e-mail to provide feedback and to share student suggestions with the class: “Sean just sent me a web page where he has been practicing conjugating verbs. I am sending the link to you in case you want to practice” (Sarah E-mail 38, 5/11/10).

DISCUSSION OF SAM, SARAH, AND RUTH'S INSTRUCTIONAL TECHNOLOGY USE

A central aim of this research is to identify how GSIs used instructional technology. Chapters four through six included a vignette demonstrative of each GSI's classroom practices, and a frequency count of several types of technology that were used both inside and outside of class. While GSIs were observed in their classrooms using doc cams and media files, they were not used in instructionally significant ways. Outside of class, GSIs used e-mail to enhance their immediacy by demonstrating their availability (e.g., instigating out-of-class contact), their approachability (e.g., using humor and encouragement), and their desire to give feedback (e.g., praise, student examples).

Across all three courses, the most common use of in-class technology was the doc cam. Although it was not used by Sam during any observation, it was used by Ruth in all six observations and by Sarah in 16 out of 18 observations. Also of note is Sarah's use of Pandora radio in 14 out of 18 class observations. In some sense of the word, the use of the doc cam and Pandora do count as uses of technology. The question is whether or not they count as uses of *instructional* technology. In these cases, the doc cam was most often used to display textbook pages on the screen. Use of technology in this way is no different than holding up a textbook for the class to see, as Sam often did. Sarah frequently used Pandora only to ease the silence during group work. She herself admitted, however, that students were not "necessarily learning Spanish" from the music. Uses of the doc cam and Pandora might have been technological, but, they were not necessarily pedagogical.

Other common uses of technologies included video files (Sam 2; Sarah 4), which were used more readily than audio files (Sam 2; Sarah 1). Ruth planned to use audio files during two separate class periods. These audio activities were cancelled due to a snow day and students choosing to complete other activities instead. Of particular interest is where audio-visual activities were placed within the scope of a class period. They were used either at the beginning or end of class. At the beginning of class, they functioned “as an excuse” to bring up the topic of the chapter (Sarah Interview 3, 833), while at the end of class they were tacked onto the last dwindling minutes of the period and only completed if time permitted.

For as little as these teachers used technology, students reacted extremely negatively and exhibited anxious behaviors. They sighed, avoided eye contact, cracked jokes, made sarcastic comments, and even asked the teacher if they were supposed to understand the content. In some cases, the mere mention of a video resulted in a mockery (Ruth, Observation 6; Sarah, Observation 5).

The question remains, why would GSIs use so little classroom technology? They have the necessary “easy access” to a PC, a Mac, and the internet within their classrooms (Zhao & Cziko, 2001). Audio and video files as well as the accompanying activities are provided to them by the Department in which they work. And, according to the logic posited by UT, those who teach “in the languages” should be “prime users of the technology classroom systems” (*Joint Technology Classroom Proposal*, p. 4).

Even more perplexing than the fact that they did not use in-class technology is the fact that they did send a substantial amount of class e-mail on their own free time. While

some of these e-mails were of the logistical variety (i.e., Here is your homework), others served to enact immediacy behaviors. Teachers used e-mail to demonstrate their availability and approachability and to provide students with feedback. Not only are these particular uses of e-mail not required of these busy GSIs, but it would seem that teacher immediacy could better be established within the walls of the classroom, rather than online. Why are these teachers avoiding in-class technologies, but taking substantial time to enact immediacy behaviors through e-mail? How can we explain what seems to be a simultaneous avoidance and embracing of technology? The answer lies in an exploration of teachers' beliefs.

Chapter 7. Findings: Beliefs and Technology Use

This chapter aims to explore the relationship between GSIs' beliefs and their technology use. GSIs were observed in their classrooms using computers, doc cams, and media files. In few instances, in-class technology was used in a way that was central to the lesson plan. For example, Sam's use of an audio clip of Ben and Marina talking about immigration in Spain was a central component of class instruction. In other instances, technology was used only cursorily, for example Sarah's use of Pandora radio as background noise while students worked in groups. In-class technology use was low, while use of e-mail was more robust as GSIs used e-mail to enact immediacy behaviors. Teachers' beliefs will be used to explain these uses of technology.

RESEARCH QUESTION 2: HOW DO GSIs' BELIEFS RELATE TO THEIR INSTRUCTIONAL TECHNOLOGY USE?

Because GSIs did not use technology in significant ways within class, but did use a substantial amount of e-mail, the question becomes what motivated these particular uses. This question is explored within Rokeach's (1968) and Green's (1971) framework of beliefs wherein a core belief is interconnected with other similar beliefs that prompt behaviors. For these teachers, their most central belief was that the classroom environment be preserved. Their behaviors were driven by their belief that students enter the language classroom with anxiety. A teacher must mediate that anxiety by creating a trusting environment through immediacy behaviors. The more relaxed students feel the more Spanish they will produce and the more language they will learn. Connected to this centralized belief are a series of other beliefs about how in-class technology violates their

desire to maintain the classroom equilibrium. Using this framework, this analysis seeks to evaluate how beliefs impacted the decisions and behaviors of teachers with respect to technology use.

This chapter is divided into three sections. The first section details the grounded theory that resulted from this study. Within this section, three essential components of the classroom environment (i.e., trust, immediacy, opportunities for students to develop fluency) are explored through previous literature and from the perspectives of the teachers. The second section details three beliefs these teachers hold regarding how in-class technology violates each of the three essential classroom components. Their beliefs that in-class technology decreases these components lead to limited use. The third section details the belief these teachers have regarding how e-mail increases immediacy and that said immediacy filters into the classroom environment.

GROUNDING THEORY

This descriptive case study utilizes a grounded theory methodology. The aim of said methodology is to generate a theory from the statements and actions of the participants themselves. Thus the resulting theory is a product of the data rather than a predetermined framework imposed upon it. The resulting theory from the present study draws upon research in the areas of second language acquisition (e.g., foreign language anxiety and fluency) and social psychology (e.g., immediacy) and describes the relationship between teachers' beliefs and their instructional technology practices. This section will explore the individual components of this theory.

Figure 1 depicts a model of the core belief expressed by the three participants. According to this belief, the classroom environment must be preserved in order for language learning to occur. The ideal classroom environment contains high levels of trust, immediacy, and opportunities for students to develop fluency. If these three requirements are met, the result is that students learn Spanish. This outcome is highly desired; therefore, teachers behaved in ways they believed “preserved” or heightened these three elements. In contrast, teachers avoided behaving in ways they believed decrease trust, immediacy, and opportunities for students to develop fluency. Each of these three components is explored in turn.

These teachers believed that students entered the language classroom with anxiety and nervousness that impeded their language learning. Thus teachers worked to establish a classroom environment high in trust and immediacy to ease anxiety and allow students to develop fluency. Teachers’ belief that students experience anxiety is not unwarranted. Horwitz, Horwitz, and Cope (1986) were the first to explore the communication apprehension specifically experienced by students studying foreign languages. They reasoned that the “ego threatening nature” of language learning stimulated a fear of negative evaluation. This anxiety is experienced by at least half of all students studying a foreign language (Campbell & Ortiz, 1991). According to Leary (1982) this anxiety may manifest itself in *arousal-mediated responses* such as squirming, fidgeting, stuttering or stammering; *disaffiliative behavior* such as participating less and creating prolonged silent periods, and *image-protection behavior* such as nodding, smiling, and feigning comprehension. Other signs of student anxiety include, avoiding

difficult language structures in favor of simpler ones, avoiding eye contact, making jokes (Horwitz et al., 1986), avoiding classroom activities, avoiding speaking, crouching in their seats, or acting indifferent (Young, 1991).

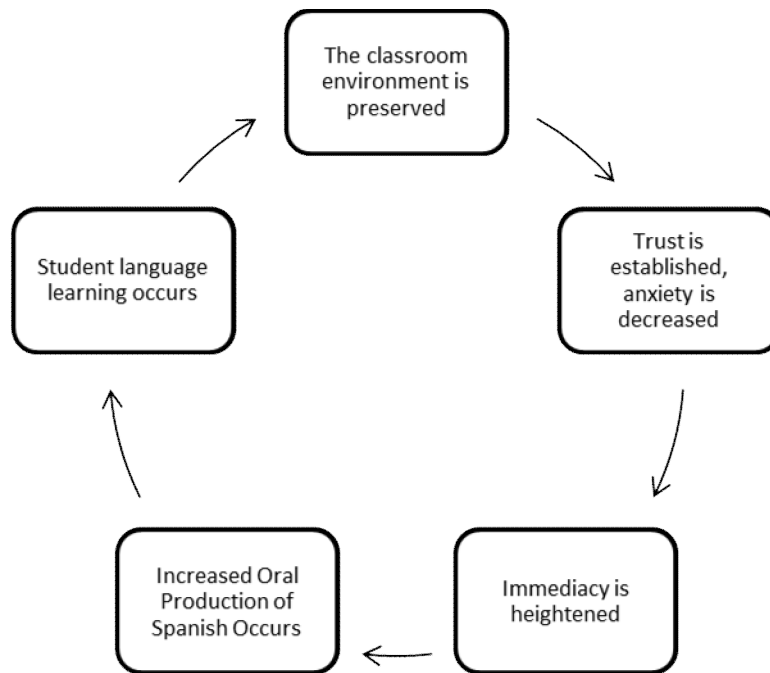


Figure 1. Teachers' Core Belief: Preserve the Classroom Environment

These anxieties may stem from (among many sources) instructors' beliefs about their role as teachers, teacher-student interaction, or the classroom environment (Young, 1991). For example, most instructors in Brandl's (1987) study believed that "intimidation [was] a necessary and supportive motivator" within the classroom (p. 50). These teachers also believed their role to be "less a counselor and a friend" to the students and more an authoritative figure. These views reinforce a classroom hierarchy and a command-control relationship between teacher and student. These beliefs and practices contribute to an

environment of anxiety and fear as students are more concerned with avoiding mistakes than learning the language. In contrast, Young (1990) found that teachers' beliefs and practices could also serve to decrease student anxiety. Those teachers who made themselves approachable, used humor in class, praised students, exhibited patience, and increased student comfort by encouraging questions were perceived as reducing student anxiety.

One of the principal methods of teacher-student interaction in language classes is through error correction or feedback. Prior research has found that harsh teacher correction may increase student anxiety (Koch & Terrell, 1991). Students also report an increased anxiety when asked to orally respond to questions for fear of providing incorrect responses and sounding unintelligent (Price, 1991). Young (1991) found that student anxiety decreased when teachers' correction of errors was less harsh and when said correction was not the focus of instruction. Teachers could also further decrease anxiety by adopting the belief that mistakes are a natural part of the learning process (Young, 1991).

The classroom environment also plays a role in mediating student anxiety. According to Young (1991), most of the anxiety experienced by students in the foreign language classroom is exacerbated by having to speak the target language in front of the class. Young (1990) found that over 68% of students were more comfortable speaking in the target language when it was not in front of the class. In a similar vein, Koch and Terrell (1991) found that pair work, small group work, and discussion in the target language provoked less anxiety and were preferred by students. The students in Price's

(1991) study said their anxiety would decrease immensely and “they would feel more comfortable if the instructor were more like a friend helping them learn and less like an authority figure making them perform” (p. 107). The teacher, then, has a lot of control over the classroom environment through his/her selection of the activities students complete and the method in which they are completed.

This prior research informs the grounded theory produced by the present study. The teachers in the present study believed students entered the language classroom with anxiety that teachers had to alleviate. They believed they needed to establish trust and immediacy with their students that served to relieve them of their anxiety and stimulate their oral participation and development of fluency. Classroom technology use remained low as teachers believed it decreased trust, immediacy, and the development of student fluency.

Trust in the Literature

“Trust” is a relational concept that has been applied to a variety of classroom settings. Brookfield (2006) stressed that “trust” is necessary as “[s]tudents need to feel they can trust the teacher and to know that [s/he] is credible before they will take learning seriously or participate in the class” (p. 167). Aside from stimulating student participation, “trust” contributes to a classroom climate that is comfortable, safe, and supportive and thus enhances student learning (Hoy et al., 2003; Peterson & Skiba, 2001; Ray et al., 2007). According to Roessingh (2006), establishing “trust” requires that a teacher illustrate reliability: “the generally accepted norms that lead to trust. . . are related to traditional virtues such as keeping promises and commitments. . . and being reliable”

(p. 570). Additionally, “trust” may also be established by demonstrating an expertise in the subject matter (Brookfield, 2006) and by enacting immediacy behaviors (Chamberlin, 2000).

Teachers in the present study echoed many of the claims found in the literature. For these teachers, “trust” was established by students and teachers fulfilling each others’ expectations. These teachers believed students expected to be provided with appropriate activities that were matched for their abilities. If appropriate activities were assigned, students were less likely to give incorrect responses during class, sound unintelligent to their peers (Price, 1991), or have their ego threatened (Horwitz et al., 1986). An implication of this expectation is that teachers were highly skilled in their subject matter (Brookfield, 2006) and were aware of and sensitive to students’ abilities and the activities that would prompt anxiety. On the other hand, teachers expected students to participate actively in the assigned listening, speaking, reading and writing activities. They expected active student participation and preferred it to students showing signs of anxiety (e.g., silence, joking, avoiding work) that may disrupt classroom flow and thus harm the classroom environment (Horwitz et al., 1986; Leary, 1982; Young, 1991).

While “trust” is reciprocal, it is largely dependent on the teacher whose pedagogical credibility is at stake (Jaasma & Koper, 1999). It is the teacher who must supply the appropriate activities that set the “trust cycle” in motion. Supplying the appropriate activities better ensures students will participate in them. Also, if activities are appropriately chosen, less corrective feedback will be necessary. Thus correction will not be the focus of class (Young, 1991) and student anxiety will be further alleviated.

