COLLEGIATE INSTRUCTORS' PERCEPTIONS AND PRACTICES IN INTEGRATING

TECHNOLOGY IN SPANISH LANGUAGE INSTRUCTION

by

ANA LORENA BARBOZA

B.S., Universidad de Costa Rica, 1984
M.S., Florida International University, 1991

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Curriculum and Instruction
College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2010

Abstract

Spanish instructors are not neo-phobic of instructional technology (IT), and they will affirm they are not afraid of IT just to avoid being labeled as 'living dinosaurs.' Most of them just do not have the know-how to explore and use IT in-depth. Regardless, they are more familiar with the diverse IT world available.

In this study the main factors influencing Spanish language educators to use IT (or not) in their Second Language Acquisition (SLA) teaching methodology were discussed. Data from Spanish instructors in eight Kansas universities was analyzed to understand their perceptions and attitudes regarding the use of IT in their classrooms. Mixed methodologies were used: A quantitative survey targeting 80 instructors from the Modern Language Departments was developed. The survey had one section on demographic information and a second with 43 items dealing with perceptions related to IT. Afterwards, a case study with four in-depth interviews was conducted to elucidate richer descriptions and potentially corroborate patterns identified from the survey data.

Data analysis revealed that most Spanish instructors have positive perceptions and attitudes towards IT.

From the survey, nine themes emerged. Six of them formed a super-ordinate category showing that instructors consider IT useful for teaching culture in the target language, and in facilitating general knowledge. In this super-ordinate category, the six emergent themes are considered subordinate themes. The other three emergent themes formed another super-ordinate category with three subordinate themes: faculty require more time, training and technical resources to be able to integrate IT in their teaching. The four interviews explored what perceptions (or characteristics) stand out among faculty along a continuum of non-users to users with respect to the integration of IT; this allowed the researcher to confirm the instructors' perceptions and attitudes on the nine emerging themes.

Spanish instructors would integrate more modern tools in their teaching if they had more opportunities and support to be better informed; received appropriate training in their specific field; and were advised of available technology. As the findings showed, educators are no longer afraid of technology. Finally, conclusions of the findings were offered as well as recommendations for future research.

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Dedication

To my parents Teresa and Alfredo for their unconditional support through all my walks of life. I am very proud having both of you as my parents. Please do not ever change because I love you the way you are.

Con mucho cariño dedico este trabajo a mis padres Teresa y Alfredo, quienes siempre me han dado su apoyo incondicional. Por favor, no cambien ni un poquito porque los quiero por ser como son.

To the two treasures of my life, Ariadna Esther and Franco Jose; both of you have been my inspiration to improve myself and to reach important goals. I hope that I will always be a good example for both of you. I love you!

Para los dos tesoros de mi vida: Ariadna Esther y Franco José. Ambos han sido la inspiración para convertirme en un mejor ser humano y para alcanzar importantes metas, como la presente. Espero sea un buen ejemplo para ustedes dos. ¡Los amo!

Chapter 1 - Introduction

Background and rationale for the study: Overview

Paul stood thinking to himself in the Kansas City airport, where he works: "Two years studying Spanish and spending money on tuition and books, and I am still not able to communicate with Spanish-speaking tourists." This situation is all too common. Proficiency in a second language is becoming a necessity for full participation in today's multicultural society and global community, yet Paul who has studied Spanish for two years, has not achieved basic communicative competence.

According to the 2007 American Community Survey conducted by the United States Census Bureau, Spanish is the primary language spoken at home by over 34 million people aged 5 or older. Spanish became America's second language in the 1960s, with the largest number of students enrolled in U.S. institutions of higher education (Brod & Huber, 1995), showing that new generations understand the importance of being bilingual to improve work opportunities. More and more people want to learn how to speak the second most commonly used language in the U.S. According to the 2000 census, the Hispanic population represented 12.5% of the U.S. population, which accounts for the Spanish language being the second most popular language spoken in the U.S. Spanish is also a language that represents an extensive range of knowledge and cultural variations.

A growing number of universities are investing many thousands of dollars and a great deal of time in program development to assure the effective use of modern technology in their classrooms. The 1997 National Survey on Higher Education (The Campus Computing Project -- Claremont Graduate University, Claremont, CA) (Green, 1999) found that all types of instruction in all fields are affected by information technology. Currently most campuses require some sort of computer competency or computer instruction for all their teachers and students. The effectiveness of technology has been studied and the outcomes are producing encouraging results, causing educators to promote greater access and more resources (Charp, 1998). For the same reason, colleges and universities are investing heavily in instructional technology (IT), to help students learn another language other than their native language (Ehrmann, 2000).

Administrators and educators are developing new and innovative teaching techniques using the computer as a main tool to assist in the acquisition of a second language (Chapelle, 2001).

Students have overwhelmingly demonstrated that their main objective in learning a language is to be able to speak it, and they expect to use technology at their disposal to help them accomplish their goals. It is important to know how educators are adopting instructional technologies to improve learners' skills in Spanish and to make them proficient in using the language, because "not much research has been done on technology from the point of view of the teacher. The focus has largely been on students and how technology affects them, and it has therefore addressed why teachers should or should not use technology, rather than why they do or do not" (Lam, 2000).

According to those few studies, educators think that the cost of integrating technology cannot be recovered and many of the obstacles mentioned by them are not really pedagogical in nature. Among the main factors that educators mention are lack of time to find and review materials, insufficient professional and technical training, and limited access to multimedia facilities and materials. There are also intrinsic factors that play in the decisions to use or not to use technology in the classroom, among them, like the lack of confidence. Some educators do not see audiovisual equipment and computers as educational tools that can help their students, but to the contrary, many times they show their fear of being supplanted by machines (Lam, 2000).

Lynn Bradshaw (2002) has mentioned that teachers have many concerns about the use of technology. Some enjoy discovering new uses for it at home and in the classroom, while others have little interest in turning on a computer. But also, some faculty have experienced many obstacles on the road to integrating technology in their classrooms. In these cases, their skills and knowledge of technology have been critical to their success. Among other factors, school culture, voluntary participation, and a comfortable atmosphere for experimentation and adequate support seem to be essential in determining favorable or unfavorable circumstances (Ditzhazy & Poolsup, 2002).

Brinkner's research (2002) concluded that faculty experience real and perceived obstacles to technology integration in their classrooms, and there are many reasons why they resist change. They are afraid of what change will bring because they may not have all of the necessary equipment to effectively implement change, or simply, they may not want to bring about

change themselves. Recent research shows that although some faculty are eager to use technology for curricular activities, the lack of effective professional development programs and time dedicated to experimentation hinder successful integration (Schrum, 1999).

Can it be said, then that technology helps in the language acquisition process? Research shows that technology can have a positive impact in the teaching and learning process, but teachers should be prepared to select the best teaching methodologies relevant to today's challenges (Stephens, Emesiochi, and Joseph, 1995), especially when the main purpose of learning a second language is communicative competence. It is not enough to understand the grammar, it is important to use it in order to express ideas and to interact with others (Thomas, 1992). In this sense, the role of the educator in the language classroom is paramount and not substitutable, but the question here is what the nature of available technology is to support and aid the educator and the student in their quest to teach and learn Spanish. How can those tools provide the student with additional opportunities to develop language skills and use language knowledge in real, interpersonal communication situations?   These questions could be answered through the implementation of a survey to determine college and university instructors' perceptions of the use of technology to teach Spanish. Spanish language instructors in Kansas universities responded to perceptual survey items on the various uses of technology in instruction. We needed to determine how their technology integration was actually used in teaching Spanish. For this purpose, Spanish language instructors at Kansas State University participated in interviews concerning their specific uses of technology in Spanish language instruction.

My experience as the director of the Language Learning Center (LLC) and as Spanish instructor at Kansas State University (KSU) has afforded me the opportunity to see first hand the difficulties and limitations that students face while learning Spanish as a second language. At the same time, I have come to recognize that technology integration in Spanish language instruction is useful in helping students overcome these difficulties and limitations.

This study seeks to identify the factors that influence the decisions that faculty make about using or not using educational technology in their Spanish language acquisition classrooms, thus contributing to and complementing the existing body of knowledge regarding the use of technological tools for second language acquisition (SLA). The results of this study will make administrators and faculty more fully aware of the factors that affect faculty members'

decisions to use electronic technologies in teaching the Spanish language, and may stimulate innovative thinking as to how to use such resources effectively.

Context of the Study

The settings selected for the present study are Spanish sections of the modern language departments at Kansas State University and seven other universities of Kansas. The sample population under study consists of faculty who teach Spanish as a second language in these departments.

Statement of the Problem

While many institutions of higher education have implemented the use of instructional technology (IT), there is still difficulty in getting faculty to adopt it willingly, although technology has been shown to facilitate learning. What influences individual faculty members' preferences toward instructional technology use, especially when widespread investment in technology by colleges has been made? This study will make a contribution to an understanding of faculty motivators and inhibitors, especially faculty perception of instructional technology in second language acquisition (SLA), and in particular, in Spanish instruction. It will provide relevant information that will help administrators arrange IT assistance to those who seek to improve skills, awareness, and confidence, and it will help them to better evaluate technology needs for courses. The study will help us understand why some faculty members are more open to involvement with instructional technology in their SLA classes.

College administrators have pursued for several decades the promise of technology-enhanced education with the idea of having better teaching and more efficient learning. This pursuit has had to overcome difficult financial and organizational obstacles. Given the huge investments in campus and statewide technical infrastructures that have been made, the main challenge in implementing technology in college teaching seems to be the development and training of faculty.

For institutions to benefit fully from their investments in technology, faculty must use the technology available to improve their teaching and their students' learning. For years, faculty identified as 'early adopters' experimented with technology in the classroom, but still there are

many educators reluctant to use it. Campuses across the U.S. and around the world are putting resources into faculty development initiatives like workshops and technical and pedagogical centers; also, faculty interest in teaching with technology continues to escalate. What are the faculty perceptions of and main factors in technology applications that lead them to use, or not to use, instructional technology in their classrooms? One might anticipate that the lack of computer literacy, training, time, infrastructure, incentives, financial aspects, reliability, support, proof of effectiveness, inadequate materials, and other factors, are the most likely candidates for their list of reasons.

Many studies demonstrate that technology, well used, can have a profound impact in the teaching and learning process, especially at the novice and intermediate levels in colleges. If educators have instructional technology available, and if campus administrators have overcome difficult financial and organizational obstacles to offer the infrastructure and to have the faculty teaching with instructional technology, then why is it that some educators choose to ignore it? If today's faculty research, evaluate, archive, and display at least some of the cultural and literary materials whose digital accessibility enriches their classes, is it not a contradiction that they do not use technology tools in their teaching? Hundreds, perhaps thousands, of useful online exercises and other second language Web pages for courses already exist, and authentic online materials are increasingly abundant. Why not take advantage of their availability to use them? Although faculty somewhat unpredictably adopt, reject, or abandon certain technologies, the SLA profession needs a new kind of adviser-teacher whose practical knowledge bridges the worlds of technology, language, literature, and pedagogy. In order to promote that ideal, we need to know what are the main factors that inhibit our colleagues from using instructional technology, so that we can eventually devise ways to help them transition into the technological age of their students.

In synthesis, this study wants to contribute toward knowledge on how technology is used in collegiate Spanish language instruction, and how the Spanish language is naturally used in electronic networks in and outside of class. It could be found through faculty input in terms of integrating technology into instruction for second language acquisition, which identifies their varied perceptions of the importance of given technological applications as well as their self-assessment of their own competence in using technology in teaching a second language. Also, the study will lead to insights into how technology makes value added contributions to language

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acquisition within the limited time frame of existing coursework, and how efficient and productive this technology can be to second language acquisition processes.

Purpose of the Study

The purpose of this study is to identify the main factors influencing Spanish language educators from the Modern Languages Department at Kansas State University (KSU) and seven other universities of Kansas, in using, or not using, technology in their SLA teaching methodology. The study will be centered on the use of technology to improve their skills in the teaching and learning of Spanish as a second language.

Research Questions

The following research questions will guide this study:

1. What factors or perceptions among Modern Language (ML) Spanish instructors impact their use (or lack of use) of technology integration in second language teaching at their home institutions?
2. What perceptions (or characteristics) do individual cases have along a continuum of non-users to users with respect to the integration of instructional technology?

Definition of Terms

There are a number of technical terms and acronyms used in Second Language Acquisition (SLA) that will be used throughout this thesis and that may not be familiar to all readers.

CAI: Computer Assisted Instruction. The use of a computer as a medium of instruction for tutorial, drill and practice, simulation, or games. CAI is used for both initial and remedial training, and typically does not require that a computer be connected to a network or provide links to learning resources outside of the course.

CAL: Computer-Assisted Learning. The term Computer Assisted Learning (CAL) covers a range of computer-based packages, which aim to provide interactive instruction usually in a specific subject area, and many predate the Internet. These can range from sophisticated and

expensive commercial packages to applications developed by projects in other educational institutions or national initiatives to simple solutions developed by individuals with no funding or support to tackle a very local problem (CAP-ET)

CALL: Computer Assisted Language Learning. It is an approach to language teaching and learning in which computer technology is used as an aid to the presentation, reinforcement and assessment of material to be learned, usually including a substantial interactive element (Levy, 1997).

CASLA: Computer Applications in Second Language Acquisition. Effective use of software in language teaching (Chapelle, 2001).

CMC: Computer-Mediated Communication. It is defined as any communicative transaction which occurs through the use of two or more networked computers. While the term has traditionally referred to those communications that occur via computer-mediated formats (i.e., instant messages, e-mails, chat rooms) it has also been applied to other forms of text-based interaction such as text messaging.

Communicative Approach: It refers to the theory of teaching according to the principle that the students and teachers should genuinely communicate with each other using the target language, and that communication is an intrinsic good of most, if not all, language learners.

Communicative Competence: Ability needed by speakers of a language to have more than grammatical competence in order to be able to communicate effectively in the language; they also need to know how the language is used by members of the target speech community to accomplish their purposes (SIL International, 1998).

CLT: Communicative Language Teaching. This method is learner-centered and emphasizes communication and real-life situations. Students assume responsibility for their own learning (Bacon, p.1).

Constructivist Approach: A theory where the central idea is that human learning is constructed, and that learners build new knowledge based on previous learning. Learning becomes active and it is not the passive transmission of information from one individual to another (Hoover, 1996).

Digital Immigrant: Describe those individuals that experienced life without this technological invention/phenomenon. A digital immigrant is a person for whom digital technologies already existed when they were born, and hence has grown up with digital technology such as computers, the Internet, mobile phones and MP3s. A digital immigrant is an individual who grew up without digital technology and adopted it later.

Digital Native: Also known as Millennial, NetGen and YGeneration. These terms are used to distinguish those who were born in a world full of technology (Internet, computers, cell phones, PDAs, and gaming machines). These terms refer to the people that have been acculturated by their parents, instructors and peers, (Gopalakrishnan, 2008).

Foreign Language and Second Language: Both terms are often used interchangeably. However, the two terms mean different things. A foreign language is a language not spoken by the people of a certain place: for example, English is a foreign language in Japan. Second language is the term used to refer to a language which is not a mother tongue but which is used for certain communicative functions in a society. For the purpose of this study, both terms will be used as synonymous.

Instructional Technology: Is the use of computers, CD-ROMs, interactive media, modems, satellites, teleconferencing, and other technological means to support learning (Gagne, 1987).

For this study, "instructional technology" and "educational technology" will be used as synonymous.

Interactionist Approach: Piaget, the most famous interactionist, felt that there were cognitive predispositions to language, but that environmental experience was necessary to start

language development. For example, Piaget felt that pre-language stages were often instincts, but in order for language to occur, infants need to receive feedback about the sounds and words they produce (Cole and Cole, 1996).

L2: Second Language. A language that a person can speak which is not the first language they learned naturally as a child (Van Patten, 1996).

Paralingual: It refers to the non-verbal elements of communication used to modify meaning and convey emotion.

SR: Speech Recognition. Speech recognition is the ability of a machine or program to identify words and phrases in spoken language and convert them to a machine-readable format. Rudimentary speech recognition software has a limited vocabulary of words and phrases and may only identify these if they are spoken very clearly. More sophisticated software has the ability to accept natural speech. Speech recognition applications include call routing, speech-to-text, voice dialing and voice search.

SLA: Second Language Acquisition. A theoretical and experimental field of study which, like first language acquisition studies, looks at, and seeks to understand the phenomenon of language development, in this case the acquisition of second languages (Van Patten, 1996).

TL: Target Language. The language to be learned is often referred to as the "target language" or "L2"; SLA is sometimes called L2A, for "L2 acquisition". The SLA model of interest hypothesizes that target language input acts as the potential starting point for acquiring aspects of the L2 (Chapelle, 1998).

Technology Implementation: The use of computers to complete desired tasks.   "In learning-led educational context the effectiveness of teaching, whether by the teacher, or through interaction with media, can be readily evaluated by the degree to which it contributes to learning (Jackson, 1998, p. 1).

Significance of the Study

"How should we introduce digital technology more effectively into the Spanish language acquisition process?" Enough evidence supports the idea that computer aids are effective tools to enhance learning. But the most important issue is to use this technology systematically. Because of the great demand for the use of computers, it is important to use them appropriately and effectively.

This study intends to be a contribution in the field of educational technology applied to Second Language Acquisition (SLA.) It attempts to show an understanding of the variables and factors responsible for the practical effectiveness and use of educational technology in Spanish language instruction. Knowledge of the educators' perceptions about technology in the classroom may help administrators in the Modern Languages Department at KSU and its counterparts, formulate policies and procedures that guide the training of faculty on the use of technology in the Spanish classroom. It may also affect decisions regarding the purchase and maintenance of software and hardware. Furthermore, identification of the skills required to use modern technology in the classroom could aid in the selection and training of prospective and established faculty. Spanish language educators need to know why a specific software program, device or application is best in the classroom. The use of instructional technology can prove to be an effective and practical tool for educators.

Limitations of the Study

In this study there are a few limitations.

- The results and conclusions from this study refer to Spanish in SLA classrooms and the Spanish language educators participating in the study.

- Participation will be limited to Spanish educators in the area of Kansas, United States. It is very possible that there are differences in technological resources from one campus to the next.

- Because I am also a faculty member of the Modern Languages Department at KSU as a Spanish instructor, educators' responses may be affected. On the other hand, my relationship with them will likely help in increasing their participation in the study.

- Despite personal efforts, the survey and interviews may not completely explore all of the issues related to the decision of using or not using instructional technology in the Spanish SLA classrooms.

- The possibility exists that some educators in this study may not be able to articulate all of their ideas about the use of instructional technology in the interviews.

Chapter 2 - Review of the Literature

Overview

This chapter provides the basic theoretical concepts of the study. The first part examines literature related to the importance of the Spanish language in U.S. culture, the implications of teaching Spanish at the college level, and aspects related to language learning and technology. Then, information about the barriers to the integration of technology in higher education is presented. To better understand the role of the technology in teaching a second language, a review of the emergence of technology in language, and the efforts that institutions of higher education make to introduce technology in their programs and curricula are also presented. Finally, research on technology and computer-assisted language learning is provided to understand the development of specific skills using specific software tools, and how to use those tools to teach a second language are discussed in this chapter.