The expectations of the teacher and students may be fulfilled or unfulfilled. If fulfilled, “trust” is heightened as both sides have delivered on their expectation. Teacher credibility is also heightened as the students have been shown that the teacher is knowledgeable of and sensitive to their abilities and their anxiety. Student anxiety decreases as they feel successful from having completing activities. This will prompt more student participation, more student fluency, and thus more language learning.

If expectations are not fulfilled, “trust” is decreased and teacher credibility is damaged as students are uncertain why a teacher would assign activities they could not readily complete. Student anxiety increases as they were unsuccessful with prior activities and may have been subject to extensive error correction. Due to this heightened anxiety, students are less likely to participate in future activities in an attempt to preserve their ego and avoid appearing unintelligent. If students refuse to participate, they will have fewer opportunities to develop fluency and thus less Spanish will be acquired.

Trust in the Participants’ Classrooms

“Trust” was mentioned throughout participant interviews. For these language teachers trust was of particular importance due to foreign language anxiety. These teachers believed that students entered their Spanish classrooms with a nervousness that impinged upon their desire to speak, their development of fluency, and thus their language learning. Teachers attempted to alleviate that anxiety by developing trust with their students. Sarah explained, “Students relax more as they learn to trust you, and when they relax the language comes so much easier” (Interview 3, 610-611). Ruth shared a similar belief: “If you feel more comfortable and you feel you can trust the teacher, you

learn more, especially speaking wise—especially in Spanish” (Interview 3, 1124-1125).

And Sam agreed:

A lot of students enter class embarrassed and nervous about what they can't do. It's a lot of stress on your brain to speak another language. I try to establish trust so they aren't stressed, and they want to talk more. (Interview 4, 1098-1099)

These quotations show these teachers' reasoning when it comes to trust. Students enter the classroom nervous and anxious about their linguistic abilities. It is the teacher's task to reduce that tension if s/he wants to help students acquire the language. Establishing trust serves to diminish anxiety. The more a student trusts the language teacher, the more relaxed the student becomes. And the more relaxed a student feels in class, the more likely s/he is to acquire Spanish. The amount of language that a student learns then is directly related to how much s/he trusts the teacher.

Because trust is essential to the classroom environment, the question becomes how to establish that trust. According to these teachers' beliefs, establishing the necessary trust required that teachers and students met each others' expectations. For example, students expected to be provided with activities they could complete, and teachers expected students to willingly participate in class. While teachers were supplied with a textbook and a calendar with suggested activities, they had freedom in terms of which ones students completed and how they were executed (e.g., time allotted, ordering of activities, completed in partners or groups). Provided that there were a great many choices of in-class activities, there was often a range in how do-able they were given

students' abilities. These teachers believed that it is in the best interest of the classroom environment to select activities that were closely matched for students' abilities.

Sam summarized the reciprocal nature of trust and expectation in the teacher-student relationship: "Students trust you to bring in activities that will help them. And you trust they will go along with what you have planned. If you use too many activities they just cannot do, the trust is gone" (Interview 1, 61-62). "Trust" then is initiated by the teacher through his/her selection of appropriate materials. A teacher who provides students with activities they can complete allows students to gain confidence and experience success in the foreign language classroom. As students gain confidence and experience success, anxiety is diminished. Students are more willing to complete future activities as the teacher has bolstered his/her credibility and set a precedent through prior activity selections.

Using too many challenging activities, however, further exacerbates student anxiety as they may be subject to error correction or fear being perceived as unintelligent by their peers. It also diminishes trust as the teacher is not delivering on students' expectations. In the following example, Ruth described how she assigned an in-class activity that did not match students' abilities, and what it meant for trust:

Near the end of class, I was running around answering so many questions. Finally, at the end of class, I said, "Ok, erase today. It didn't work at all." If that happens once a semester that's fine. But if it's happening every day, then students lose trust. They rely on you to provide activities they like and they can do. (Interview 1, 538-541)

"Trust" is a critical element that requires constant care. In this instance, students were provided with an activity they could not complete. If this occurs with frequency, students

lose trust in the teacher's abilities to select activities matched for their skills. If the class collectively loses trust in the teacher, then every subsequent activity will be met with resistance. Students then enter the classroom assuming they will not be successful, and these assumptions impede the completion of future activities.

These GSIs believed that "trust" was one necessary component of the classroom environment. Each student entered the classroom with anxiety that must be alleviated, as a certain amount of comfort and relaxation was essential to learning a language. The more trust a student instilled in a language teacher, the more relaxed the student would be during class time. This relaxation was essential given the challenges inherent in learning a foreign language. Trust between teachers and students was reciprocal and was initiated by teachers. These teachers believed students trusted them to assign activities that were feasible. Students responded favorably to activities they could complete. And teachers in turn trusted that students would complete activities willingly. If teachers assigned too many activities that were not matched with students' abilities, the trust, as Sam stated, "is gone." With less teacher-student trust, these teachers believed less Spanish would be acquired.

Teacher Immediacy in the Literature

As important as it was for these teachers to establish trust in the classroom, they believed it was equally necessary to establish immediacy. In contrast to the teachers in the Brandl (1987) study who induced student anxiety by utilizing an authoritarian approach, the teachers in the present study aimed to preserve the classroom environment

by exhibiting approachability, using humor, and providing students with feedback and encouragement. All of these behaviors can be classified as ones that increase immediacy.

Albert Mehrabian (1971) coined the term “immediacy” to refer to a set of verbal and non-verbal behaviors that enhance “closeness” and “interaction” between interlocutors. Mehrabian reasoned, “people are drawn toward persons and things they like, evaluate highly, and prefer; and they avoid or move away from things they dislike, evaluate negatively, or do not prefer” (1971 p. 77). Immediacy behaviors then serve to decrease the perceived distance (physical or psychological) between individuals (Witt, Wheelless & Allen, 2004).

Immediacy behaviors have been classified as either verbal or nonverbal (Arbaugh, 2001). Verbal immediacy behaviors include calling on students by name, using inclusive speech (i.e., *we* versus *you*), asking for student input, providing personal anecdotes, engaging in small talk, using humor and encouragement, and giving feedback and praise (Arbaugh, 2001; Carrell & Menzel, 2001). Nonverbal behaviors include gesturing, establishing eye contact, smiling at the class, moving throughout the classroom, removing barriers between the teacher and the students, and using appropriate touch (Arbaugh, 2001). Mehrabian (1971) found that these nonverbal behaviors increase the sensory exchange between people which prompts further interaction.

In a landmark study, Andersen (1979) applied Mehrabian’s concept of immediacy to the classroom setting and found it was linked to teacher effectiveness. The more immediacy a teacher enacted, the more psychologically available s/he appeared to students. This heightened availability led to enhanced student involvement and learning.

These findings have been substantiated by Mehrabian (1971) who found that students communicate more readily in high immediacy classrooms and Richmond and McCroskey (2000) who found that students prefer teachers who practice immediacy behaviors and, as a result, learn more from them.

Although the concept of immediacy has not been widely applied to foreign language classrooms, it stands to reason that it has applicability. Kennedy (2006) found that students need to emotionally connect with a second language, feel included in the lesson, and feel comfortable before being able to effectively communicate. To this aim, immediacy behaviors have been shown to decrease student apprehension and resistance (Kearney, Plax, Smith & Sorensen, 1988; McCroskey & Richmond, 1992) and increase students' willingness to talk (Menzel & Carrell, 1999, Rocca, 2004). And immediacy behaviors have been shown to have a positive impact on student affect toward course content and the instructor (Andersen, 1985; Thweatt, 1999) as well as the classroom environment (Andersen, 1979). The more immediacy behaviors enacted by a teacher the more motivated and positive the student will feel towards the content and the teacher. It seems these behaviors would be of particular importance in a foreign language classroom where: a.) the course is a requisite for graduation, b.) because of prior foreign language experiences and/or the course's requisite status, students may have negative affect towards the content and its relevance, c.) the content (e.g., Spanish) is heavily dependent on classroom interaction, d.) students may experience anxiety when it comes to speaking in a foreign language. Establishing immediacy would be one way to mediate these factors and allow for increased student learning.

Immediacy has also been explored in smart classrooms and online environments Witt and Schrodt (2006) found that instructor immediacy behaviors moderated the effects of instructional technology use under multiple experimental conditions. They studied eight scenarios. Participants were 549 college students randomly assigned to one of eight classes. The class sessions represented four levels of technology use (none, minimal, moderate and complete) and two levels of teacher nonverbal immediacy (high immediate and non-immediate). In no technology classrooms, all communication was face-to-face. In minimal technology classrooms, teachers used overheads and videos during class. In the moderate technology classroom, teachers used PowerPoint, video, web resources and e-mail. In the complete technology classrooms, participants were present for the first and only live session of a completely virtual class where all discussions and materials were posted online. Teacher nonverbal immediacy conditions were manipulated. The researchers performed a 4 X 2 factorial ANOVA. They found two-way interaction and significant main effects for technology use and immediacy on student affect (Witt, 2006). Student affect was greatest for high immediacy, minimal technology classrooms. Affect was lowest for complete technology classrooms.

With respect to enacting immediacy behaviors through e-mail and online formats, Robinson and Whitemarsh (2009) conducted a systematic review of studies addressing teacher immediacy in hybrid and online courses. The unique challenges of electronic communication call for teachers to explore novel communication strategies that build rapport and foster openness and warmth in an online environment (Robinson & Whitemarsh 2009). Robinson and Whitemarsh (2009) identified a number of effective

strategies for constructing teacher immediacy online. These strategies could be grouped as demonstrating availability (e.g., providing quick responses, and establishing out-of-class meetings) demonstrating approachability (e.g., using students names, using humor and less formal small talk), and providing and requesting student feedback.

Teachers in the present study believed that classroom technologies prevented their consistent use of immediacy behaviors. In each of the classrooms in this study, the computer console was stationed at the front of the room. The only place then that a teacher could operate the technology was at the front of the room from behind a large computer screen. From this vantage point, teachers' faces were hidden which they believed impaired students' ability to comprehend the target language. They also viewed their content as highly personal and "human" and that interaction within the classroom was essential. Classroom technology was also seen as interfering with feedback which teachers believed should be given on a private-individualized basis with each student in order to ease anxiety.

While teachers did not use classroom technologies for fear that it decreased immediacy, they did use e-mail as a means of increasing immediacy outside of class. Teachers use e-mail because they believe it made them appear more available, more approachable due to their use of encouragement and humor, and, finally, it allowed them to provide students with feedback. They believe this heightened online immediacy transfers to the classroom environment.

Immediacy in the Participants' Classrooms

Although teachers did not specifically use the word “immediacy” during interviews, their mention of “caring,” “bonding,” “closeness,” and “personal connections” are all tenets of teacher immediacy. Sam noted how important it was for his students to know that he cared about them: “The bottom line is, in class, they have to know I am there to help. I mean, I really care about them and their learning. They have to know I care” (Interview 3, 875-876). It was not enough that, in a factual sense, Sam was helpful and cared about his students’ learning. What was most important was that he communicated that caring to his students. If students realized how Sam felt about them and their learning, the classroom environment was much improved.

Similar to Sam’s expression of caring, Ruth noted the importance of “bonding” with students: “You have to develop a bond with them. That really makes a difference to them” (Interview 5, 1904-1905). Much like Sam, Ruth stressed how bonding was significant in the eyes of the student. While Sam had claimed students “have to” know he cares, Ruth claimed that you, as a teacher, “have to develop a bond.” That bond is non-negotiable and necessary as it makes a difference in the learning and the lives of students.

The result of this bonding and caring was that students were more likely to participate and ask questions. Sam explained how students reacted after he had established this bond a few weeks into the semester: “One [student] said ‘I realize you’re actually a really nice guy, and I feel I can talk to you and ask you questions now.’ And I’ve had that reaction with a number of students” (Interview 3, 871-872). Developing that

bond increased students' comfort and allowed them to realize they could feel comfortable approaching Sam with questions about the content of the course.

Sarah, like Sam, acknowledged a similar need to maintain closeness with her students and the consequences of being too distant: “[Students] must be at ease with me and feel close to me. The moment students feel distant from me, they will talk less. They will participate less, and they will lose interest” (Interview 3, 632-633). Much like Sam and Ruth’s previous quotations, Sarah stressed the imperative that students “must be at ease” with her. She also noted that in just one “moment” they could feel distant, illustrating how quickly she believes consequences unfold if she does not maintain that feeling of closeness. The ultimate consequence would have been that students talked less during class time, thus decreasing the amount of language they learned.

These teachers believed that immediacy was an essential component of the classroom as it allowed for students to feel close and connected to their teachers. This closeness then stimulated teacher-student communication and promoted questions and participation. Ruth suggested that the primary reason for teaching and learning Spanish was a function of immediacy:

Why are you teaching them Spanish in the first place? So they can personally connect with me and their classmates. So they can connect with other cultures and other people that they couldn't connect to before. That's why I am teaching Spanish. If there's no personal connection, why not just teach them math? (Interview 6, 2229-2231)

The reason Ruth teaches Spanish is so that students have more opportunities to “personally connect” with her, with their classmates, and with people from other cultures.

This personal connection is so integral to the content that, without it, she may as well be teaching a different subject altogether.

These teachers believed immediacy between teachers and students was necessary for various reasons. First, it had a positive impact on students in that it decreased their anxiety and increased their comfort in class. Second, this comfort led to increased student questions and participation which ultimately resulted in more language learning. Finally, they viewed their content as highly interpersonal. The personal nature of their content demanded that they develop relationships with their students. Teachers enacted immediacy behaviors that they believed established and strengthened this close-personal connection.

Fluency in the Literature

According to these teachers' beliefs, the final necessary component of a successful language classroom was that students had opportunities to develop oral fluency. This was significant as these teachers equated "language learning" with "learning to speak." Prior research has defined "fluency" as "flow, continuity, automaticity, or smoothness of speech" (Koponen & Riggensbach, 2000). Of all the language skills, fluency is one of the "most salient markers of proficiency" in that it is easier to gauge if someone can continually speak a language than it is to determine if they can continually listen, read, or write (Rossiter, Derwing, Manimtim, & Thomson, 2010). Like any skill, fluency must be developed over time. It is suggested that first, teachers assess their students' oral production to determine if fluency development is needed (Ejzenberg, 2000). If so, teachers can begin by enhancing students' awareness of fluency

markers (e.g., in other words, on one hand, on the other hand) within the target language (Riggenbach, 1999). Finally, students must be given multiple opportunities to rehearse fluency markers in a variety of contexts and with a variety of subjects (Bygate, 2001; Gatbonton & Segalowitz, 2005).

These teachers believed fluency was the mark of language learning and organized their classroom activities so that students had multiple opportunities to complete pair work or group work using the target language. Their chief goal was to prompt students' use of Spanish and keep them continuously talking with little to no use of their first language. While these teachers may have believed they were developing their students' fluency merely because students were talking, Rossiter et al. (2010) note that free production tasks, or tasks in which students simply talk about a subject, "are unlikely to have a significant impact on oral fluency" (p. 588).

As these teachers believed that technology-based tasks impeded their students' opportunities to develop fluency, they were less likely to use technology. They believed such tasks required less listening and less oral production than a conversation. They also believed the tasks stimulated students' use of English more so than their use of Spanish. Even if these types of tasks did promote students' use of Spanish teachers believed the Spanish was inorganic or that the content of the videos, and the resulting conversations, may have affirmed rather than diminished stereotypes.

Opportunities for Students to Develop Fluency in the Participants' Classrooms

Trust and immediacy serve to decrease foreign language anxiety and allow students to feel at ease in class. Once these two components of the classroom are established, it is necessary to capitalize on them by providing students with opportunities to develop fluency by communicating with their classmates. These teachers' emphasis on student fluency was logical considering that they defined "learning a language" as "learning to speak." Sam explained, "the best way to learn is to practice speaking. At the same time, you need to be in contexts in which you can get feedback but not so much feedback that it completely interrupts the conversation" (Interview 1, 176-178). Sam claimed the "best way" to learn is to practice speaking and receive feedback. The nature of the feedback must be such that it does not completely hinder communication. Although Sam stressed the importance of speaking in an environment rich with feedback, Sarah claimed the best teachers focus on their students' oral production: "The best teachers value speaking. They ask you a question or have a classmate ask you, and you have to struggle to respond in the [target] language" (Interview 1, 82-83). Sarah stated that the "best teachers" emphasize speaking and promote classroom interaction.

Finally, Ruth drew significant parallels between the ability to speak and one's quality of life:

I am teaching [Spanish] because I want them to learn to *speak* it! So that when they go to a foreign country, they don't act like dumb Americans who can only speak in English. When you speak, that's where you get quality of life. That's when you learn about cultures. (Interview 6, 2244-2246)

Ruth teaches so that her students develop the ability to speak and interact. She believed this skill would most assist her students outside the walls of the classroom where it would allow them access to a foreign country and increase their cultural awareness.

These teachers defined “language learning” in terms of being able to speak the language. Therefore, it was logical that these teachers would seek to establish a high-trust, high-immediacy classroom in which students felt comfortable enough to practice speaking in Spanish. They organized most of their class time around student group work, during which they compared their answers, sorted out grammar, discussed their opinions and asked for clarification in Spanish. Sarah explained how essential student-student communication was in her classroom:

Students need to know the classroom is an open place where they are free to say and to think whatever they want, and nothing will happen to them. They have to be willing to talk about anything and everything. (Interview 3, 837-838)

Sarah believed the classroom environment was vital to student participation and learning. If the classroom were an “open place” then students would be more likely to express themselves in Spanish without the fear of judgment. If the proper environment were maintained, students would feel comfortable enough to “talk about anything and everything,” which is often required of students in upper-level introductory classes. The nature of such classes is such that students may be asked to discuss topics they had never considered before (e.g., the immigrant perspective). Exploring these topics may prove challenging if students are concerned about their linguistic ability or the repercussions of stating their point of view. Whether a student agrees or disagrees is not nearly as

important as the fact that s/he is doing so in Spanish. Ruth expressed a similar perspective:

In a language classroom, you need that openness. You want students to feel like they know each other, and they can talk to each other in a different language and not care if they disagree or make mistakes. So I think, definitely openness and comfort are important. (Interview 3, 1114-1117)

Every semester, Ruth aspires to have a classroom in which students “feel like they know each other.” This familiarity allows students to feel at ease when communicating in Spanish. Much like Sarah, Ruth noted that students must be prepared to talk about many topics. This preparedness is enhanced by the “openness” in the classroom which is characterized by students continually talking even if they disagree or make mistakes in the language.

Finally, Sam explained how challenging but necessary it is as a language teacher to stimulate student conversation:

Sometimes, it’s like prying something open with the Jaws of Life to get students to speak (laughs). So you have to work against that by making sure students work together in class. The more they talk in Spanish, the more interaction between them, the better the class runs. (Interview 1, 180-183)

Sam reinforced that students enter the language class fearful of having to speak. But he aims to relieve this fear by creating an environment in which students converse on a regular basis. The more talking and interaction that occurs, the more Sam deemed the class a successful one.

All three GSIs expressed that the mark of a good class is the amount of student interaction in Spanish. Although establishing that interaction is challenging at first, it is

essential as the more Spanish students produce, the more they learn. For these three GSIs, providing students with opportunities to develop fluency is a precondition for preserving the classroom environment. The nature of their subject matter is such that it requires interaction, perhaps more so than other content areas. While courses in other subjects might be successful despite lower levels of student interaction, the same is not true for Spanish courses in which students must be communicating, questioning, reasoning and expressing their opinions if they are to attain a level of proficiency in the language.

These teachers' most core belief was that they had to maintain a classroom environment characterized by trust, immediacy, and opportunities for students to develop fluency. They believed students entered the foreign language classroom with anxiety, and that they as teachers had to work to alleviate it if they wanted students to develop fluency. In order to alleviate that anxiety, teachers established trust and develop immediacy with their students. These two elements allow for increased student production, which resulted in language learning. If the teacher chose not to maintain this environment, s/he risked the failure of even the best activity: "You can have a perfect activity, and if the class doesn't have the right dynamic, then no matter what—no matter what you try to teach them—it is not going to work" (Sam Interview 3, 919-920).

Teachers instantiated trust by assigning activities that were appropriate for students' abilities. These activities allowed for students to feel successful, which decreased anxiety and prompted students to trust the teacher to assign appropriate activities in the future. If teachers assigned too many activities not matched for student skill, the trust would be broken and students would be resistant to future activities.

These teachers believed the classroom environment is enhanced by immediacy. Immediacy made a difference to students as it allowed them to feel comfortable asking questions and made the teacher appear more approachable. This heightened approachability further strengthened the personal connections these teachers believed were integral to their content. If teachers do not establish this bond with their students, they would likely participate less in class and thus learn less.

For these teachers, “language learning” meant “learning to speak.” Thus they focused on students’ fluency and emphasized the importance of communicating with their classmates on a number of subjects. This increased production led to language learning. If a teacher did not attempt to alleviate student anxiety by establishing trust and immediacy, it was less likely that students would be willing and able to orally participate in class. Failing to establish the appropriate classroom environment, then, decreased the likelihood that language learning would occur.

This central belief regarding the preservation of the classroom environment was interconnected to other beliefs regarding how best to maintain that environment. Teachers behaved in ways that they believed preserved these three classroom elements (i.e., increasing trust, immediacy, and opportunities for fluency development). And they avoided behaving in ways that they believed infringed upon them (i.e., decreasing trust, immediacy, and open communication). Because they believed in-class technology use violated the three necessary characteristics of a balanced classroom environment, use remained low. One reason e-mail use was high, however, was because it was believed to bolster immediacy that filtered into the classroom environment. The following sections

describe the beliefs these teachers share regarding how in-class technology use decreased trust, immediacy and opportunities for fluency development (beliefs one through three), and how e-mail use outside of class increased immediacy that filtered into the classroom environment (belief 4).

Beliefs About In-Class Technology Use

Belief 1: Technology-based activities decrease trust

These teachers believed that technology-based activities were not matched for students' language abilities in terms of comprehensibility. This may have led to increased student anxiety and resistance to subsequent activities. If teachers decided to use these activities despite this fact, they were choosing not to fulfill students' expectations and thus risking their credibility. Ruth noted that students could not comprehend audio files: "Students always say, 'there's no way we can understand the audios. They're way too fast!' And you know, I agree with them. If they don't understand what's being said, there's not much they can do" (Interview 2, 609-611). Ruth agreed with her students' assessment that the language used in audio files was spoken at a pace that challenged them. She reasoned that, if the technology presented language that was incomprehensible to students, then the incomprehensibility rendered the activity useless. Similarly, Sarah explained how students lack the vocabulary necessary to complete activities accompanied by videos:

"Sometimes you use technology, like a video about immigration. Then after watching the whole thing, someone will ask, 'How do you say 'immigration'?' And you wonder how much they really understood and how successful [the activity] will be if they don't have the vocabulary. (Interview 3, 801-803)

It is difficult to foresee how successful an activity will be if students do not understand the associated video. Often, technology-based tasks require students to use the information provided in the audio/video clip to answer a variety of questions (e.g., true-false, multiple choice, open ended). The success of the activity, then, relies on students' ability to answer the questions, which in turn is heavily reliant on how much of the information they were able to glean from the medium. If, after seeing a video about immigration, students are still uncertain how to express the very subject of the video, they may struggle with the associated questions. Their incorrect responses will require correction from the teacher and anxiety will ensue. The teacher's failure to deliver on students' expectations has increased anxiety and decreased the trust that teachers believe is essential to language learning and the classroom environment.

Although students did expect to be able to complete activities provided by the teacher, these teachers believed that students did not expect technology to be used in teaching. In fact, they believed students viewed technology use as "unplanned" in comparison to other activities. Sam explained the contrast between the expectations that those in administration have for technology, and the expectation of students:

People in administration are often older, and so they still think of computers as something like "Wow! This is on the computer! This is cutting edge technology! This will help students learn!" But kids now they really just don't react to technology, and they don't expect you to use it at all. (Interview 3, 794-796)

Sam believed those in administration were impressed with technology and that its use alone would "help students learn." He contrasted this perspective with the expectations of

students that were more influential over his daily practices. Students did not share the same enthusiasm for technology as those in administration. In fact, Sam asserted, students did not expect teachers to use technology at all.

Similarly, Ruth expressed that students view technology use as “unplanned” in comparison to other activities: “I think if you use technology, sometimes students think you didn’t plan class at all. Like you just came in and threw some video at them instead of really planning and organizing and all that” (Interview 3, 1139-1140). Not only is classroom technology use not expected by students, but they may see its use as unplanned, particularly if the associated activities are not matched for students’ abilities. It may appear to the students as if the teacher did not consciously establish class objectives, select activities based on those objectives, and determine how the activities would be completed.

Students enter the classroom with expectations regarding what “good” teachers do. These expectations are based on at least thirteen years of prior experience in schools by the time a student enters college. The teachers in the present study were attempting to fulfill those expectations of their students namely that teachers provide do-able activities and that technology use may not play a significant role in class. Teachers worked to fulfill these expectations so that students would fulfill theirs as active participants in the classroom. By continually fulfilling each other’s expectations, teachers and students established trust that heightened teacher credibility, reduced student anxiety and maintained a classroom environment in which learning could occur.

If a teacher chooses to use technology despite the fact that it is not matched for student ability, consequences ensue that harm the classroom environment. Students will exhibit signs of anxiety (e.g., squirming, fidgeting, avoiding eye contact, avoiding participation, cracking jokes) that impede their language learning. Sam explained the effect that audio activities have on students: “Listening activities kind of throw them off and frustrate them” (Interview 2, 654). Unlike other activities, audio activities interrupted students’ concentration and thus resulted in frustration. Sarah noted that student reaction to in-class videos is closer to boredom. When asked about her students’ reaction to the in-class videos, she stated, “Most of the time, I think students are like, ‘Eh, I don’t really want to see this. Who cares about this? This is boring’ ” (Interview 3, 860-861).

These teachers believed students became anxious and bored by classroom technology use. These beliefs were consistent with what was seen throughout their classroom observations (detailed in Chapters four through six). Students exhibited various anxious behaviors at the close of audio clips. Sam’s “nervously, heave a sigh, or shake their heads in frustration. One student looks at another with widened eyes as if frightened, his partner commiserates grimly, “Yeah,...I know how you feel” (Field notes Observation 1, 96-97). And Sarah’s students, “avoid her eye contact and look at their books or the floor. A few shift in their seats. It is a long minute that seems even longer as no one says anything” (Observation 2, 282-299).

It was also common for students to respond to technology-based activities with jokes. Most student jokes centered on their own inability to complete the activities or, relatedly, how displeasing they were. When Sarah paused an audio to allow students to

respond to questions, “a student quips ‘Say whaaaat?!’ as if he understood nothing that was said” (Field notes, Observation 14, line 2684). And as a video clip in Sam’s class, “a student leans to her neighbor and says—“womp womp”—as if imitating death in a game of Pac-Man. She does not think this activity went well” (Field notes, Observation 2, 321).