Importance of the Spanish Language in the U.S. Culture

Learning a second language is analogous to acquiring a new tool or skill that helps one to understand another person as well as an entirely different culture. Acquiring a second language enables the learner to gain new knowledge that enriches one's life experiences. The interest that one has for learning a second language depends on the number of cultural variations and new experiences the new language presents to any given individual. Spanish is a good example of a language that represents an extensive range of knowledge and cultural variation. The interest of many people in the United States in learning Spanish has been growing since Juan Ponce de León introduced the Spanish language in Florida in 1513 (Weber, 1994). Today the popularity of learning Spanish-as-a-second language is at an all time high.

Sam Slick (2006), who founded Command Spanish, the nation's largest firm specializing in teaching Spanish for the workplace, said in USA Today, that "There's nothing foreign about Spanish anymore. It's the second language of the United States." Today, Spanish is taught throughout the country, based on the goal of acquisition of the language for communicative competence. According to the National Capital Language Resource Center (2003), communicative competence means the, "ability to use the language correctly and appropriately to accomplish communicative goals. The desired outcome of the language learning process is

the ability to communicate competently, not the ability to use the language exactly as a native speaker does" (p. 1).

The researcher has focused this study on teaching and learning Spanish as a second language.   From the above we observe a natural or social attraction to learning Spanish as a second language. This is intensified by changing demographics in the United States, its growing Hispanic population, and dramatic projected increases in this population. Table 2.1 summarizes Hispanic/Latino population numbers and percentages in the United States. This 2000 census data show that there were over 35 million Hispanic/Latinos living in this country. This represented 12.5% of the U.S. population.

Table 2.1 Hispanic or Latino Population for the United States: 2000

	Total Population	Percent of Total Population
Total U.S. Population	281,421,906	100%
Hispanic/Latino	35,305,818	12.5%
Non-Hispanic/Non-Latino	246,116,088	87.5%

Source: Adapted from the U.S. Census Bureau, Census 2000

In addition, two thirds of the Hispanic/Latino group traced their roots to Mexico, and 86 percent reported that Spanish was their first language. Further, U.S. Census projections show that by 2010, the Hispanic/Latino ethnic group will make up14% of the population. By 2050, there will be approximately 400 million people of Hispanic origin in the U.S. (Census, 2000)

The census data above projects a growth in the U.S. Hispanic/Latino population which might suggest a greater need for Spanish language instruction. Table 2.2 summarizes foreign language enrollments in higher education (1990-1995) for several different languages. According to the Census Bureau, between 1990 and 1995, Spanish language had the largest number of students enrolled in American institutions of higher learning. Moreover, there was a 13.5% increase in student enrollments in Spanish language classes during the reported time period.

Table 2.2 Enrollment in Foreign Languages in Higher Education (1990-1995)

Language	1990	1995	Percentage of change
Spanish	533,944	606,286	+13.5
Arabic	3,475	4,444	+27.9
Chinese	19,490	26,471	+35.8
French	272,472	205,351	-24.6
German	133,348	96,263	-27.8
Classic Greek	16,401	16,272	-0.8
Hebrew	12,995	13,127	+1.0
Italian	49,699	43,760	-11.9
Japanese	45,717	44,723	-2.2
Latin	28,178	25,897	-8.1
Portuguese	6,211	6,531	+5.2
Russian	44,626	24,729	-44.6
Others	17,544	24,918	+42.0
Total	1,184,100	1,138,772	-3.8

Source: Adaptation of the table 1 of Brod & Huber, 1995

Furman, Goldberg and Lusin (2007, p.2), also mention that the enrollments in Spanish have expanded by 10.3%, continuing a record of uninterrupted growth begun in 1980 (See table 2.3). "Spanish remains the most taught language in the United States, with a 10.3% increase over 2002," although there was a slight decrease from the 1998–2002 percentage raise, 13.7%. "In actual numbers, Spanish gained 89,677 students between 1998 and 2002 and 76,718 students between 2002 and 2006."

Table 2.3 Enrollments in Spanish Compared with Those of All Other Languages except Latin and Ancient Greek, by Year

Enrollments in Languages Other Than English in United States Institutions of Higher Education, Fall 2006

The study "Enrollment in Language Other Than English in United States Institutions of Higher Education" by Furman, Goldberg and Lusin (2007) also shows a comparison of the languages with higher enrollment in 2006 (See table 2.4)

Table 2.4 Comparison of Introductory and Advanced Undergraduate Course Enrollments in the Top 15 Languages in 2006

	Introductory Enrollments	Advanced Enrollments	Ratio of Introductory to Advanced	All Enrollments	Advanced Enrollments as % of All Enrollments
Spanish	669,432	142,602	5:1	812,034	17.6
French	160,736	40,927	4:1	201,663	20.3
German	72,434	18,758	4:1	91,192	20.6
American Sign Language	72,694	5,249	14:1	77,943	6.7
Italian	69,757	7,593	9:1	77,350	9.8
Japanese	55,161	10,585	5:1	65,746	16.1
Chinese	41,193	9,262	9:2	50,455	18.4
Latin	26,787	4,383	6:1	31,170	14.1
Russian	17,527	6,569	8:3	24,096	27.3
Arabic	20,571	2,463	8:1	23,034	10.7
Greek, Ancient	13,250	3,176	4:1	16,426	19.3
Portuguese	7,387	2,422	3:1	9,809	24.7
Hebrew, Modern	7,665	1,250	6:1	8,915	14.0
Hebrew, Biblical	7,854	705	11:1	8,559	8.2
Korean	5,511	1,397	4:1	6,908	20.2
Other languages	27,836	3,478	8:1	31,314	11.1
Total	1,275,795	260,819	5:1	1,536,614	17.0

In summary, the writer has focused this study on Spanish language instruction in higher education. In this section of literature, the researcher has shown that the Spanish language is moving toward becoming the second language of the United States. It is also the most frequently taught language in college modern language departments. Thus, Spanish is a very important language for the study of instructional technology integration.

Teaching College Level Spanish

College Spanish students, the majority of whom are English-language speakers, have had eighteen years to acquire sufficient sophistication in English to succeed in the classroom where English is the language of instruction. In our efforts to help them acquire a second language, in this case, Spanish, we cannot ask them to spend another lifetime to develop a working knowledge of their new language. The acquisition of additional languages is a complex process, one that requires complex and varied teaching strategies.

College level Spanish teachers utilize what they know and practice as speakers of one or more languages already, thus making the language-learning process more efficient. A conventional class approach is to impart a great deal of information about the newly studied language. Students compile vocabulary lists, repeat endless verb conjugation drills, and memorize dialogues. The focus is often to teach "about" the language, not be "in" the language, or by "doing" the language. Current strategies focus on practical skills development, the carrying out of specific tasks, and learning to "negotiate" meaning in the acquired language.

Most students today appreciate the greater emphasis on the practical, functional use of Spanish. While they learn to accomplish simple tasks (greetings, good-byes, compliments, expressions of sorrow and joy, the purchase of goods or putting together a travel itinerary), they enjoy the experience. The more they use the language, the more they internalize its structure and lexicon, and it becomes a useful communication tool.

The goal is to communicate concepts and to accomplish tasks in a manner that is culturally appropriate in the Spanish-speaking world. Even after a year, or two, which implies the investment of considerable time and money in an attempt to learn Spanish, students are still incapable of sustaining a conversation in the language. Students are still "translating" via memorized words, inflected words, and syntactic rules which they use to communicate their thoughts and feelings (Warner, 2007). So, for Warner, the four skill areas of learning a foreign language need to be addressed consistently and continually: listening, speaking, reading (including vocabulary), and writing (including grammar). It is easy to fall into the trap of teaching about the language, instead of actually teaching in the language. For this reason, as the Innovation's Director Salgeetha Gopalakrishnan (2008) states, it is important that educators be able to "design learning environments and methodologies that closely align with this generation's communication styles and learning preferences" (p.10).

Warner states that linguistic learning is not just an abstract or theoretical conceptual learning process. To learn Spanish is not just to understand and memorize grammar rules, phonetic norms or be able to produce logical sentence structures. A person can acquire all of these and still be unable to communicate using that language within actual situations of practical, social and interpersonal communication. Speaking a language is not only a mentally introspective process but also a whole psychological and anatomical process, working together to convert the meanings and the sounds of words into meaningful and understandable discourse.

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"Words in languages are finite, but sentences are not. It is this creative aspect of human language that sets it apart from animal languages" (Warner, 2007).

The concept of language as a practical tool for successful participation in social life underscores the importance of "learning to use a language", no matter if it is a first, second or third language. In this perspective, the educator's attention is focused on the common use and practical application of linguistic knowledge. It is not a scholarly and erudite exercise to show off "language knowledge" or to demonstrate the ability of language acquisition. In this case, it is the educator's goal not just for the student to acquire academic knowledge of the Spanish language, but to be able to "use" it in practical situations of authentic interpersonal and social communication.

This crucial challenge in second-language acquisition is to be able to practice all skills in developing a practical use of the new language. Beyond personal talents and initiative, there are technological tools and helpful aids to accelerate the learning curve. If students and teachers do not avail themselves of those resources, success in the practical learning of language will be delayed. People have been learning other languages successfully for centuries, and by various methods and learning strategies. As a practical matter, however, we cannot afford the luxury of a slow-paced acquisition process, nor is it acceptable to require an extensive number of classes, or dramatically to increase individual study time, to accomplish foreign language competence. Of course, time is not the only practical issue of concern. The longer it takes to accomplish learning objectives of language proficiency, the more costly and stressful the process will be, for the student and the institution.

Of the so-called four skills, listening, reading, writing, and speaking, the most difficult tasks have to do with language production. One of the first obstacles to overcome is the issue of pronunciation, the most difficult stage in the language acquisition process. For non-native speakers, the goal of proficiency equal to a native speaker is a moving target (Thomas, 1992). Current research on pronunciation instruction has dramatically changed the way pronunciation teaching is perceived. Morley (1991) recommends that teacher and learner change roles. Teachers must act, according to Morley, as "pronunciation coaches" and the learner must be proactive showing interest and initiative to learn. To Morley, only if the teacher takes the responsibility of changing her/his role is it possible to teach pronunciation effectively. The goal should be not to teach for "perfect" pronunciation, but for functional intelligible pronunciation.