Although no technology was used during most of Ruth’s classes, when she mentioned a video the class had previously seen, a student teased, “We aren’t watching it again, are we?” (Ruth’s Vignette). And on another occasion when she referenced a previous audio-based “conference” activity they had completed, a student interjected, “Yeah, that one was a lot of fun!” (Observation 6, 680-689). All of these jokes were usually met with classmates’ laughter and or agreement. These examples illustrate that even a mere mention of technology results in a negative response from students. For as little as these teachers used technology in their classrooms, the overwhelming and consistent student reaction to it was negative.

If teachers chose to use technology-based activities, they believed they risked teacher credibility. As technology-based activities were often not matched for students’ skill set, using them implied one of two things. Either, teachers knew the activities were too difficult and used them anyway, implying they did not care if students experienced anxiety, and, as a result, the classroom environment became unpleasant. Or, teachers did not know the activities were difficult, but used them anyway, in which case, they were illustrating their lack of knowledge regarding student abilities, their content, and the challenges in learning a language. Using these types of activities, then, implied either a lack of sensitivity to students’ struggles and the classroom environment, or a lack of

knowledge regarding one's content. As it was the teacher's responsibility to select activities, they had a great deal of control regarding the establishment of their credibility.

Ruth explained how her credibility was tied to the success of the activities she chose:

I am not using my class as a place to say, "let's experiment with this technology and see how it goes! If students can't understand it, and it fails then I can take from that [experiment] and change it"—No way! My credibility is at stake." (Interview 4, 1318-1320)

With this quotation Ruth illustrates her belief that using technology means risking student comprehension. And risking student comprehension is equated with failure. This is not a risk she is willing to take as the classroom is no place for experimentation, which may unexpectedly fail. If such activities fail, it is not enough that such failure could be used to inform the development of future activities, as she has already lost her credibility as a teacher. In addition, she will have decreased trust, as she has chosen an activity that students cannot complete. Subsequent course activities will likely be met with resistance as students have previously been shown the teacher's inability to select appropriate ones. Given this vantage point, it is best to select activities that are likely to meet student expectation and that are likely to succeed.

Everything that happens in class, whether it is successful or not, reflects on the teacher. In the following quotation, Sarah explained how technology use could result in a loss of her professional credibility:

Technology is not magic. It can freeze up, or not work. You think the video is really good for students, but it's too confusing. Those things reflect on me. I take a lot of time to plan my class, but those things don't make it look that way. (Interview 1, 221-223)

In this quotation, Sarah referenced a technological failure (i.e., the computer freezing up) and a task failure (i.e., an activity that is too confusing). Although these types of failures are very different, they are equated in Sarah's mind as she believed that both reflect poorly on her abilities as a teacher. While Sarah organized her course and attempted to fulfill the expectations of her students, she feared that technology use made it appear quite the opposite.

Finally, an example of students questioning the teacher's credibility occurred in Sam's class (Observation 9, 1801-1805). After a video clip ends, students compared their answers with their group. Two girls from different groups confronted Sam and the following exchange occurs:

Brenda: <E>That was way too hard!
Nicole: <E>Yeah, did you think we would understand that?
Sam: Was it difficult?
Brenda & Nicole's groups: Yeeees!
Sam: It was good practice though.

Of particular note is Nicole's question that gets to the heart of Sam's credibility. Through her question, she seemed to be trying to determine if Sam knew the video was too hard to understand. If Sam knew the video was too difficult and used it anyway, it suggests he is not sensitive enough to students' abilities, expectations, or rising anxiety. On the other hand, it could be that Sam did not think it was hard at all, which demonstrates his unfamiliarity with his content. Either way, his credibility as a teacher is damaged as he is either unaware of students' anxiety and expectations or ignorant of his subject matter.

These teachers believed that technology-based activities violated the trust necessary in a successful classroom environment. They believed that technology-based

activities were not matched for students' abilities in terms of comprehensibility and vocabulary. If teachers assigned these types of activities, they were not fulfilling students' expectations and were thus increasing student anxiety. Students also reacted negatively to technology-based activities, they exhibited frustration, boredom and a resistance to work and participate. In these ways, students were not meeting teachers' expectations. Because expectations were not met by teachers or students, trust was not established and teacher credibility was threatened. Without trust, students would not feel comfortable enough to participate and develop the necessary fluency that these teachers believed was the indicator of language learning.

Belief 2: Technology-based activities reduce teacher immediacy

Aside from their belief that students react negatively to in-class technology use, GSIs also believed that in-class technology use interferes with their ability to establish immediacy which is a vital component of the language class. This closeness helps students feel at ease as they speak and listen in the target language. According to LaRose and Witten (2000), immediacy can be established by the teacher through any number of behaviors including making eye contact, smiling, giving feedback and moving around the classroom. Because technology is stationed at the console in front of the classroom, using it decreases teachers' abilities to enact those immediacy behaviors.

Teachers believed that in-class technology use interfered with the immediacy behaviors of making eye contact and smiling. Ruth explained: "I don't think computers actually help in class. If I'm up there [behind the console] the monitor covers my face. They have no idea what is going on behind that computer" (Interview 3, 1219-1221). She

admitted that the computer in her classroom obstructed her teaching as it hid her face from her students. Similarly, Sarah described how standing behind the console interfered with students' listening comprehension:

Sometimes listening in a foreign language can be difficult! Especially if I'm behind the computer and they can't see my eyes, or gestures or if I'm smiling. It's like there's no person behind the language and that makes it so hard. (Interview 1, 311-313)

Listening in a foreign language can prove challenging. However, teachers can aid students through the use of eye contact, facial expressions, and gestures which make input more comprehensible for students. From behind the console, Sarah could not enact the immediacy behaviors that enhance the teacher-student relationship, nor could she make her message more comprehensible through said behaviors. She described talking to students from behind the computer as if "there [were] no person behind the language." Without that personal element, comprehending the language is that much harder.

A recurring theme in Ruth's interviews was the idea that in-class technology decreases teacher immediacy and increases the social distance between teacher and student. In this sense technology was viewed as a barrier between teacher and student interaction. She explained:

You have to fiddle with the computer a little, but if you're constantly just standing in front of the computer screen, you might as well just record my class and attend online. I think that's the great thing about a language class is that you can interact. That's why students like it so much. Their other classes don't allow them to interact and see the teacher is human. (Interview 5, 1892-1896)

Attending a class in which a teacher remains behind the computer does not allow for immediacy behaviors to be enacted. Ruth compared this social distance to distance

education, where the interactions between teachers and students must occur through a screen. She further explained the importance of immediacy for her content area. Interaction is not just required in a language class, it is what makes a language class unique. In a language class, students have more opportunities to interact with the teacher and come to view the teacher as a human being with prior experiences. These teachers believed that the more a teacher capitalized on those opportunities, the more a student would feel relaxed and comfortable enough to speak Spanish. And the more a student speaks Spanish, the more opportunities there are for his or her fluency to develop.

Sam believed that technology impinged upon his ability to provide students with timely feedback. He admitted, “With technology, it’s quality over quantity. I don’t use technology all the time in class, and I don’t think I should, especially at the expense of giving students feedback” (Interview 4, 1152-1153). Sam did not believe he should use an abundance of technology in his teaching. But what was more intriguing was that he claimed he should not use technology “at the expense” of providing students feedback. It is as if using technology and giving feedback were mutually exclusive. This comment is better understood if we consider that these teachers believed feedback was best given to their students privately, rather than from the front of the classroom from behind the computer console. This private feedback was often given as students completed group work and teachers walked throughout the classroom, making themselves available to students. We saw evidence of their classroom movement from their classroom vignettes.

Ruth’s movement around the room away of the technology occurred readily. During the vignette, she moved towards her students when she saw they as a group were

confused. She also moved away from the console after posing a question she wanted them to discuss, such as the difference between the ‘present perfect’ and the ‘past perfect.’ Ruth explained her reasoning for her perpetual movement around the classroom:

First, I want to be able to answer their questions. Second, to make sure they’re doing their work. It helps me listen too, and students like to know you’re listening. I’ll catch little snippets of conversation and join in or correct it. I think it’s easier too if I am right beside their desk, they can grab me and say “Pst, can you check this?” versus me standing like a matriarch in front of the class and waiting for someone to raise their hand. (Interview 5, 1880-1886)

Ruth believed her movement between her students’ desks increased her ability to answer students’ questions. The close proximity also allowed for more teacher-student interaction and more opportunities to “join in” with student conversation or “correct it.” She mused that it was easier for students to ask a question if she were close to them, rather than if she were in front of the class “like a matriarch.” She even noted that, if she chose to stand in front of the room, students may not have felt comfortable enough to ask a question. In that case, she would just be “waiting for someone to raise their hand.”

Sam’s movement around the classroom was similar to Ruth’s. In the vignette, he provided students an assignment and allowed them to complete it independently, he signaled this with, “I’ll be around if you need me.” During this time, he moved around the room in between the rows of students. He was careful not to intrude, but to be close enough to provide feedback. Sam explained:

Rather than use the computer, I like them doing group work. I walk around the room to make sure they know I am there for support and feedback. The ideal is that they work together. That’s when they use the language freely, and that’s what they like. If someone gets stuck, they raise their hands and say “Is this right?” It’s easier than asking with

everyone watching. I decided it's best to spend class on those things and show them I am there. (Interview 4, 1049-1053)

Sam prefers that students complete group work rather than use the computer. During group work, students have more opportunities to “use the language freely” which is “what they like.” In this way, Sam's providing students with group work activities was related to teacher-student trust in that he was providing students with activities they enjoyed and could complete in a group. If a student has a question, he noted, it is easier for them to ask him individually than it is to ask him in front of the entire class. Sam has decided it is “best to spend class” on group work and providing students with opportunities to ask questions. This belief has removed Sam from the front of the room, away from the console, and away from the use of technology.

Sarah's movement throughout her classroom was similar to both Ruth's and Sam's. During the vignette, we observed that Sarah is not always behind the console. She moved closer to students when she wanted to have a conversation with them, or when she asked a question that requires a lengthy answer. Sarah explained why she walked around the room:

[Students] ask more questions when I wander [around class]. So, I walk around and eavesdrop. And students ask, “How do I say this?” And boom! I help them. Students love the “Let's Talk” activity because I can sit and talk with them. They get to know me and each other. [Those activities] place me in the middle of it all. That's better than [being] at the front of the room. (Interview 4, 1312-1316)

These teachers believed that technology use would impede their ability to enact immediacy behaviors. Technology acts as a physical barrier between the teachers and their students by covering their faces and gestures. As Sarah noted, “listening in a foreign

language can be tricky,” and having nonverbal cues covered up by the console “makes it so hard.” Teachers also noted the need for interaction and the need for students to see them as human. Those two characteristics are what distinguish their Spanish courses from other courses on campus. Rather than stand at the front of the room with the technology, they prefer to walk around the classroom as students work in groups. This movement decreases the barriers between themselves and their students and increases their availability to students. The immediacy behavior of classroom movement allowed them to join in on students’ conversations, correct student speech or respond to student questions and provide feedback. Teachers believed providing feedback in this manner was more beneficial for the students who may not have felt comfortable asking questions to the whole class as the teacher stands at the front of the room.

Belief 3: Technology-based activities reduce opportunities for students to develop fluency

GSI expressed the belief that using classroom technology decreases opportunities for students to develop fluency and thus inhibits their language learning. Given that these teachers viewed “learning a language” as “learning to speak,” they were not likely to use technology-based activities that did not stimulate oral production. In addition to believing that these activities did not focus on production, they believed these activities did not require students to develop listening skills. Some activities were poorly designed and require that students use English to complete the task. Even if some technology-based activities did result in oral production, teachers feared the medium may have reinforced stereotypes and that student production was inorganic.

These teachers believed that technology-based activities did not require students to develop listening skills or produce Spanish. Ruth explained how students merely listened for a few words, and used those words to determine the multiple choice answer:

The audio activities don't make them develop listening as much as a conversation would. I've had students tell me, "I just listen to words that are the same." Like, oh, I heard this [word], and that word's in answer 'B' so circle 'B'! Sometimes that's not right. With a conversation, you got to really understand what's being said. (Interview 2, 596-599)

Ruth contrasted how students approach listening to an audio clip and how different it is from listening to a conversation. The task associated with the audio clip stimulated passivity as students needed only to understand a few words to select the appropriate multiple choice response. A conversation however, required more comprehension on behalf of the listener.

Similarly, Sarah believed that using audio-technology that requires students to listen to songs was not conducive to oral production. In these types of activities, students are given printed song lyrics with words omitted. The class listens to the song multiple times in an attempt to fill in the blanks. Sarah explained why she believes this is a poor use of technology for language learning:

Students don't produce anything. They only have to understand a word or two. They wait for those [missing] words and ignore the rest. It would be better to have students talking. Make them *talk* about a topic from the book and about the grammar too. You don't need a song or technology to do that. (Interview 4, 1154-1157)

If students only have to understand one or two words while they listen to an audio clip or a song, an inherent passivity has been built into the task as completing it requires little

understanding and no production of the language. Technology-based tasks are often designed so that students need not listen to or produce much Spanish.

Other technology-based tasks are designed poorly and require that students use English in order to mediate the activity. In the following quotation, Sarah was looking through a series of PowerPoint presentations she had saved from the Blackboard teachers' website:

Look at this one with commands. How is a student going to tell you how to make a Spanish dish? [The student] will just say he doesn't know how to make it. This other [PowerPoint] is really bad. It has no logic, and students use that as an excuse. They have to tell a story using the pictures, but there's no logical order to them. So students use English to figure out *how* to do it instead of *doing* it in Spanish. (Interview 4, 1197-1201)

While some activities require little to no production on the students' behalf, others such as a PowerPoint have the ability to stimulate written or oral production. But if their design is such that students lack the prior knowledge necessary to complete the task, students may not produce as much Spanish as these teachers would prefer. The use of media must lend itself to the task students must complete. If students need to tell a story, the media provided should show a sequence of events with a discernable beginning and end. Otherwise, students blame the technology for their inability to complete tasks. Rather than having students talk about how to do the activity in English, it is preferred that students use Spanish as that is how they believe the language is acquired.

For these teachers, language is learned by speaking. Therefore, it is important that an activity not stimulate student passivity or demand too much clarification in English.

Sam also explained that the content of some videos may further promote stereotypes of Latin America, rather than dispel them:

There's this attitude about what's assumed about Latin America and some videos kind of reinforce that. It's just when they talk about poverty, I wish they would problematize that more and try to basically demystify these stereotypes that are so common here in the United States. (Interview 3, 623-626)

Sam found one video regarding the formation of youth clubs in Guatemala stereotypical, as he believed it overly emphasized economic poverty. Here he explains how students react to these depictions of poverty and how these types of activities could be improved:

Whenever there is a possibility of reinforcing a stereotype, I'd like the activity to have something else that helps students compare and talk about, "Well, maybe I'm wrong" or "Economics isn't everything." Or "They have a lot that I don't have." (Interview 2, 634-636)

Instead of reinforcing stereotypes regarding poverty, he would prefer that the activity demanded that students further discuss their assumptions and confront the stereotypes they hold. While not all videos reinforce these stereotypes, the few that do might confirm students' negative opinions of the Spanish-speaking world, rather than transform them.

Even if technology-based activities do manage to stimulate student communication, the language produced is, as Ruth described, "really inorganic conversation" (Interview 3, 961). At the close of the semester, Ruth's students had to use the Audacity recording program to audio-record a commercial advertising a product they had invented. These recordings not only resulted in the aforementioned "inorganic" speech, but they also resulted in technological difficulties. Students were uncertain how to save files correctly, and Ruth was unable to open several of her students' completed

projects. This struggle prompted a class e-mail from Ruth in which she detailed instructions regarding how to save the files and joked, “Yay for technology that makes our lives easier” (E-mail 13, 4/4/10). Even so, students spent more time and energy figuring out the technology than planning their commercial in Spanish. While these recordings were meant to be completed outside of class as homework, the difficulties experienced by students trickled into the classroom environment where there was more talk about technology than there was about Spanish. Ruth laments, “it gets so caught up in this technology mess of crap that the Spanish isn’t there” (Ruth Interview 5, 1968).

These three teachers believed that preserving the classroom environment was vital to language learning. Within the ideal environment, high levels of trust and immediacy will decrease student anxiety and allow students to achieve more fluency in Spanish. This core belief influenced their classroom practices and led to low-levels of technology use. They attempted to increase trust by providing students with activities matched for their skills and preferences. Technology-based activities violated that trust as they were not matched for student ability and this increase student anxiety. They enacted immediacy behaviors in an effort to decrease psychological distance and establish personal connections between themselves and their students. They also believed these immediacy behaviors meshed well with their content as said behaviors allowed them to give students individualized and immediate feedback. They aimed to provide students with group work that allowed them to continually talk in Spanish as they viewed oral production as the mark of language learning. Because preserving the classroom environment was the foremost concern for these teachers, they avoided using classroom

technology as they believed it was in direct opposition of the environment they wished to maintain. They believed classroom technology use was a breach of teacher-student trust, a barrier to their immediacy behaviors and a deterrent to students' development of fluency.

Although in-class technologies were rarely used, teachers did use e-mail more readily. Such behavior is not surprising. Using e-mail is, in many ways, more straightforward than incorporating technology into the classroom setting. With e-mail, one need not worry about timing, pacing, and other logistics that classroom technologies demand. My argument is not that teachers' use of e-mail, in and of itself, is unique or merely that its use is more robust than their use of classroom technologies. My argument is that teachers' beliefs about the use of e-mail are unique as they directly relate to their core belief regarding the preservation of the classroom environment.

Belief 4: E-mail use increases teacher immediacy, which filters into the classroom

In chapters four through six, each teacher's use of e-mail was explored. While most of their messages were of the logistical variety, many immediacy behaviors were also enacted. Teachers increased their availability by using e-mail to arrange study groups, appointments and shift their office hours to times more convenient for students. In this way, e-mail served to establish more teacher-student out-of-class contact. Teachers used e-mail to enhance their approachability by expressing encouragement and humor. Instances of this type include Sam and Sarah's counting down the remaining class days and Ruth joking with her students about their audacity project. Finally, teachers believed e-mail served as an effective medium to provide students with feedback and

praise. Both Sam and Sarah mentioned students by name and shared their language resources with the class.

These teachers believed that the immediacy established through e-mails filtered into the classroom environment, thus leading to decreased anxiety, increased fluency and, ultimately, language learning. This section explores these teachers' belief that e-mail enhanced their availability, their approachability, and their ability to give feedback. It also explores how they believed that enacting these immediacy behaviors online further preserved their classroom environment. The belief that e-mail enhanced immediacy was apparent when teachers were asked about their students' opinions of technology. Not only did they immediately mention e-mail use, but they connected that use to increased availability, which was demonstrated through timely responses. These timely responses to students' queries decreased the psychological distance between teachers and their students. In the following quotation, Sam explained what his students might say about his class and technology use:

[Sam] is very available [and] tries to get back to you right away if you e-mail him. Ever since I found out that I could set up e-mail to automatically refresh, my job has been easier. I can respond quicker to students, and they really respond to that. (Interview 4, 1035-1037)

It is significant that, of all the technological aspects of his Spanish course (i.e., Blackboard, Blackboard grades, audio and video exam portions, student PowerPoint presentations), Sam believed his availability through e-mail was the most important to his students. Not only would students mention e-mail first, but it is also significant that they would note how quickly he responded to their queries. Sam believed his students valued

the closeness and availability that e-mail provides. In fact, setting up his e-mail to refresh made his job easier as he could more readily respond to student questions and concerns. E-mail, then, was not merely significant in that it provided students with access to Sam. According to Sam's beliefs, e-mail user was significant because students "respond" favorably to it. His efficient replies acted as an immediacy behavior, thus decreasing the psychological distance between him and his students. When asked the same question, Sarah had a similar response:

[Students would] say they are always able to reach me and ask about Spanish. For example, I got online to check my e-mail at 11 last night, and I saw a student had sent me an e-mail at 10:58, and I responded right away. It's all about access for them. (Interview 3, 670-673)

Much like Sam, Sarah believed that students would note her perpetual accessibility. Upon seeing an e-mail from her student, she quickly responded, as she believed immediate replies are favored. It is also significant that she claims "it's all about access" for students. These teachers believed that psychological closeness for students was time sensitive within an online environment. Waiting too long before responding to an e-mail is the equivalent of ignoring a raised hand in a classroom.

When asked what her students would say about her class and technology use, Ruth explained:

They'd say e-mail is awesome! I think they like having that quick access to their teachers. They'll copy and paste something from their homework and ask 'Why is this like this?' Or sometimes, they ask if we can meet later in the day. [E-mail] just facilitates everything. (Interview 4, 1553-1555)

Much like Sam and Sarah, Ruth noted that students value quick access to her. And Ruth used e-mail to answer questions and establish out-of-class contact. She concluded by saying that e-mail “facilitates everything,” which is to say it provided students with efficient access to their teacher. These instructors believed that the heightened availability that e-mail provided improved students’ experience in class as it decreased student anxiety and promoted student comfort. Sam explained:

I wish I were the kind of professor that could just blow [students] away in class, but I am not. I think my talent, more than anything, is to really be there for them. I think for them to feel comfortable participating in class, I really need to do those extra things like e-mails. (Interview 3, 871-883)

His talent lies in his providing availability to his students. E-mail allowed him to increase that availability by providing students ample opportunities to ask questions and clarify any concepts. It also allowed him to further enact immediacy by establishing out-of-class contact. This immediacy behavior was essential as it showed students that he as a teacher was “there for them” outside the confines of the classroom. Furthermore he believed, decreasing the psychological distance between himself and his students online, carried over into the classroom setting. This online immediacy promoted students’ comfort and allowed them to participate more in class.

When these teachers were asked about their students’ opinion of technology, they equated “technology” with “e-mail.” They also stated that they believed their students responded favorably when they had access to their instructors and when instructors responded readily to their questions. E-mail assisted in providing that access and allowed

teachers to establish further contact outside of class. This access increased teacher immediacy by decreasing the psychological distance between teachers and students.

In addition to believing that e-mail helps them enhance their availability and establish out of class contact with their students, these teachers believed that e-mail allowed them to appear more approachable. Approachability was enacted through such behaviors as engaging in small talk, using humor, and giving encouragement. This is of interest considering that these teachers saw their students three hours a week in class, and enacted a number of immediacy behaviors during that time. These teachers explained how they believed e-mail further heightened that immediacy and allowed them to appear even more personable in the eyes of their students. Sarah explained:

E-mail helps students really view you as a person. I've used it to talk to students about what they are passionate about like poetry or music. It shows students that you are interested and that you don't see them as just another number. (Interview 3, 640-643)

E-mail offered Sarah more opportunities to further strengthen the bond she had with students. She did this by encouraging them to pursue their passions and demonstrating a curiosity and an investment in what they valued. This allowed students to realize she did not view them as "just another number." Rather, she viewed them as individuals with unique interests.

While Sarah noted that e-mail made students view her as a person who had invested in them as individuals, Ruth noted how the use of humor in e-mail made her more approachable to her students:

E-mail allows you to be a bit more informal, and that makes me approachable. That's better than having this weird distance between you

[and the students]. You can loosen up and joke with them a little. They ask me more than they might in person. (Interview 3, 1133-1136)

E-mail allowed for an informal relationship that she believed made her more amicable to students. She preferred this type of relationship to one marked by “weird distance” as a friendly relationship allowed students to feel more comfortable and ask more questions.

Sam often assigned homework through e-mail, and offered students encouragement and advice like a friend:

In an e-mail, I can give advice like a friend and encourage them like, “Ok, this activity is kinda tricky. Do this or that before you start, and you’ll be successful. You might not understand the directions, but they just say blah, blah, blah. I know you’ll do fine.” (Interview 1, 314-317)

Sam believed e-mail offered him more opportunities to encourage his students and provide them with tailored advice that would allow them to be successful. It is significant that Sam stressed that his advice and encouragement are given “like a friend” or peer whose chief purpose is to support rather than to instruct and correct. E-mail, then, allowed him to more thoroughly enact his “friendly” teacher role while providing students the encouragement he believed was necessary for their success.

These teachers not only believed that e-mail allowed them to appear more approachable in the eyes of their students, they also believed that doing so online enhanced the classroom environment. Sarah explained:

E-mail gives me space to get to know students and vice versa. They will come to you for help with their homework or to talk about their hobbies. If you respond when they come to you, they will see you as a helper and that makes the classroom that much more comfortable. (Interview 3, 615-618)

E-mail provided teachers with space to appear personable and approachable to students. Through the use of humor and encouragement, teachers could decrease the perception of the psychological distance felt by students. Doing so prompted students to view the teacher as a friend or a helper. And students carried that perception into the classroom environment, making it more comfortable.

Finally, teachers explained how they used e-mail to enhance immediacy by providing students with feedback. They believed this particular use of e-mail improved their classroom environment. Sam explained how the best individualized feedback on written work is given in e-mail:

If you want to provide the best feedback you have [students] e-mail what they wrote to you. I look over them, and I pick two or three things that I really like. And I'm like, "Wow you did a really good job expanding on this sentence." And then I'll say "careful with" and I pick two or three things. It sure takes a lot of time to review through them, but then they'll always have it. (Interview 1, 524-528)

While providing students with typed, individualized feedback was time-intensive for Sam, he believed this type of detailed feedback was an invaluable resource for students. Because the feedback was sent via e-mail, students would always have a record of their writing that they could reflect on and refer to.

Using e-mail to provide students with feedback on their work and to answer students' questions preserved the classroom environment. Through student e-mails, Sam learned about what students were struggling with and could address questions in a positive manner:

When they have a question in class, a lot of times I already know what it is because students have e-mailed me. And I tell them, "A lot of you e-

mailed a question like this.” So they know they aren’t alone and questions are expected. Or like, “That part was ambiguous for all of us! We could actually pick both answers.” They see questions are ok, and ask more of them. (Interview 2, 743-746)

E-mail informed Sam as to the areas where his students needed more feedback. He then entered class with that information and used it to create a positive environment regarding questions. He informed them that a lot of the other students e-mailed similar questions and used inclusive speech (i.e., we could) to signal that they are a collective group of questioners. This demonstrated to students that questions are a natural part of learning and were received positively by Sam both online and in class. Students then responded to his feedback by asking more questions thus stimulating the learning process.

Much like Sam, Ruth used e-mail to provide students with feedback and believed that immediacy behavior enacted online improved her in-class environment. In the following quotation, Ruth explained:

I tell my students, “If you have questions, ask! You can e-mail me three times if you have to. I’ll be happy to respond each time for as long as it takes. And we can work our questions out together.” And you know what? They do! And I give ‘em individual attention that way. (Interview 4, 1662-1664)

Questions are a vital part of learning and must be treated as such. Ruth encouraged student questions by suggesting that e-mail allows for multiple exchanges and that she is happy to continually respond. She also used inclusive speech, saying “we” can work out “our” questions. This takes the focus off the student as the “naïve” questioner as she stresses that the questions are shared by everyone. In saying this, she decreased the psychological distance students perceived between themselves and their teacher.