Self-confidence, self-monitoring and the ability to know how to develop students' pronunciation are also required. Morley also points out that teachers need to assure that the pronunciation teaching program incorporate three characteristics: the learner's intellectual involvement; the learner's affective involvement; and the learner's physical involvement.

Oral production, with pronunciation as a key element, is one part of the Spanish language communication process. Listening skills are directly related to pronunciation since a student's inability to distinguish between the sounds of the language often affects one's ability to understand it when it is spoken to him or her. Listening is a daunting task because it is sequential and ephemeral. Unless we tape record the oral message that is given to us, it is gone into thin air, and we must rely on our memory to help us solve the mystery of the oral communication. Not surprisingly, these two skills are the most difficult for the educator to impart to his or her students. Their importance is shown by the fact that one word can be changed into another by simply changing one sound (Warner, 2007). Spelling is not as psychologically stressful as interpersonal dialogue. When reading a written text, or writing a text on a piece of paper or on a computer screen, there is no psychological tension derived as there is from the process of listening, understanding, elaborating and responding with one's own personal ideas to be expressed orally, in a spoken discourse. When we speak, we not only express a message or thought, but also we transmit an image of ourselves, as well, which is very important socially to the speaker. "Second language learning is a process involving the co-presence of intra- and inter-psychological activity, environments with histories, and an ongoing negotiation of social identity" (Thorne, 2000).

People try to be helpful to foreigners with whom they are engaged in a dialogue, yet when we study a second language we must deal with the very real issue of embarrassment. After all, we can articulate our ideas well in our "own" language, and that sophistication may be a trait that defines us, and gives us relative prestige in social circles. It is natural to create an "affective filter" which is effectively an inhibition that keeps us from "using" or "doing" the language. We become passive, and depend on our interlocutor, or another person, to carry the load of the conversation. Thus, learning to speak another language is stressful. Spanish, or any other language, is best acquired by listening, speaking, and responding to others in as stress-free a learning situation as possible. Teachers can be supportive and encouraging. Technology can also have a positive impact on the process because the computer is impartial and impersonal. It

can correct us forever without once becoming frustrated or angry. We know that the friendly computer will not think badly of us if we continue to use the wrong verb conjugation, or mispronounce our name. Many teachers incorporate technological devices as effective tools to achieve the goal of reducing the affective filter.

The role of the educator is essential for learning to be effective. In recognition of the fact that students have varied and different learning styles, and because technology can be harnessed to substitute for the instructor in certain language-learning tasks, educators choose the pedagogy that is key in the acquisition of desired learning skills. Digital technology is convenient, easy to use, and efficient, and would be popular choice by teachers involved in the language acquisition process. The use of this technology implies an important time management and pedagogical investment. Questions arise as to the practical and theoretical effectiveness of technology as an aid to the educator by helping to accelerate and enhance the students' learning experience. How do we help students to learn, knowing that the current generation of students is coming to campus with quite sophisticated technology skills and habits? Language instructors know that, and some "are finding that they are able to provide a flexible and creative learning environment more in tune with today's students through the use of (mostly) free tools that allow for a customized set of resources and services" (Godwin-Jones, 2009). These educators have understood that their students are 'Digital Natives'. They are also known as 'Millennials', 'NetGen' and 'Ygeneration.' "It is this generation of Millennial students that is entering college campuses and your classrooms now" (Gopalakrishnan, 2008). These students have social influences that affect the way they process information, communicate and learn. "If we educators want to reduce the communication gap, we need to create a learning environment that enables students to parallel-process, multi-task, and figure things out for themselves, and that taps into the skill set of our Digital Native students" (Gopalakrishnan, 2008, p.1).

Among several theoretical approaches to learning a language, VanPatten (1999) suggested Second Language Acquisition (SLA) as a theory-driven research field that it is concerned with how people learn a language other than their first. VanPatten and authors such as Schiffrin (1994) feel that language should be considered from a more communicative perspective, and not as words and sentences without interaction or context. To VanPatten (2002), the acquisition of a language is different from any other kind of learning.

In the 1980's language transfer began to be perceived as a cognitive process, yet the most important change was that research on SLA began to focus on the behaviors and methods of linguistic communication. VanPatten (1999) argued for the importance of the communicative approach of language teaching with communicative activities in the classroom. VanPatten, Williams, Rott and Overstreet (2004), defined SLA as a competence on which skills in language use depend. To these theorists and researchers there are three sets of processes essential for SLA: (1) input processing, (2) accommodation, and (3) restructuring in the acquirers' interlanguage (IL) grammar. They also reaffirmed that SLA process is input dependent (the single most important concept of second language acquisition).

A very well known expert in SLA, Stephen Krashen (1985), created the 'Natural Approach' model to explain how humans acquire a second language. His model has four stages and each one refers to a certain level of language competence. The process starts with a *"general language teaching stage."* Krashen and Terrell (1983) explained that this stage is divided in three substages: the *pre-speech substage* (learners use gestures to communicate, but do not produce utterances), *the early production substage* (learners can produce short utterances) and the *extending production substage* in which learners can produce short phrases. The *"sheltered language teaching"* is the second stage in Krashen's model. Here, the learners communicate with speakers of the target language, making a real use of the language, and paying more attention to the subject matter. Through this interaction, learners receive the necessary input and feedback from native speakers to improve their language skills. When learners are in the third and fourth stages, they are prepared to interact with native speakers in the language acquired. They pay attention not only to the formal aspects of the language, but to the messages and their content. In these stages, learners definitely reach language competence (Krashen, 1981).

Many interactionists think that a lot of comprehensible input is what is needed for SLA. Gass (1997) outlined the following model (Figure 2.1) with basic components in the SLA process, which in turn summarizes a consensus view among interactionist SLA researchers.

Figure 2.1 Basic components in the SLA process in interactionist research, according to Gass.

In order to acquire language, social and personal factors are necessarily present. A language class involves the use of oral or written communication and people sharing information. Communication as the medium for instruction, assessment, interpersonal relationships, group interactions, community relations and counseling, and the whole social life, is culturally bound.

According to LeLoup & Ponterio (2003), there are several theories of SLA. The interactionist position, supported in research, proposes that the concomitant effects of the external linguistic environment and internal individual variables are very important in language acquisition. "The tenets of comprehensible input, intake, output, negotiation of meaning, and attention to both form and meaning are posited to have an impact on a learner's inter-language progression" (p.1).

Studies of socio-cultural perspectives on language learning, "provide a complementary position that considers language learners in direct relation to their social and cultural surroundings and condition" (LeLoup & Ponterio, 2003, p. 1). To O'Neil,

> Language is arguably the most important component of culture because much of the rest of it is normally transmitted orally. It is impossible to understand the subtle nuances and deep meanings of another culture without knowing its language well (2006, p. 1).

In other words, language and culture are strongly intertwined.

LeLoup & Ponterio (2003) recognized some positive research results regarding the ability of Computer-Assisted Language Learning (CALL) to "provide an arena for natural, meaningful, and realistic language production and reception between and among native and nonnative speakers of the target language" (p.1). Also, they mentioned that it has been demonstrated that learners report a positive attitude using computers when engaged in language learning tasks, especially the ones that promote social interaction. It is clear that the use of technological devices to learn how to utter the proper sounds of a different language has some interesting

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advantages that avoid cultural barriers, and the psychological reluctance to pronounce and speak a new different language. It is not easy to learn a second language. This is why it is important to take into consideration the communicative approach, the input defended by interactionists, Krashen's "sheltered language teaching" stage, and the socio-cultural perspectives of language itself. All these theoretical stances permit one to better understand the process of how a person learns what primary considerations an educator should take into account to help his or her students to speak a second language.

The ultimate goal of language instruction is to prepare the person to express effectively and appropriately during oral conversational exchange with native or expert speakers of a target language. "The learners' oral output plays an important role in their acquisition of L2 competence …we consider oral output central to L2 acquisition" (Bärenfänger, Beyer, Aguado & Stevener, 2001). According to these authors, oral output permits corrective feedback, syntactic processing, and the automatic speech production.

The American Council of Teachers of Foreign Languages [ACTFL], is an organization formed by language educators of all levels, from elementary, secondary, community college, university and governmental institutions. Its member teachers have been promoting initiatives to develop pedagogical approaches and instructional activities that promote L2 speaking ability. They believe that speaking skills are improved by practice speaking in different contexts. Technology provides a means to create "different contexts" for their students.

At virtually any level, the language classroom is different, and the learning experience is unique, because students are confronted with constant, and predictable failure. The teacher must encourage students to keep trying, even though they themselves know (that is, the students know) what their teachers also recognize, that their language expertise is, at least at first, insufficient to meet the demands of effective communication. The instructor must devise exercises that limit language output, and thus the possibility of failure, to instill confidence and a positive attitude among the students.   For when learners produce incomprehensible output they experience communicative failure.   They are then forced into making their output more coherent, precise and appropriate. Learner output production, especially modifications to output to make it more comprehensible, draws attention to L2 structures. Production forces learners to pay attention to the means of expression, thus increasing the possibility that learners will stretch their linguistic resources to focus on the form to convey message meaning.

Even though the researcher has stressed so far the difficulties of oral language production, it goes without saying that writing, also a product of language, must be developed. It is also important to keep in mind that not all oral and written production qualify as valuable comprehensible output. Learners should have the help and feedback of people who master the second language in order to attempt to use the language to construct meanings for communication. In this case, VanPatten (2002) suggests five implications to reach that objective:

1. The more input, the better (the more meaning-based the class, the better);

2. The more interaction, the better;

3. All learner production should be meaning-based, or communicative;

4. Focus on form (or grammar instruction) should be meaning-based and tied to input or communication;

5. Examine what we expect of learners.

All these suggestions will help the learner in the process of "intake", which he defines as "the amount of input the learner can process within his or her "working memory" (p.24).

The comprehensible output of oral speech is influenced by other factors: attention (conscious attention as indispensable for turning input into intake), monitoring (error detection and subsequent self-repairs are only possible if there is a specific control device, and automatization (cognitive processes are generally characterized as the quick and invariant performance of a large number of related tasks). These are the cognitive processes that affect oral speech production. There are also three main components mentioned by Levelt (1989) in his model of speech production: conceptualizer, formulator, and articulator. The conceptualizer conceives an idea and selects, orders and keeps track of what was said before and so on. The formulator translates the preverbal message into a linguistic structure. This process, sometimes referred to as linguistic processing, involves developing a grammatical and phonetic plan. The end result of this activity is internal speech or a speech plan. The articulator refers to the motor execution of the speech plan by the processes of respiration, phonation and articulation.

In an effort to generalize output, in speech or writing, modern language teachers used to rely heavily on the use of videotaped programs to provide life-like speech situations. However well intended, the focus of this activity was still on the viewing rather than the production of the video. Students were encouraged to learn by viewing, and not by doing. But in a modern

conversation class, this should not be the case. In a conversation class <u>video production</u> for stimulating conversation has an "especially important function" (Altman, 1989). Television has remained as a tool of communication and as an educational and entertainment medium (Richardson and Scinicariello, 1989). Students take very seriously the act of speaking in front of a camera, thus expecting more of themselves. Students become aware not only of their verbal utterances, but also they become aware of paralingual features, such as gestures and facial or body expressions essential for communication. When they view their videos they smile and observe both their performance and use of the L2. During the production process (planning and execution) the learners practice both oral and aural skills, and they start using the language as a communicative tool to accomplish a real goal (Tudor, 1986) while they work in a very cooperative atmosphere. The review of their videos also allows the students the opportunity to evaluate grammar and pronunciation. They can also see progress and areas that need improvement. The whole group and the educator have the opportunity to identify and analyze the grammatical problems, thus sharing responsibility.

By reviewing their video, students have the time for corrective work, developing constant awareness and criticism of themselves. The enthusiasm among the students grows with the playback of their video because it gives them immediate and tangible rewards. One of the main advantages of using video technology is that it can be taped anywhere, giving the students the opportunity to be more creative. In 1996 the American Council on the Teaching of Foreign Languages [ACTFL] recommended the use of technology in language classes because different technological tools can help students to improve their linguistic skills. Nevertheless, in oral output few studies have been done. "Up to now, research on the acquisition of foreign language competence has predominantly investigated the structure and the functions of the input" (Bärenfänger et. al., 2001), and the importance of creative output for second language education has only been widely recognized since the mid-1980s (e.g., Gass and Selinker, 2001).

In this section on teaching college level Spanish, the researcher seeks to give a picture of second language acquisition as a meaningful, communicative process. College Spanish teachers endeavor to move from a process of teaching about the language to one of students' purposeful use of the language. It was emphasized that language production is the most difficult task; moreover, processes were identified to nurture the modes of listening as well as production. Second language acquisition (SLA) was presented as an important theoretical approach to

Spanish language instruction. SLA was broken down into stages and basic approaches to achieving SLA were discussed as well as the role that technological applications might play in supporting the process of SLA.

Language Learning and Technology

Successful learning can be reached through the use of the world of media and new technologies. Both are experiencing transformations due to two main developments: applications of digital technology and the major spin-off from digital technology. Currently, we are able to converge all media forms to provide multimedia or use a non-linear approach to integrate various media forms, and it is possible to design, create and present information that allows the learner to interact in a flexible way. Many communication and instructional goals are possible now through current learning technologies.

Learners can be helped to understand ideas and acquire information too complex for verbal explanation by using instructional technologies that involve powerful pictures, words, and sounds. When skillfully combined, these elements can compel attention, and can help to overcome the limitations of the classroom regarding time, size and space. Although the acceptance and integration of instructional technologies took time to be considered within instructional programs, today we have evidence of the effectiveness of carefully designed, high quality instructional media used as an integral part of the classroom instruction. Teachers and students should take advantage of the instructional technology. The reality of our times is that telephones, mp3 players, computers, video and play stations are a daily part of the lives of our students. Social networking is the way they communicate with their peers, and texting is more popular than having a traditional conversation on the telephone. Teachers may take advantage of their own students' knowledge and facility with electronic devices to incorporate them into their lesson plans and learning strategies. Why not use such devices to produce language, and thus provide the repetitive functions needed to acquire language skills that the so-called "mother method" has facilitated for centuries? Today, the question is not whether or not to use technology, but what technology to use, for how long, and at what cost.

Stephens, Emesiochi, and Joseph (1995) stated:

Teachers should be prepared to use teaching methodologies relevant to

today's challenges especially regarding the newer and emerging technologies of computers, interactive video laser discs, CD-ROMs, CDI, CAI, simulation and virtual reality (p.19).

These technological innovations foster changes in power relations in the classroom, facilitate massive information exchange, and encourage learner autonomy. It is important to remember that these innovations are ultimately "tools or adjuncts in the hands of instructors who must use them creatively to maximize the students' language learning experience" (Sotillo, 2000). Having 'Digital Natives' in our classrooms, technology can play a major when acquiring a second language. "The web is a great resource for authentic language materials which students can access. Furthermore, current technologies afford powerful ways to also provide students with cross-cultural experiences and linkages, in a manner that is not possible without technology" (Gopalakrishnan, 2008).

Stimulating an interactive environment where a second language is spoken by non-native speakers is best accomplished by multimedia and hypermedia systems. The use of multimedia, the Internet, and collaborative tasks in language learning is the real-world benefit to students of becoming more sophisticated in using computers and more experienced with a group approach to projects (Warschauer & Healey, 1998). In teaching a second language, the introduction of technological applications such the World Wide Web (WWW), has been one factor of great influence. Many second language educators believe that technology has the potential to change the way we perceive and perform language teaching. "Technology integration in foreign language teaching demonstrates the shift in educational paradigms from a behavioral to a constructivist learning approach. Language is a living thing, so the best way to learn a language is in interactive, authentic environments" (Wang, 2005).

By using recent technologies, researchers can track the learning behavior and the progress made by students in SLA. If we document the process of learning acquisition by the students, the better we understand how they learn, and the more successful we will be in developing resources and methods to help them learn more effectively.

"The most popular contexts for second-language acquisition (SLA) research are the classroom and naturalistic settings" (Collentine, 2000, p.44). "Technology provides insights into not only the *product* of learners' efforts but also the *process,* offering unprecedented opportunities for documenting acquisition" (Hulstijn, 1997, p. 132). Documenting acquisition is

important because it allows us to study and analyze how people acquire knowledge. Usually, computer-assisted language learning (CALL) is used to keep track of the constructivist process in which the learner is immersed. It is important to follow the learner's cognitive activity. "… learning activities in technology-based environments play a fundamental role in determining learning outcomes… they determine how the learners will engage with the course materials and the forms of knowledge construction that will take place" (Oliver, 1999, p 246).

Digital audio provides several advantages to users such as random access, variable playback speeds, and incorporation into interactive language learning applications, but in the digital age the greatest potential benefit to language learners is in the area of spoken language practice that lies in speech recognition and speech synthesis. The processing speed of personal computers, "the commercialization of speech technologies, and the tremendous interest in making the World Wide Web voice-accessible have led to interesting developments in these areas" (Godwin-Jones, p. 6).

According to Godwin-Jones, a beginning second language student cannot yet have a free-ranging conversation with a computer, "but parts of what needs to be there for that to be possible are beginning to fall into place." Today we can find programs, like IBM's *Via Voice* or *Wimba*, that allow word processing and other kinds of computing tasks to be accomplished through voice input. Programs like these have become mainstream software products and have been extended to a variety of languages, but of course these programs are designed to recognize the speech of native speakers, not of struggling beginners.

Current language learning software programs operate within a controlled environment, limiting the user's vocabulary. Programs like *TriplePlay*, *Echos,* and *New Dynamic English* are well known for their speech recognition ability. These programs typically focus on word/phrase discrimination and word order/syntax transformations. The speech recognition is incorporated in question formation and answering, grammar exercises, and responses to audio/video input. "Using voice input rather than the keyboard or mouse enhances active learning and simulates more closely real world communication" (Godwin-Jones, p. 7.)

The use of speech synthesis (computer recognizes human speech, talks back, and synthesizes human speech in order to have a two-way conversation), and text-to-speech (the users can have texts in English or Spanish read back to them in a variety of voices), has been available. Although these programs have artificial voices that sound like what they are,

computers pretending to be human beings, now some computer products are capable of providing voices which, while not quite mistakable for human, are quite useful for language learning.

"The multimedia computer is the ideal tool to present linguistic stimuli, both in spoken and in written form, and to register all reactions of learners in terms of both accuracy and time" says Chun (2000, p. 2). According to Hulstijn (2000) in language teaching, electronic multimedia hardware and software have replaced the traditional audio and video systems in the laboratory.

LeLoup & Ponterio (2003) also recognized some positive research results like the ability of the CALL to "provide an arena for natural, meaningful, and realistic language production and reception between and among native and nonnative speakers of the target language" (p.1). They mentioned that it has been demonstrated that learners report a positive attitude using computers when engaged in language learning tasks, especially the ones that promote social interaction.