Ruth was an avid supporter of students e-mailing questions. This is true even if it required multiple e-mail exchanges. This perspective is logical considering that she believed that providing feedback in e-mails contributed to and preserved the classroom environment. Ruth explained:

Answering students' e-mails quickly really pays off. Then [students] come to class and they talk more because they're more confident in their answers. So they really participate and help the others. They're also so thankful you responded fast. (Interview 4, 1419-1421)

For Ruth, responding quickly to student e-mails paid off as students entered class more confident and willing to participate. This quotation is very similar to Sam's quotation at the opening of this section in which he noted that students "really respond" to quick e-mail messages (Sam Interview 4, 1037). Ruth noted how those quick responses led to a more fruitful classroom environment. Because students had ample opportunity to discuss their confusion with Ruth outside of class, their anxiety had been quelled and their confidence had been lifted. Students participated more in class, which increased their fluency and resulted in language learning.

E-mail allowed students to ask questions and allowed Sarah to provide students with personalized feedback:

[E-mail] let's me give each student a lot of feedback. I tell them they can e-mail me anything about the homework, or just any random questions they have, even if they think it's the stupidest question. We all ask stupid questions at some point, and we don't learn if we don't ask. (Interview 3, 656-659).

Much like Ruth, Sarah told her students that they could e-mail her with any question or concern. Like Sam and Ruth, she used “we” to demonstrate inclusivity, and increase the immediacy between herself and her students.

Sarah believed that the feedback she provided in e-mail had a positive effect on the classroom environment. When asked how technology affected her teaching, she responded:

It helps every day! Students e-mail me a ton of questions, and I can use those questions to guide my class. It helps me know where students need more practice, what needs more clarification, and what they want to focus on. (Interview 4, 1082-1083)

It is interesting that Sarah states technology affected her teaching every day, as so little classroom technology is used. E-mail assisted Sarah’s teaching as it provided her insight into student needs. In that way, e-mail served as an informal assessment of where her students required improvement and practice. It also allowed her to see the concepts students were focusing on. For example, if students asked a lot of questions about a minor concept, they may have spent an inordinate amount of time studying a topic of little consequence. E-mail would provide Sarah with that insight and allow her to hone in her teaching on more substantial topics.

These teachers believed that e-mail allows them to provide students with feedback and that doing so improves their classroom environment. Sam’s e-mails with students allowed him to predict questions they would ask, and approach them with the perspective that they are a natural part of language learning. He told his students they were not alone in their questioning and this outlook resulted in students asking more questions. Ruth

believed that e-mailing feedback to students decreased their anxiety. They were able to clarify their thinking, and relieve any confusion before they entered the classroom setting where they participated more because they were more confident with the content. Similarly, Sarah found that e-mails informed the focus of her teaching and helped her tailor class time so that it meets students' needs.

These teachers believed that e-mail use increased their immediacy, which improved the classroom environment. They also believed the inverse was true. If they did not respond to student e-mail, it decreased their immediacy and harmed the classroom environment. Sam explained how ignoring students' needs negatively impacted the classroom ambience:

The classroom becomes negative if you don't respond to student needs. You completely lose [students] and it becomes a huge impediment for the class because they end up creating a negative atmosphere. (Interview 1, 75-76)

Without responding to students' needs, a teacher is setting off a chain of consequences that harm the classroom environment. As students' needs go unanswered, they cease to trust their instructor. The untrusting relationship creates a 'negative atmosphere' in class. This 'negative atmosphere' becomes a 'huge impediment' as students miss out on opportunities to learn due to an atmosphere of mistrust and negativity.

Like Sam, Ruth explained the consequences of failing to promptly respond to students' e-mails:

If you don't keep up with their grades and e-mails, students tune out. They start to think, 'Well, she doesn't really care about us.' Then they're not so onboard, and they get frustrated. Then nothing gets done. (Interview 1, 547-548)

Much like Sam's previous quotation, Ruth viewed ignoring students' e-mails as setting off a series of consequences for the classroom environment. If a teacher chooses not to respond to students' e-mails, students think the teacher "doesn't care," as s/he has not attempted to maintain the personal connection from the classroom within the online environment. This prompts frustration in students as they believe the teacher should be available outside of class. This frustration is carried into the classroom where "nothing gets done" because the teacher failed to fulfill student expectation.

Finally, Sarah offered advice to a new Spanish instructor that emphasizes the importance of responding to students' e-mails:

One very easy thing [to do] is to always respond to students' e-mails. They *love* you if you do that! But if you don't, they take it very personally. And they come to class upset or offended, and they just sit there. (Interview 6, 1828-1830)

Sarah's advice to a new instructor illustrated how important it was to respond to students' e-mails. A quick response increased teacher immediacy, which students reacted favorably to. Failing to respond, however, decreased that immediacy, which, as Sarah noted, students interpreted as a personal offense. They carry that resentment into the classroom where they "just sit there" refusing to participate and thus refusing to learn.

This chapter has explored how these three GSIs have a central belief of preserving the classroom environment. This central belief entails maintaining a classroom community filled with trust, high teacher immediacy, and multiple opportunities for students to develop fluency. Connected to this central belief is the idea that using in-class technologies diminishes these three necessary components of a successful classroom.

These teachers also believed that immediacy behaviors enacted through e-mail carried over into the classroom and further enhanced their classroom immediacy. These findings are relevant to the adoption and practice of technology use within the foreign language classroom.

Chapter 8. Discussion and Implications

This chapter delineates the results of this study, its implications, and recommendations for future research. The discussion section begins with the general findings regarding technology use by the participants. This is followed by the ways in which their beliefs prompted that use and how these beliefs differ from what we know of principled pedagogical practice in second language teaching. The implications section details suggestions for professional development. The recommendations section outlines avenues for future research in both teachers' beliefs and instructional technology.

DISCUSSION

The aim of this study was to respond to the following research questions: 1] How do Graduate Student Instructors of Spanish use instructional technology? 2] How these Graduate Student Instructors' stated pedagogical beliefs relate to their instructional technology use? The present research fills a gap in the literature regarding the beliefs and practices of graduate student instructors of Spanish (Aguirre & Speer, 2000; Borg, 2006; Borg, 2003; Phipps & Borg, 2009). These teachers' practices are informed by their core belief that they must create a classroom environment with heightened trust, immediacy, and opportunities for students to develop fluency. Their rationale is that with heightened trust and immediacy in the classroom, student anxiety will decrease. With less anxiety, students will increase their fluency, which these teachers believe is the mark of language learning. Technology use remained low as they believe said use decreases trust,

immediacy, and opportunities for students to develop fluency. Preserving the classroom environment was so vital that they attempted to maintain immediacy outside of class through the use of e-mail. They believe that the immediacy established online transfers to the classroom environment. These findings may help inform necessary aspects of professional training for foreign language GSIs that has been suggested by the MLA.

Technology Use

Classroom technology use for all three teachers was low. On the few occasions they did use technology, they preferred reliable technology that supported their classroom routines and preserved the classroom environment. These routines allowed them to avoid any unpredictable occurrences in the classroom and maintain the flow of activities.

The most common technology used was the doc cam. While Sam never used this particular technology, it was used by Sarah and Ruth in nearly all class sessions. The doc cam represents a “reliable” technology whose use is straightforward. These types of technologies are easily “attached” to a lesson without transforming how the material is taught or the role the teacher plays (Putnam & Borko, 2000). Most often, the doc cam was used to show students the page or page number the teacher was referring to. The textbook remained on the doc cam while students completed activities and teachers walked around the room to field questions and provide feedback. In this way, the technology was part of a routine teachers used to preserve their classroom environment.

Cuban et al. (2001) echoed Putnam and Borko’s (2000) claim that teachers prefer technologies that do not disrupt classroom routines and allow them to maintain control. Using technology in this way saves the teacher precious time and energy and can provide

a welcoming predictability within the complexities of classroom life. Without following routines, and delivering on students' expectations, these teachers feared that students would "end up creating a negative atmosphere" (Sam Interview 1, 76). For this reason, technology was used infrequently and in a habitualized manner. When using a video clip, for example, teachers would direct their students to the appropriate textbook page and start playing the clip at the front of the room from behind the console. When the clip ended, students were directed to work in partners or groups to complete the activity in the textbook. Teachers walked around the room, enacting immediacy behaviors. And students developed fluency and overcame anxiety as they participated in Spanish. This pattern was familiar and comfortable to the teachers and students and thus helped teachers avoid unexpected detours in their lessons.

According to Ertmer (2005), technology integration can create unknown variables for some teachers. These variables (e.g., technological malfunctions) are erratic and thus beyond the teachers' control. These variables may disrupt the instructional flow and unpredictably alter the classroom environment that these teachers believe must be preserved. Thus these teachers relied on routinized practices that did not create instances in which they may have had to confront these variables, tailor their lessons, or re-think an activity in real time. As Sarah notes, technological hiccups "reflect on me" (Interview 1, 222), and Ruth believed that experimenting with technology would put her "credibility. . .at stake" (Interview 4, 1320). Teachers believed their students would see these variables as failures of the teacher, who, in reality, could not have planned for such unforeseeable challenges. Teachers' beliefs then, led them to use technology in minimal ways. It was

not fully integrated into the lesson, and was often added to the dwindling minutes of the class period. If the technology failed, class would soon be over. No recovery plan or reallocation of class time would be necessary. And students, in their rush to hurry to their next class, may be less likely to view the variables as a failing on behalf of the teacher.

While teachers' use of technology in class remained low, they used e-mail to enact immediacy behaviors outside of class. Teachers believed their e-mails made them more accessible and approachable and allowed them to provide students with individual feedback. Furthermore, teachers believed that enacting immediacy behaviors online enhanced the classroom environment. E-mail provided them with a space to respond to students' questions and concerns, establish an informal relationship, and provide students with individual feedback. This relationship then carried into class where they believed students viewed them more as a "helper" or a "friend" more than a number on their roll sheet. Teachers also believed their feedback enhanced students' confidence and participation and allowed them to better address students' in-class questions. In short, teachers believed using e-mail to enact immediacy behaviors increased their immediacy that was essential to the classroom environment.

The present study supports prior research that demonstrates that teachers' practices are largely influenced by their beliefs (Calderhead, 1996; Clark & Peterson, 1986; Cuban, 1986; Ertmer, 1999; Fullan, 2001; Fullan, 2003; Guskey, 2002; Mumtaz, 2000; Niederhauser & Stoddart, 2001; Palak & Walls, 2009; Ravitz et al., 2000; Zhao & Cziko, 2001). More specifically, their beliefs about preserving the classroom environment led to low-level technology use. This corresponds with prior studies

regarding low-level technology use at the K-12 levels (Cuban et al., 2001; Ertmer et al., 1999; Ertmer 2005). Finally, it supports the claim that there is a gap between what we know about effective technology practices and what is practiced in the classroom setting (Ertmer et al., 2001). The following section explores the beliefs and practices of these teachers in conjunction with claims found in the second language literature.

Beliefs and Practice

These teachers' core belief about maintaining a particular classroom environment was connected to their beliefs about student anxiety and how to provide feedback. This supports previous findings by Windschitl and Sahl (2002) and Zhao et al. (2002) who noted that teachers often evaluate technology based on their beliefs about students and appropriate practices in their content area.

Belief 1: Technology-based activities decrease trust.

These teachers believed students entered the classroom with anxiety and thus worked to decrease that anxiety by establishing trust and immediacy. Teachers aimed to provide students with activities they could readily complete so that students would actively participate and the classroom flow would be maintained (Calderhead, 1987). Teachers believed audio and video files were beyond their students' abilities with respect to comprehensibility, thus they were rarely used as their use would have increased student anxiety and decreased student participation.

Teachers avoided using technology for fear that the input provided would not be comprehensible to students. Their desire to provide students with comprehensible input and mitigate student anxiety is based on Krashen's (1981) notion that comprehensible

input and student motivation are all that is needed to learn a language. Krashen's claims have been debated, however, as it is unclear how much information need be comprehensible in order to lead to language acquisition. What is not debated is the role that a vast array of input has in language learning. Rather than focus on students being able to comprehend every word in the audio/video clips, teachers may want to shift their focus to the benefits that a vast amount of input can provide their students. Varied input is highly important to acquiring and thus effectively communicating in the second language (Ellis, 2005; Grgurovi & Hegelheimer, 2007; Major, 2001; Zhao, 2005). For this reason, it is advisable that teachers create ample opportunities for students to receive a variety of input both inside and outside of class (Ellis, 2005; Jones 2003). Technology allows us to efficiently and effectively accomplish both of these tasks.

While foreign language anxiety is a reality that a majority of students experience (Young, 1990), not all research agrees that anxiety is wholly detrimental to language learning. For example, Kleinmann (1977) found that anxiety actually enhanced student performance. And others have found that anxiety may have been positively related to one skill, but not to all skills (Chastain, 1975; Tucker, Hamayan & Genesee, 1976). These studies illustrate that it may not be necessary for teachers to spend an exorbitant amount of time and energy to alleviating student anxiety.