It is clear that the use of technological devices to learn how to utter the proper sounds of a different language has some interesting advantages that avoid cultural barriers, and the psychological reluctance to pronounce and speak a new and different language. It is not easy to learn a second language. This is why it is important to take into consideration the communicative approach, the input defended by the interactionists, Krashen's "sheltered language teaching" stage, and the socio-cultural perspectives of the language. All these theoretical stances permit one to better understand the process of how a person learns what main considerations an educator should take into account to help their students speak a second language.

The teaching of a second language using technology has been an important topic of study for some years. The main questions to be answered center around whether and how the uses of technological resources affect SLA and teaching. In the realm of SLA, the most recent efforts to enhance the process of language learning have involved computer technology. Garrett (1989) points out that that tendency in education is part of a larger phenomenon known as the "new humanism," an attitude whereby technology helps to integrate the efforts of researchers from different fields. Technology enables humanists to investigate traditional concerns in novel approaches, exploiting technology's potential to build on the values of a given sphere and to create "principled connections" among the disciplines of the humanities (p. 104).

From a critical perspective, Salaberry (2001) asked important questions about technology in the classroom. The author stated that although many researchers have been positive toward its use, many others had a more reserved position. Most "new technologies" like radio, television, VCR, and computers may have been revolutionary in human interaction, but he believed that it was not clear that they had achieved equal degrees of pedagogical benefit in the realm of second language teaching. Salaberry claimed that the pedagogical effectiveness of technologies was related to four major questions:

(a) Is increased technological sophistication correlated to increased pedagogical effectiveness?

(b) Which technical attributes specific to new technologies can be profitably exploited for pedagogical purposes?

(c) How can new technologies be successfully integrated into the curriculum? And

(d) Do new technologies provide for an efficient use of human and material resources? (p. 1)

To answer these questions, one must have an understanding of how effective language acquisition occurs, its practical obstacles and the potential of technology to lessen or remove them.

Do we need educational technology in language classrooms? What kinds of services do computer technologies provide for these classrooms? These are two questions raised by Wang (2005). Partially answering the questions Wang suggested that technology integration in second language teaching demonstrated "the shift in educational paradigms from a behavioral to a constructivist learning approach." Language is a living thing, so the best way to learn a language is in an interactive and authentic environment. Computer technologies and the Internet are powerful tools for assisting these approaches to language teaching (p. 2). To Wang, when educators use technology their role should turn into that of a facilitator, providing their students the opportunity to search and explore for themselves. Wang (2005) also referred to a crucial issue-- educators cannot forget that technology is a tool and students' learning achievements rely on appropriate and creative instruction. The more aware one is of the pitfalls of using technology to design creative activities then the better able one is to avoid these pitfalls and use technology more effectively in L2 education.

Technological tools (Internet, multimedia, word processors, drill and practice programs, and others), can help students to engage in individualized instruction designed to meet their specific needs, but also it is necessary for educators to be trained in its instructional applications (Butler-Pascoe, 1997). Today, educators can still use pictures and gestures to help students' comprehension, but these resources are not enough. The use of the computer with Internet and hypermedia resources and its multi-sensory collection of text, video, sound, animation, and pictures can create a supportive and effective learning environment in the classroom. Using software, such as *Audacity,* can make learners feel secure enough to make and correct their own errors without embarrassment or anxiety. Also, students need to feel comfortable in using the technology to record, solve problems, save and send the files to their instructors.

Chapelle (2001) stated that language learners very often used computers. They were used to write papers, receive and send e-mail, and browse the World Wide Web. She also believed that the language teacher had to shape some of their computer-using experiences into language learning experiences, and that this task required teachers to study the features of computer-based tasks that promote learning. To Chapelle (2001), computer-related issues in SLA still needed to be understood, because there was not yet a coherent set of principles for examining past work and plotting fruitful directions. She stated that there have been individual and cross-disciplinary efforts to study and evaluate computer applications in second language acquisition (CASLA).

Like many other researchers, Chapelle had concerns about the importance of applying pedagogical and design principles based upon second language acquisition theory. In 1998, she suggested seven criteria for developing multimedia computer-assisted language learning (CALL):

- making key linguistic characteristics salient,
- offering modifications of linguistic input,
- providing opportunities for 'comprehensible output',
- providing opportunities for learners to notice their errors,
- providing opportunities for learners to correct their linguistic output,
- supporting modified interaction between the learner and the computer,
- acting as a participant in L2 tasks.

Chapelle proposed a model, based on Gass's, but modified it to include task characteristics. It included the same linguistic (input and output) and learner knowledge and

processes (apprehension, comprehension, intake, integration, and linguistic system). This model (See figure 2.2) added to the psycholinguistic perspective a means of expressing the task demands, which influence psycholinguistic process and knowledge.
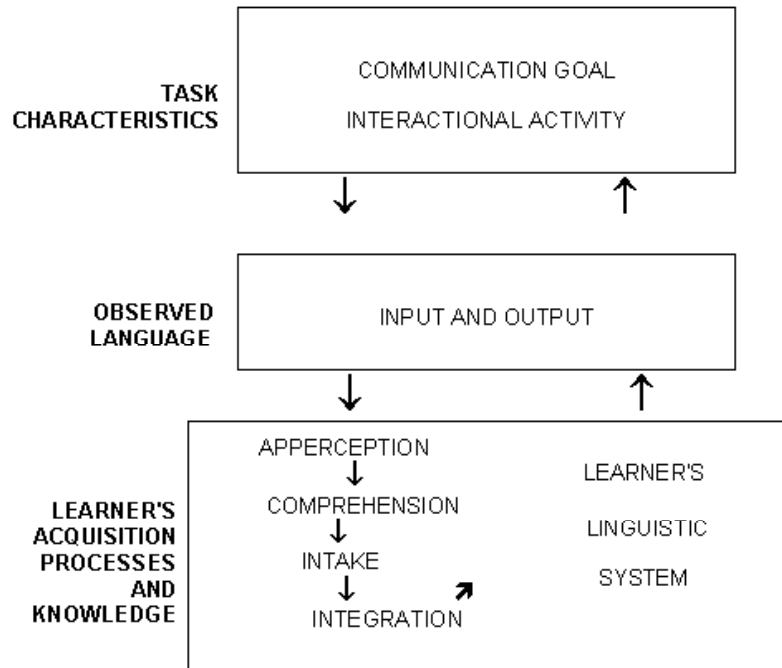
Figure 2.2 This SLA model, proposed by Chapelle, separates the observable language from learner processes, including task characteristics.

To Liu et al. (2002) the capabilities, modalities and activities of CALL helped students with a variety of learning styles. According to Barr, Leakey, and Ranchoux (2005), computer technology made a significant difference in enhancing students' oral language development. To them, there were several benefits of computer technology in oral language development. For instance, in monitoring, tutors can monitor and intervene in students' activities in a number of ways. In pronunciation, the students can listen repeatedly to their recordings against the standard of the native speaker, and they have individual access to resources on the Web, which give coaching in pronunciation, extending the boundaries of the classroom.

Barr, Leakey, and Ranchoux (2005) also mentioned that technology also prepared students to respond spontaneously in a conversation, giving them the possibility for distance learning through computer-mediated video conferencing software, with target language institutions, and the development of banks of role plays that were accessible on demand. The

students could also respond to visual or aural input. A digital lab with streamed digital video/audio could provide individual access and control of functions and the recording of student responses to stimuli or questions, and teachers could take control of student consoles in an ideal modern lab (2005).

Reading and writing have been traditionally the most frequently addressed skill areas in research. Each foreign language, such as Spanish, German, French Japanese, Russian, Italian, and Arabic, has software programs that are used in the process of teaching and learning. "… The greatest need for software development is in the areas of listening and speaking since these two areas were found to be sparsely represented" (Liu et al., 2002). Some computer-mediated communication (CMC) software tools, such as *InterChange,* were developed to support the learning of a second language. Many educators have accepted it because it allows conversations between students in a target language, creating a balanced participation in the classroom (Chun, 1994; Sullivan & Pratt, 1996).

Word processing software, which offered such features as spell checkers, thesauri, dictionaries, style checkers, and grammar checkers), also appeared and became the "…most accepted and universal use of computers in education today" (Hyland, 1993, 21). Some research has shown that word processing helped transform routine tasks into novel ones creating learner's interest (Greenia, 1992). This author also explained that the early use of computer-based writing programs facilitated the creation of communicative writing communities throughout the copy of assignments that students created and shared via a floppy disk. This process transformed the role of the instructor into a facilitator for classroom discourse. In SLA, word processing has been used for textual writing, particularly using the functions of grammar, spelling, translation and format. *Systéme D* is one word processing program that has helped the curriculum by placing a focus on the writing process, according to their creators Scott and New (1994). Some negative findings in the use of word processing researchers found that, for instance, students revised fewer writings on a computer (Hyland, 1993). For Hyland, at least one semester of word processing was necessary for users to improve their skills in writing.

Some Internet-based tools such as email, synchronous chat, bulletin boards, and digital video are now being used in SLA. There have been many projects developed using web publishing and simulated immersion (Pertusa-Seva & Stewart, 2000). Hellebrandt, (1999) stated that these tools allowed students to be exposed to an authentic cultural context by speaking and

writing in the target language. Two more tools, email and synchronous chat, also enhanced communicative language skills according to Kost (1999).

Finally, in order to assess oral proficiency levels in a second language classroom, speech recognition (SR) software has been used. SR allows the students to produce linguistic units that later are going to be analyzed by a speech recognition program and also provides students with feedback. However, authors such as Derwing, Munro and Carbonaro (2000) think that SR is insufficiently reliable due to the problem of the software not being able to recognize clearly the non-native speaker's utterances (p. 597).

Barriers to Integrate Technology in Higher Education

Why haven't we seen information technology and, in particular, computers become more heavily used in teaching? Maybe the most important reason is that there is little incentive for faculty members to change the way they teach. Perhaps the most difficult barrier to effective technology integration is the resistance that some professors have to change (Novek 1999). Nevertheless, about fifty years ago, some main barriers found were: how to match the use of a technological tool and the curriculum; inaccessibility and cost of equipment, and lack of educator skills in using technology. Today, besides those barriers to technology integration, there are others: lack of time, lack of access, lack of resources, lack of expertise, and lack of support (Butler and Sellbom, 2002; Leggett & Persichitte, 1998; Rogers, 2000). Tien and Luff (2001) also found that the relationship between the teacher and the technical support person could be a barrier, as well.

Butler and Sellbom (2002) concluded in a study conducted at Ball State University in Indiana that reliability was another barrier. Also, another study conducted at Illinois State by Chizmar & Williams (2001), confirmed all the barriers mentioned before. Hardware failures, incompatible software between work and home, poor or slow Internet access and out-of-date software were factors in overall reliability. The study mentions that the attitude of faculty is important in how technology is integrated. Faculty showed skepticism towards the overall effect technology integration had on student learning. Confidence, competence and creativity were three stages that Earle (2002) found when analyzing the attitude of educators as they adopted a change. Rewards, incentives and growth plans could be a flexible way to encourage educators to enhance technology in the classroom. The annual Campus Computing Project (1997) in its

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National Survey of Information Technology in Higher Education in the United States, reported that only 12.2% of the institutions surveyed recognize information technology in the career path of faculty. In the 2000 survey it pointed out that only 16.9 percent of institutions rewarded the use of information technology in the faculty review and promotion process.

Effective Integration of Teaching Technologies

In a research study based on qualitative reports and conducted at the college level by Aaron (2001), he designed the "SPECTRA" list (Support, Perceived need, Expertise, Communication, Time, Resources, Access) by adding the key ingredient of communication. In a rigorous review of the literature on the integration of teaching technologies in universities, Ives (2002, p.45) identified a long list of factors. Table 2.5 reproduces the data from Aaron and Ives.

Table 2.5 Table 2.1 Factors Affecting Teaching Technologies Integration in College and University Contexts.

College Factors		University Factors	
	%	%	
Support	17	14	Training
		10	Support
		4	Rewards
Perceived Need	7	9	Advantages
Expertise	12	10	Pedagogy
Communication	43	8	Climate
		7	Culture
Time	9	11	Time
Resources	11	9	Equipment
		8	Funding
Access	1	8	Access

The lack of IT staff and the resistance to commitment to educational technology by schools were also barriers pointed out by the Campus Computing Project (2000).

It is a common assumption to think that when teachers adopt information technology in the classroom that they will immediately feel discomfort and unfamiliarity because of the innovation. Instructional technology has been seen as an innovation, and it is not easy to persuade people to adopt an innovation.   Today, the tools required to make the transition from traditional to digital formats are more accessible. Yet, assistance and support are always needed for faculty to achieve a satisfactory use of instructional technology in the classroom.

In education, enormous investments in electronic technology have been made since the 1960s. Ehrmann (2000) offers a list of the different stages and the reasons to invest in electronic technology (see figure 2.3).

	A Few Outcome Gains Used to Justify Investments in New Technology		
	Makes learning better, faster, and cheaper by using self-paced, interactive courseware	**Other Ways Outcomes Might be Improved by Changes in Teaching-Learning Practices**	**Gains in Access, Changes in Content, Personal Efficiency**
Mainframe Computing and time-sharing (1970- 1980) [variety of operating systems changing over time, not usually compatible with one another]	Computer-assisted tutorials and assessment (interactive, self-paced, branching)	Simulation	Batch programming as one foundation for teaching computer science; engineering and scientific programming and software packages for design, analysis, data retrieval, etc.
Computers with videodisc players (late '70s – late '80s)	(See above)	Visualization	Image archives in fields such as biology, art to help widen the

			range of content taught in those fields
Microcomputer (standalone) (early 1980s - late 1980s)	(See above)	Learning Basic, Logo, etc. in order to learn computer skills, new skills of reasoning	Better productivity software for personal efficiency; exploding variety of professional tools and resources to help teach new topics, courses, minors and majors.
HyperCard (late 1980s – early 1990s)	(See above))	Students learn by creating hypertext resources	Stackware for distance education
Computer conferencing systems (Late 1980s – early 1990s)	(See above)	Improve outcomes (and especially collaborative skills) through increased use of (online) seminars	Distance learning applications
Web (late '90's to the present)	(See above)	Use the Web for many of the pedagogical ideas described above (online research to stimulate active learning; simulations powered with Javascript)	Distance learning; new topics opened via online access to corporate, government, cultural data

Figure 2.3 Generations of Technology, and Educational Reasons for Buying It.

(Ehrmann, 2000)

It is important to distinguish between motivation and exhortation to use technology. When students are motivated, they are more engaged and want to learn more. It is not enough to exhort or command students to learn; it is better if they are motivated or inspired. The resulting behavior of using or not using technology in the classroom is related to reasons, motives and circumstantial factors as much as to practical convenience or reward systems.

A number of studies try to answer what happens in teacher-education technology courses and programs. The majority of these studies explore issues like what teachers are and/or should be learning in technology courses; teacher-education students' knowledge of and attitudes toward technology; and how teachers think about and use computers in the classroom. This research shows that these courses and programs have a limited impact on how teachers think about and implement technology-supported teaching (Egbert, Paulus & Nakamichi, 2002).

According to Lam (2000) the research approach to educational technology has mainly been concentrated on the learners. To Lam, there is lack of research on technology from the point of view of the educator. "The focus has largely been on students and how technology affects them, and it has therefore addressed why teachers should or should not use technology, rather than why they do or do not."

> It is not due to a lack of confidence or interest in CALL that teachers do not use CALL activities; rather, it is due to a lack of time, administrative or curricular restrictions, or lack of resources (Egbert, Paulus & Nakamichi, 2002, p. 122).

There are also intrinsic factors that play in the decision to use technology in the classroom, such as the lack of confidence. Some educators do not see audiovisual equipment and computers as educational tools that can help their students. To the contrary many times they show their fear of being supplanted by machines (Lam, 2000).

This problem is not exclusive to higher education. For instance, Lynn Bradshaw (2002) has mentioned that K-12 teachers have many concerns about the use of technology. Some enjoy discovering new uses for it at home and in the classroom, while others have little interest in turning on a computer. Ditzhazy & Poolsup (2002) found that some K-12 faculty members have experienced many obstacles on the road to integrating technology in their classrooms. In these cases, their skills and knowledge of technology were critical to their success. School culture, voluntary participation, a comfortable atmosphere for experimentation and adequate support

were essential in determining favorable or unfavorable circumstances in the use of technology in the classroom.

One of the main reasons faculty resist changes in the classroom is because they experience and perceive obstacles to technology integration in their classrooms. They are afraid of what a new situation will bring, because they may not have all of the necessary equipment to effectively implement those changes, or simply they may not want to change their teaching style. Recent research on K-12 level shows that although some faculty were eager to use technology for curricular activities, the lack of effective professional development programs and lack of time to dedicate to experimentation hindered successful integration (Schrum, 1999).

Emergence of Technology in Language Learning

The importance of communication and espionage using foreign languages was very important during the World War I, and it was for that reason that the Language Lab originated. In the beginning, the labs consisted of tape recorders, amplifiers, headphones and microphones systematically laid out so that a teacher could help the students learn faster by using recorded lessons and other teaching aids. Generations of tape players allowed learners to listen to examples of native speech and to imitate and compare their own utterances. Dual track cassette players remained a staple of many language labs. Later, devices supported by microprocessors were introduced into the systems, along with tape recorders and amplifiers. This second stage improved the functionality of the equipment used and provided greater control to the students of the different communication functions. In the third stage, computers were included in the system, along with tape recorders and amplifiers. In this stage computers were solely used as multimedia players.

Computers have been used in the acquisition of second languages since the 1950's, according to Chapelle (2001). The name "CALL" (Computer-Assisted Language Learning) was agreed upon at the 1983, Teachers of English to Speakers of Other Languages (TESOL) convention in Toronto. It was in the 1960s, examples of CALL were documented when some projects explored the use of computers for second language instruction in higher education (p.9). Curiously, such projects were done using computer equipment and software acquired on campuses for other purposes.

In North America the best-known early CALL project was initiated at Stanford University in the Institute of Mathematical Studies in the Social Sciences (Chapelle, 2001). The project was directed by Richard Atkinson and Patrick Suppes, who had the collaboration of IBM and funding from federal government resources. Early CALL projects were undertaken at university mainframe computer centers, and the pedagogical principles went beyond the behaviorist/audio-lingual paradigms, because learners were provided with grammatical explanations and specific feedback about their responses.

Due to the popularity of CALL, which is an ever-evolving process, in the early 1970s, the U.S. government made the commitment to support computer-assisted instruction across the curriculum, a significant phase in the evolution of CALL despite the decline of Computer Assisted Instruction (CAI) (Chapelle, 2001).

In the 1980's various types of CALL began to be popular; although they offered some innovative uses, they were limited in use to drill and practice exercises (Iandoli, 1990). More interactive uses of CALL appeared as the technology advanced and more media were integrated into computers (Pusack & Otto, 1990). Researchers further developed CALL by combining research in "educational technology (particularly hypermedia), artificial intelligence, computational linguistics, and speech recognition technologies" (Chapell, 2001).

It has been demonstrated that CALL has benefited the development of listening skills in SLA, although most CALL-based teaching and learning traditionally tended to focus on non-oral activities such as software or Web-based reading, writing, or gap-filling type activities. Nevertheless, oral practice did not disappear, but the conversation class, pair and group role-plays, and discussions have continued to take place in ordinary classrooms. Felix (2001) listed "lack of speaking practice" first on the students' list of disadvantages in using Web-based programs for language, along with "distraction," "no interaction with peers," "inadequate feedback," and "absence of teacher" (p. 47).