While the classroom environment, no doubt has an effect on students' anxiety, alleviation of that anxiety may be better addressed by the students rather than the teacher. Prior research has suggested that foreign language anxiety be treated much like other anxieties in which the sufferer must identify their irrational fears and situations which

invoke them (Foss & Reitzel, 1988). Such identification would allow the student to pinpoint anxiety-producing situations and respond with productive self-talk (Oxford, 1990), journal writing (Foss & Reitzel, 1988), or relaxation exercises (Campbell & Ortiz, 1991). This research demonstrates that students themselves should be provided with anxiety-relieving techniques. That way, students could independently use these relaxation tools as they deem fit for their individual experiences. Being taught these techniques and being allowed to practice them within the classroom setting would prove beneficial when students experience anxiety in other settings that are beyond the teacher's control (e.g., a foreign country). These techniques would then allow students to have control over their anxieties and successfully alleviate them independently of their teacher, who will not always be present to mediate such stress.

Beliefs 2 & 4: Technology-based activities reduce teacher immediacy. E-mail use increases teacher immediacy

These teachers' low-level classroom technology use can be explained by their belief that technology decreased the amount of immediacy behaviors they were able to enact within the classroom setting. Specifically, they noted that technology blocked their facial expressions and gestures and acted as a barrier between teacher-student interaction, and prevented them from giving feedback.

While technology was viewed by these teachers as a barrier to their immediacy behaviors, focusing on immediacy at the expense of using technology served as a barrier to students' interactions with other cultures. Garrett (1991) noted the power of technology to assist in integration in language learning. Often, learning a language is seen

as separate from learning the culture. As technology allows us to show students language in a multitude of authentic cultural contexts, it bridges the gap between these two interrelated concepts. Technology, then, can allow us to provide students exposure to different varieties of Spanish, witness two or more people interacting in the target language, or experience the countries their textbooks reference.

If the nature of their content is “personal,” the content should be presented in such a way that it exposes students to other people and other ways of thinking. The focus of the class should then shift from making the teacher appear approachable to making Spanish speakers from a variety of cultures more accessible to students. While teachers emphasized the importance of their own abilities to enact verbal and nonverbal immediacy behaviors, they were not as focused on their students’ development of similar nonverbal elements in Spanish. The only way students will acquire these elements is to witness and experience interpersonal interaction. In this instance, technology is of great assistance, as the internet provides an endless supply of videos portraying realistic interactions between native speakers (Kramsch & Anderson, 1999; Osuna & Meskill, 1998).

Teachers believed that using technology would impede their providing students with feedback. They viewed technology as a barrier as it was stationed at the front of the room, and they preferred to give students private feedback as requested during group work. Teachers believed private feedback was preferable to correcting students in front of a group, as the latter would increase student anxiety and thus decrease participation. Ellis (2005) notes that few studies have explored the effects of different types of feedback on acquisition, though a majority assert the importance of feedback for acquisition. Implicit feedback, in which the teacher repeats the erroneous phrase correctly, has been shown to be more effective than explicit feedback (Long, 1996; Muranoi, 2000). Others have found

that explicit feedback, or direct correction of an error, is more effective in prompting the learner to provide the correct form both after the correction and in subsequent attempts (Carroll & Swain, 1993; Lyster, 2004). As corrective feedback plays an important role in grammar learning, teachers must reconsider their belief that feedback be given privately and only at the students' request. These teachers' practices are guided by the belief that students do not want to be corrected. Prior studies, however, have found that it is not the corrective feedback itself that prompts students' anxiety; it is the manner in which it is provided (Koch & Terrell, 1991; Horwitz, 1986; Young, 1990). The teacher must thus focus on providing corrective feedback that students need and desire in ways that do not invoke anxiety.

These GSIs' pedagogical beliefs influence the particular types of e-mails they send to their students. While some e-mails were logistical in nature, others were used to enact immediacy behaviors that expressed availability (e.g., quick and timely responses), approachability (e.g., less formal language, small talk), and provided opportunities for feedback (e.g. personalization, student input) (Robinson & Whitemarsh 2009). Teachers believe the immediacy established e-mails carries into the classroom environment. This is of interest in light of prior research that has explored either immediacy used within the classroom (Andersen, 1979; Mehrabian, 1971; Richmond & McCroskey, 2000; Wheelless & Allen, 2004), or immediacy established in online courses (Robinson & Whitemarsh 2009). Prior research has not yet thoroughly explored the establishment of online immediacy and its effects on a live class with regular live sessions.

As teachers believed e-mail was a valuable tool because it enhanced immediacy, it would be beneficial to translate that e-mail use into uses that could enhance their students' language learning. They could use it to provide students with more robust written feedback (Ogata, Feng, Hada, & Yano, 2000). Prior research in second language

learning has also noted that technology, when placed in the hands of the students can have positive effects. E-mail's utility has been credited in assisting students with developing writing skills (Bloch, 2002; Chen, 2006). And culture can be acquired through e-mail exchanges with foreign pen pals (Oliva & Pollastrini, 1995). Such uses of e-mail would move beyond the establishment of teacher-student immediacy and serve to impact students' second language learning.

Belief 3: Technology-based activities reduce opportunities for students to develop fluency

As these teachers believed technology decreased students' opportunities to develop fluency, classroom use remained low. Specifically these teachers claimed technology-based activities did not require as much listening as a conversation as students only had to listen for a few words to arrive at the right answer. They also noted that technology-based activities did not stimulate much oral production in Spanish and that the mediation of such activities resulted in students' use of English.

In each of these cases, technology is the object of undue criticism. For, it is not the technology itself that fails to require listening or production. Rather, it is the task design that has not been developed in a multi-step manner such that students have information to listen for and a topic to discuss. Prior studies have found that technology can increase meaningful, communicative exchanges between students, but that these exchanges were made meaningful by the tasks students complete (Johnston & Milne, 1995; Liaw, 1997). Bradley & Lomicka (2000) stated that technology use in foreign

language courses will not be very effective if “students get information without putting it to use” (p. 363).

A task-based learning approach (Doughty & Long, 2003) would serve to provide students with tasks whose completion would require multiple steps (Brown, 2007) and demand drawing upon multiple skills (Nunan, 2004). According to Salaberry (2001), “the success of a technology-driven activity will likely depend as much or more, on the successful accomplishment of pre- and post-activities than on the technology itself” (p. 51). This is to say, the technology is not the reason that students do not listen to media or produce must Spanish. Rather the tasks themselves must give students a reason to listen and later speak in Spanish. A pre-activity would establish the vocabulary and grammatical structures necessary to complete the task. And there should be substantial time spent on post-activities that provide students an opportunity to reflect on and react to what they heard and/or saw.

Adding extra steps to an already existing task can provide students with the guidance and the time necessary to search for necessary vocabulary, decide which grammatical structures are necessary and appropriate, organize their thoughts and thus explore weightier topics more in-depth. With more time devoted to preliminary steps, students will be less likely to produce “inorganic speech.” If multiple-choice tasks that involve technology do not allow teachers to achieve their objective of having students develop listening skills, students could be required to write their own multiple choice questions after hearing an audio clip. If students do not produce enough Spanish when filling in song lyrics a step could be added to the task that required students to work in

groups to add another stanza to the song. This task would draw upon multiple skills (Nunan, 2004). Students would have to listen to the original lyrics to grasp the tone and the content of the lyrics. They would have to converse with class mates as they determine what concepts to express in the additional lyrics and how best to express them in the target language. And they would have to write the lyrics down to share with their classmates. The subject of the song itself could also be fodder for conversations about students' past experiences and their similarities and differences to those of their classmates.

These teachers' core belief about preserving their classroom environment influenced their low-levels of classroom technology use. Related to this core belief were beliefs about the teachers' need to decrease student anxiety, provide feedback, and promote students' development of fluency. These teachers may be unaware of how to use technology in such a way that it supports their content rather than competes with it. For this reason, the Department of Spanish and Portuguese should aim to provide their GSIs with models of how to use technology. In order for GSIs to adopt such models in their practices, their pedagogical beliefs will have to undergo change (Fullan, 2001).

IMPLICATIONS

We have brought technology to the teachers, but we have yet to bring teachers to technology. The latter can be accomplished with professional development that addresses teachers' beliefs, the content they must deliver, and the technological tools available to them. The department should provide professional development in "language teaching and the use of new technologies" as suggested in the MLA Report (2007, p. 7). The

reason these teachers do not use an abundance of technology in teaching is because of their beliefs about their classroom environment and their content. Their language-specific beliefs are guiding their practices that largely do not include technology and are not informed by what we know about best practices in second language teaching.

Professional Development

The continual growth of technological innovations makes professional development challenging (Roblyer, 2005). One of the challenges is matching access to innovations with the additional training that is required to integrate technology into the content in meaningful ways. The present study has contributed to the knowledge base necessary to determine potentially beneficial components of technology training for GSIs. Professional development ought to require GSIs to confront and share their beliefs with those in the department and observe the practices of their colleagues.

Teachers behave in ways they believe are the best ways to teach. As these teachers viewed technology in direct opposition of their practices, technology use remains low. While beliefs have a strong influence on practices, teachers may remain largely unaware of the pedagogical beliefs they hold as they have developed over long periods of time and are often perceived as self-evident (Fullan, 2001; Kagan 1992). Additionally, as beliefs are more evaluative than knowledge (Nespor, 1987) a teacher may strongly believe in a concept that s/he knows relatively little about. For these reasons, “Teachers must be given opportunities to reflect on their own beliefs about learning and instruction and to develop a sense of the consequences of alternative belief systems” (Dwyer et al., 1991, p.51). In order to provide new GSIs with opportunities to

reflect on their beliefs and consider their value and consequences, it is suggested that the required GSI training course (398T) assist teachers in identifying their pedagogical beliefs. As this department-specific course is required for all incoming GSIs, it would provide them with an invaluable opportunity to address their pedagogical beliefs early in their faculty career. The course itself could greatly aid teachers in identifying their pedagogical beliefs regarding the ideal classroom environment, their students' abilities, their content, as well as beliefs regarding effective instructional methods within their content area.

After stating their beliefs in writing, Phipps & Borg (2009) have suggested that teachers should further explore their beliefs by collecting evidence for them. This evidence could include research articles, personal teaching experiences, observations of colleagues, or discussions with colleagues. GSIs could also be asked which of their evidence sources are the most compelling and influential over their beliefs and thus their practices, thus prompting them to consider how these beliefs are formed and how they may change. In the spirit of sharing pedagogical beliefs, Kumaravadivelu (2001) suggested that teachers use electronic journals (i.e., blogs) so that they could readily share their evolving beliefs and provide comments thus stimulating discussion. The process of exploring their beliefs and requiring GSIs to find supportive evidence will prompt them to more fully engage with the rich data created daily behind the walls of their classrooms. Allowing them the necessary time and space for reflection will allow them to further elucidate their beliefs which may assist them in understanding how these beliefs influence their practices.

Prior research has shown that technology training that is the most effective is conducted in small groups in the classroom environment (Makrakis, 1991) and is conducted by their peers rather than a supervisor or administrator (Clouse & Alexander, 1997; Ertmer, 2005; Vopal, 1997; Zhao & Frank, 2003). In addition, Snoeyink (2001) found that K-12 teachers were more receptive to technology training that was based at their grade level. The current research adds to these prior findings by providing evidence that technology-based training should also be subject specific as many of these teachers' beliefs and practices were connected to their beliefs about foreign language anxiety, feedback, and oral production.

GSI's need more opportunities to see their content taught in a variety of ways to see what is possible with technology. This could be achieved by requiring GSI's to observe colleagues classrooms. This suggestion came from the GSI's themselves. Ruth said, "When you get to see your colleagues teach, you think 'Hey! I could do it that way!'" (Interview 1, 262-263). Similarly, Sarah said she was "considering telling [supervisors] that they should make us go observe other teachers' classes. We'd learn a lot" (Interview 4, 1354). Sam also noted the value of being able to see an entire class period, "It would be helpful to see what [other GSI's] are able to do in 50 minutes. I am sure there are a lot of good examples out there" (Interview 3, 916-917). These observations could continue throughout the GSI experience, thus providing teachers with the rare opportunity to see the practices of their colleagues and become aware of the possibilities available in terms of their content.

As teachers use innovations they believe add value to their teaching (Eisenhart et al., 1988) they need to be made aware of how technology can add value to the content they teach. Teachers need to be made aware how the technology best supports their content across the four skills (i.e., reading, writing, speaking, listening). They need to know how to use technology: how to introduce technologically-based tasks with a pre-activity and debrief with a post-activity; how to use technology yet tend to immediacy, and how to use technology and provide students with feedback. Finally, teachers need to know who to contact if they need assistance with their attempts to use technology to support their teaching. This assistance will necessarily span beyond the technical help that most instructional technologists are prepared to provide. For this reason, it is proposed that a GSI who is knowledgeable of both the content, the curriculum, and technology use in the foreign languages fill this position of support.

Teachers in this study received mixed messages regarding in-class technology use. On one hand, the university, supported technology use by revamping classrooms and providing teachers with high-tech tools. On the other hand, UT failed to provide training and admitted to having no vision or road map for instructional technologies as recently as 2009 (SITAC). Furthermore, without any investigation into the nature of language classrooms or the types of tools would be best suited for language learning, UT provided teachers with tools that largely remain dormant. In a context in which teachers received conflicting messages about technology practices, their beliefs stimulated their practices as they controlled the nature of their classroom environment, and the activities and interactions there within. While technology is a reality for which teachers must be

prepared, teachers' beliefs are a reality that technology advocates must also face. Both of these propositions can be fulfilled through professional development that begins when new GSIs are hired and continues through their career. These years represent a precious time in which experiences and reflection can have an impact on teachers' conceptualization of what it means to teach their content.

LIMITATIONS

Data for this inquiry were obtained from a variety of sources (e.g., interviews, field notes, observations, documents) in an effort to enhance the trustworthiness of the findings. "Thick description" was used to illustrate classroom exchanges and participants' own words were used to describe their experiences as GSIs. Participants assisted in member checking as they received copies of interview transcripts and assured their accuracy. As this study captures the experiences of three GSIs, it cannot be generalized to all graduate students teaching in the foreign languages. It is my hope, however, that these three cases have been depicted with such richness that readers will be able to determine if these participants have had experiences similar to their own. The following section explores limitations of the present study.

First, I worked in the Department of Spanish and Portuguese prior to conducting this research. On one hand, this proved beneficial as the GSIs knew of me and were willing to talk to me about their teaching. It is plausible that they may not have willingly opened up to a researcher they had never met. On the other hand, my having worked in the same department as the participants no doubt influences how I view their challenges and perceive their beliefs and practices.

Second, due to the nature of the IRB approval, participants had to be informed about the subject of my research before agreeing to participate. The fact they knew this investigation was about “instructional technology” may have influenced their practices and their statements during interviews. We cannot be certain if their in-class use of technology was exactly as it would have been if I were not observing their classrooms or if they had no knowledge of my research topic. We also have to assume that they were honest and forthright in their interviews.

Third, there is a discrepancy between the number of interviews and observations for each participant. When this research began, I planned to complete six observations and six interviews with six GSIs. Of the three cases, only Ruth’s followed this pattern. Sam’s case included seventeen observations and four interviews. And Sarah’s included eighteen observations and six interviews. Sam had requested to do fewer interviews due to personal time constraints. Sam and Sarah both invited me into their classrooms unconditionally. I felt it would have breached the researcher-participant relationship to ask Ruth to allow me into her classroom for more observations. She may have felt pressured to say “yes” although she may not have wanted to. She may have behaved differently if she had granted me access, in an attempt to provide me with “good” data. Rather than breach this confidence, I decided it was best to carry out no more than the planned six observations with Ruth.

Fourth, this study suffers from a lack of a wide range of participants. All three participants were approximately thirty years old at the time of the study. Sam and Ruth were both non-native Spanish speakers from Texas. Sarah was the only native Spanish

speaking participant, from Spain. Lacking from this group is a native Spanish speaking male whose beliefs and practices with respect to technology could have greatly informed this research.

Fifth, all participants in this study were recommended by supervisors within the department. They chose graduate students that they believed were “exceptional instructors” and users of technology. This no doubt influenced the teachers who were suggested to me as participants and ultimately those who I could have selected as participants. In this way, the study has been filtered through the beliefs of supervisors who may have different conceptualizations of what it means to be an “exceptional” instructor or an “effective user” of technology.

RECOMMENDATIONS FOR FUTURE RESEARCH

Research Regarding Beliefs

One of the most prevalent arguments in favor of technology reform is that it motivates students who readily embrace technology in their personal lives and are always plugged in. The logic is that bringing technologies that students are familiar with into the classroom setting will promote learning. As students are the consumers of instructional technology, their perceptions and evaluations of it are valid and merit investigation (Liu et al., 2003). As of yet, little is known about students’ beliefs about instructional technology. This information would be of particular interest to those in the field of foreign languages where in-class technology exposes students to new cultures and new ways of thinking while challenging students’ abilities through the nature of the media and the task. Do students believe technology improves their language learning? If so, which

technology do they believe is the most effective and which skills (i.e., reading, writing, speaking, listening) do they believe are improved? Does technology use motivate students to learn the language? If so, how much, and in which ways?

Another avenue for students' beliefs research would be to investigate the longevity of their language learning beliefs. According to Rokeach (1968), beliefs that are established through personal experiences are most central and less susceptible to change. Because students enter college with thirteen years of educational experience, their beliefs about teaching and learning may be a part of these most centralized beliefs. While students may have heavily ingrained beliefs about schooling, they may not have had much experience with foreign languages or cultures. Perhaps it is these beliefs that may still have the ability to change throughout the battery of foreign language courses required by the university. How consistent are students' beliefs about language learning over time? For example, would an entering freshman have beliefs about language learning that were drastically different from a junior having completed her foreign language requirements? Do these beliefs change? If so, can we contribute those changes to the classes students take, the methods and technologies used in said classes, or to the personal relationships they developed with their teachers and classmates?

Since these GSIs' in-class technology uses were indirectly guided by their beliefs about students, it would be useful to explore the extent to which student beliefs about in-class technology use correspond to those of their teacher. Would a difference in beliefs among these groups change the way the technologies were integrated into the classroom setting? Would a substantial difference between students' beliefs and teachers' beliefs

change the scores students gave the teacher on the Course Instructor Survey at the close of the semester?

Scant research has been conducted regarding the beliefs of administrators whose task it is to oversee the work of multiple teachers, develop the pacing of classes, and resolve conflicts. How do administrators' beliefs regarding teaching, learning, and technology use affect their practices? To what extent do these beliefs correspond with those of the teachers they oversee? What occurs if/when there is a very high or very low correspondence between the beliefs of administrators and the beliefs of the teachers they oversee?

As the field of teachers' beliefs continues to grow at the K-12 and collegial levels, we must not neglect researching the beliefs of GSIs who will fill positions as college faculty. GSIs are in a state of transition as they prepare to cast off their identities as students and join the respected ranks of faculty. This liminal experience endured by GSIs makes them a unique research interest in the field of beliefs. Do their beliefs about teaching, maintaining the classroom environment, or the nature of their discipline change throughout graduate school? Do they change as a result of being granted a GSI position or as a result of a TA-ship? Do different beliefs influence their teaching practices depending on the course level taught (e.g., teaching introductory Spanish versus teaching Spanish literature). Do GSIs in different disciplines (e.g., Engineering, Art History, Sociology) hold different beliefs about what it means to teach and learn?

As teachers' practices in this study were influenced by their beliefs about the nature of their content, more research is needed regarding foreign language teachers'

beliefs about language and language learning. This research may explore any one of the following areas relevant to language teaching: reading instruction; writing instruction; target-language use; teaching culture; correction of written (or spoken) errors; development of activities, quizzes and exams; and grading procedures. While any language teachers' beliefs research would greatly contribute to the field, there is a distinct need for studies in the less commonly taught languages (e.g., Arabic, Japanese, Russian).

Research Regarding Technologies

Ertmer et al. (2001) claimed that future research regarding technology should focus on those teachers who practice meaningful technology use without using the latest technologies. She reasoned that teachers would most benefit from this research because they could more easily enact those practices. In the spirit of this suggestion, we need more research about the technology practices of GSIs who teach a variety of disciplines to diverse student populations. This research would allow us to further provide GSIs with support and professional development as they progress through the intricate states of teaching and graduate study.

This research also suggests that GSIs' believe that e-mail functions as a way to develop trust and immediacy with students that endures within the classroom setting. As more and more teacher-student communication is conducted in online environments, we lack a base of research that can inform us regarding effective practices. Thus, it would be beneficial to research individual e-mail exchanges between teachers and students to determine how these exchanges function and how teachers are building trust and

establishing immediacy through these messages. Are students' interpretations of these "rapport building" e-mails the same as those of their instructors.

CONCLUSION

The purpose of this study was to explore the pedagogical beliefs and technology practices of three Spanish GSIs. The findings can inform technology integration efforts regarding how to best support teachers in their efforts to use technology in their classrooms. Their reasoning for low uses of technology was that it interfered with three components of a successful classroom environment, namely, trust, immediacy and opportunities for students to develop fluency. Their beliefs about the need to maintain the classroom environment served as a filter, thus influencing how they interpreted innovations such as classroom technology. To further promote technology integration, teachers need opportunities to state their beliefs, reflect on them, and experiment with new practices that might stimulate a change in their beliefs. Making teachers aware of their beliefs is crucial, as only through this awareness can they see the implications of those beliefs within their practices. Designers of professional development should become intimately aware of (and acknowledge) teachers' current beliefs and practices when designing training for teachers. Through this careful consideration of teachers' present practices, it is more likely that an appropriate training be designed that is befitting of teachers' needs concerning their instructional strategies, their students, and their content. The Department should support teachers' beliefs and attempts to integrate technology into their classrooms, and consider that change in beliefs and practice will not occur instantaneously or seamlessly.

While we cannot generalize these outcomes to all foreign language learning contexts, this study provides the unique perspective of the graduate-student instructor to a growing body of research on instructional technology. While colleges are quick to invest in technology itself, they often do not equally invest in exploring instructors' perspectives and discovering beliefs that influence practices in different disciplines. Knowing how and why instructors use available technology will help us provide them the professional development and support necessary to carry out technology-based reform efforts in their future careers as college faculty.

Appendix A: Consent Form

CONSENT FORM

IRB APPROVED ON: 12/09/2009 EXPIRES ON: 12/08/2010

IRB PROTOCOL #2009-03-0060

Title: Teachers' Beliefs and Classroom Use of Technology

Conducted By: Michelle Matthews

Of The University of Texas at Austin: Dept.Spanish/Portuguese BEN 5.102 Telephone: (512)000-0000

You are being asked to participate in a research study. This form provides you with information about the study. The person in charge of this research will also describe this study to you and answer all of your questions. Please read the information below and ask any questions you might have before deciding whether or not to take part. Your participation is entirely voluntary. You can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You can stop your participation at any time and your refusal will not impact current or future relationships with UT Austin or participating sites. To do so simply tell the researcher you wish to stop participation. The researcher will provide you with a copy of this consent for your records.

The purpose of this study is to investigate the beliefs, perceptions, and assumptions that university-level Spanish teachers have about successful language learning and classroom technology use. Ten university-level Spanish teachers will serve as participants.

If you agree to be in this study, we will ask you to do the following things:

- Participate in an audiotaped screening interview. Based on your screening interview responses you may or may not be asked to participate in the remaining interviews and be observed by the investigator.
- Participate in a total of six audiotaped interviews about your beliefs regarding teaching and learning a second language, classroom technology use and the context in which you teach. Each interview should last approximately 50 minutes.
- Allow the class you teach to be observed by the investigator for six predetermined lessons.

Total estimated time to participate in study is 10 hours throughout one semester.

Risks of being in the study

- Participating in this research may involve a loss of confidentiality. You will be asked to create a pseudonym that will be used to label all data collected. When discussing the study with faculty sponsors, you will be referred to only by pseudonym. In the final writing of the dissertation, the pseudonym will be used.
- This research involves risks that are no greater than everyday life. If you wish to discuss the information above or any other risks you may experience, you may ask questions now or call the Principal Investigator listed on the front page of this form.

Benefits of being in the study

- Your participation may improve the way you teach by asking you to examine your beliefs about language learning and technology.

Compensation:

- Unfortunately there are no means to compensate you for your participation in this study.

Confidentiality and Privacy Protections:

- The records of this study will be stored securely and kept confidential. Authorized persons from The University of Texas at Austin, members of the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. All publications will exclude any information that will make it possible to identify you as a subject. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.
- The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate you with it, or with your participation in any study.
- Participants will select a pseudonym that will be used:
 - (a) to label all data (i.e. audio recordings, observation notes)
 - (b) in discussion of the research with faculty sponsors
 - (c) in the writing of the final dissertation
- With respect to the interviews in this study:
 - (a) all interviews will be audiotaped
 - (b) tapes will be coded so that no personally identifying information is visible on them
 - (c) tapes will be kept in a locked filing cabinet in the investigator's home

(d) tapes will be heard or viewed only for research purposes by the investigator

(e) tapes will be destroyed after they are transcribed or coded

Contacts and Questions:

If you have any questions about the study please ask now. If you have questions later, want additional information, or wish to withdraw your participation call the researchers conducting the study. Their names, phone numbers, and e-mail addresses are at the top of this page.

If you would like to obtain information about the research study, have questions, concerns, complaints or wish to discuss problems about a research study with someone unaffiliated with the study, please contact the IRB Office at (512) 000-0000 or Jody Jensen, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects at (512) 000-0000. Anonymity, if desired, will be protected to the extent possible. As an alternative method of contact, an e-mail may be sent to orisc@uts.cc.utexas.edu or a letter sent to IRB Administrator, P.O. Box 7426, Mail Code A 3200, Austin, TX 78713.

You will be given a copy of this information to keep for your records.

CONSENT FORM

IRB APPROVED ON: 12/09/2009

EXPIRES ON: 12/08/2010

IRB PROTOCOL #2009-03-0060

Statement of Consent:

I have read the above information and have sufficient information to make a decision about participating in this study. I consent to participate in the study.

Signature: _____ Date: _____

_____ Date: _____

Signature of Person Obtaining Consent

Signature of Investigator: _____ Date: _____

Appendix B: E-mail Script

Dear Potential Participant,

You are invited to participate in a survey, entitled “Teacher’s Beliefs and Classroom Technology Use.” The study is being conducted by Michelle Matthews of the Department of Spanish and Portuguese at The University of Texas at Austin.

The purpose of this study is to examine teacher’s beliefs and classroom technology use. Your participation in the survey will contribute to a better understanding of the relationship between teachers’ beliefs and practice. We estimate that it will take about 10 hours of your time throughout the semester to be interviewed and observed.

Risks to participants are considered minimal. There will be no costs for participating, and your participation may improve the way you teach by asking you to examine your beliefs about language learning and technology.

Your participation in this study is voluntary. You may decline to answer any interview question and choose which class periods are observed. You have the right to withdraw from participation at any time without penalty.

If you have any questions about this study or are interested in becoming a participant, please respond to this e-mail (or call (512) 000-0000) with a day and time you would be available to discuss consent forms and complete a screening interview.

This study has been reviewed and approved by The University of Texas at Austin Institutional Review Board. If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish - the Institutional Review Board by phone at (512) 000-0000 or e-mail at orsc@uts.cc.utexas.edu.

IRB Approval Number: 2009-03-0060

Thank you,
Michelle Matthews
(512) 000-0000

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