Although language laboratories are already well accepted and established in institutions for the purpose of handling the technological support needed by language teachers and students, the effective use of instructional technology in second language teaching has emerged at most colleges and universities. For educators in charge of this type of institutional sub-organization, it is important to understand the role and function of the technological arsenal available to the lab. That knowledge allows them to achieve effective development of the practical use of the

languages among the students, and to provide the whole educational institution and community with a language learning center, promoting not only cross-lingual, but also cross-cultural interpersonal communication.

In more traditional language, as we has been noted, learning the students use tape recorders to work with the target language in its spoken form. Tape players, for instance, allow "learners to listen to examples of native speech and to imitate and compare their own utterances" (Godwin-Jones, 2000). Dual track cassette players and variable speed tape players have also been widely used. According to Godwin-Jones, today the trend is away from analog and towards digital formats. Currently, publishers are making their accompanying audio programs available on CD; audio programs have been digitized and made available to students through an intranet or local area network. Audio files are typically digitized in wav or aiff formats or in a streaming format like QuickTime or RealAudio, and played back through Web browsers.

Economic Investments in Educational Technology at the University Level

A growing number of universities are investing many thousands of dollars and a great deal of time and effort in program development to assure the effective use of modern technology in their classrooms. The 1997 National Survey on Higher Education (The Campus Computing Project -- Claremont Graduate University, Claremont, CA) (Green, 1999) found that all types of instruction in all fields are affected by information technology. According to the National Education Association (NEA, 2004), technology is changing the teaching and learning process. The academy is more attracted by the promise and potential of technology. For some people technology is seen as a way to reduce staff and cut budgets. "Others see technology as a critical complement to the educational experience, opening more opportunities for the learner than can be encompassed by one campus" (NEA, p.1). *The National Survey of Information Technology in U.S. Higher Education of 2004* revealed that "colleges and universities are beginning to experience some relief from the budget cuts that have cast a shadow over campus IT efforts and investments for the past few years" (p. 1).

The effectiveness of technology in K-12 has been studied and the outcomes are producing encouraging results, causing educators to provide greater access and availability of more resources (Charp, 1998). If the investments in technology have produced good fruit in K-12, there is no reason why this success can not duplicated in higher education. William Frawley

(2003) discussed integration of technology into instruction at the University of Delaware. Between 2000 and 2002, the Center for Teaching Effectiveness (CTE) awarded $200,000 in faculty development grants for projects using advanced and emerging technology in instruction. CTE awarded grants to chemical engineers, musicians, cognitive neuroscientists, management specialists, artists, physicists, nutritionists, and marine scientists and English professors.

The University of Delaware had a powerful reason to award those grants: The faculty was increasingly adopting collaborative learning approaches for their students in their courses and classrooms. Many faculty members were embracing problem-based learning (PBL) as a powerful student-centered approach to learning. The faculty wanted to use PBL because students work cooperatively in small groups and exercise their critical thinking skills by analyzing and solving real world problems. In their classes, faculty had limited access to information technology in PBL classrooms, and it was a real and serious barrier to realizing the full power of the approach. For this reason they asked for help, thinking that wireless technology could help lower that barrier. They required a high-security wireless access point, and a mobile wireless lab for several areas of study. The project had a strong impact on the initial effort to integrate wireless technology and collaborative learning. The faculty that initially participated in the project had previous experience in collaborative learning and in the use of technology in the classroom, and it was a big advantage. Today, 613 teachers are using technology in their classes with diverse approaches and technologies like interactive WebCT, Macromedia Flash, web mail utility, Java Applet simulations, AutoCAD, interactive Websites, streaming video lectures, and online forums between other technologies available.

Indiana University has been using participatory strategies like *Oncourse*, an online environment for teaching and learning, designed to help educators and students. With this environment, faculty could have access to applications like: 1- distance education and distributed learning, 2- classroom teaching, 3- workshops and training and, 4 - collaborative learning. In the fall 2007, Indiana University changed to the *Oncourse CL*, and faculty and students were not happy about the change. Some professors submitted to Indiana University authorities a *'Proposal for Faculty Approval of Technological Teaching and Learning Tools and Systems'* in November 2006. In this document, the faculty said that they were

> …experts in and responsible for course content and pedagogy, and their involvement is critical in the decision-making that results in the acquisition and/or implementation of new system-wide course management systems

and other technological teaching and learning tools and systems."
(Cochrane & others, 2006).

The faculty and students at Indiana University were asking for participation in the decisions about technological systems that impact their educational environment. This reaction showed a new mentality at higher education institutions. "Communication and user support are integral to the successful adoption and diffusion of any innovation, yet support staff in technology organizations often hear too little too late when large projects are planned (Fitzpatrick, 2003, p. 50).

The university being studied is not the exception in the efforts made to offer better technological support to faculty and students. The administration has supported the investment in technology and its use has become a great advantage to the students. Technological classrooms are part of the main campus infrastructure, and almost half of the educators use them or some kind of technology in the classroom. Considering all specific situations and their factors pointed in the literature, the present study is part of the search to determine what will encourage faculty to respond positively to the urgent need to use the available technology effectively. During the 2006-2007 academic year the administration allocated to the Language Learning Center (LLC) $40,000 for the acquisition of new equipment, audiovisual materials and software. More financial resources were expected, according to the Office of the Dean.

This willingness to invest funds in the LLC is part of the university's decision to use and provide modern technology to its students and faculty. Financially, there are many important reasons why investments in technology in the long term will increase economic revenues for the institution. Many other universities are also investing in technology in order to remain competitive. Technological resources become obsolete very rapidly, so it is important to use and take advantage of them before these resources become outdated.

Research on Technology and Computer-Assisted Language Learning (CALL)

To better understand the influence of technology in SLA, it is important to review some of the contributions of Computer-Assisted Language Learning (CALL) and the labs in the development of effective listening and oral skills, and the results obtained in the seven dissertations found in ProQuest and ERIC.

Buscemi's case study (2003) involved the implementation of technology in a university-level Spanish program, and the researcher used quantitative and qualitative methods. Her study was conducted during the first phase of the implementation of a computer-enhanced component in the first-semester Spanish course. The purpose was to compare, for a semester, the results of two classes; one class with 50 students using a computer-enhanced component and one class with 54 students that did not use computer-enhanced component. One of the research objectives was to describe learner progress in SLA with respect to one aspect of the target language—verb morphology. The researcher used data to describe the learners' oral and written verb production performance. Among the main findings were that quantitative analysis of the post-test data showed a higher frequency of self-initiated grammatical corrections by the computer-assisted learners, but did not yield a significant statistical effect for the computer-assisted verb exercises on accurate oral and written verb production, except for the discrete-item verb test. Quantitative and qualitative results and observations, for this study, indicate that participation in computer-assisted verb exercises had a positive effect on learning Spanish verb structures with respect to accurate oral and written production. The analysis was based on six sample transcriptions.

Patterson (2001) studied computer-assisted language learning. She analyzed the discourse produced in computer-assisted and oral class discussions by Spanish learners in three university Spanish conversation classes. Her purpose was to compare the discourse produced in computer-assisted class discussions (CACD) and oral class discussions (OCD). During 15 weeks semester, 42 students in three classes participated in Computer Integrated Manufacturing (CAM) using, in the lab, the Interchange program of Daedalus software, which allow them to communicate freely while participating in writing discussions using the target language (TL). Patterson collected the data from computer printouts of the CACDs and transcripts of the OCSs. To get information about anxiety she used self-report questionnaires. Responses to the questionnaires showed that in CAM the students experienced less anxiety than in an OCD. Also, in the CAM the students produced more words, took longer turns, and the nature of the discourse was more conversation-like, as compared to the question-answer series of the OCD. The author concluded that the CAM could be an important addition to the language class because it improved discourse competence, an integral part of language acquisition.

Another study done by Karbasioun (1997) was on the use of interactive video, computer-assisted language learning and second language/culture acquisition in the use of Spanish, French

and English as a second language. The author believed that traditional methods of instruction failed to promote acquisition, and that communicative approaches were far superior to other methods in terms of their results. He thought that it might be possible that with recent advances in technology one could get closer to creating an authentic situation in using language. Using qualitative research the author investigated the effectiveness of semi-interactive video, a tool that is proving to be an increasingly valuable aid to learning. It offers a number of advantages over many other traditional teaching media and is capable of providing a combination of effects, which are currently superior to anything available through the more widely known forms of computer-assisted learning (CAL).

The author used this tool, as opposed to semi-communicative methods, in a course with traditional and non-traditional college students that was taught using two different methodologies. The first half of the semester he used a semi-communicative approach and the in the second part the course was taught entirely based on semi-interactive video. The learners were interviewed at the end of the research project and observational journals were kept to maximize precision. The research was conducted with an experimental group and with a control group, i.e., a comparable group residing (working or staying home) in the U.S. but not undergoing any language training. This group filled out questionnaires, once at the beginning of the project, once two months later, and finally four months later. Just as with the experimental group, the control group was interviewed at the end of the project in order to cover any missing information and/or for data confirmation purposes.

Although the author reports that the findings are mixed at best, some important results show that the students prefer the audiotape to the semi-interactive video to improve their abilities in listening comprehension and speaking. Forty per cent of the participants considered both methods important to overcome their fear of making mistakes when speaking a second language.

Despain (1997) studied the effects of two delivery systems for listening comprehension exercises on the language performance and attitude of beginning Spanish students, using computers. His idea was based on the fact that educational institutions were incorporating computer technology into many areas of the education experience. In this research eighty subjects in five sections of a beginning Spanish language class were randomly assigned to a traditional instruction or to a computer-based instruction group at the North Carolina State University. One of the groups used a delivery system for the listening comprehension exercises.

Different methods were used, such as listening comprehension pretests, practice tests and post-tests, and various attitude surveys, to measure the effects of the respective attributes of each delivery system on subject learning achievement and attitude throughout the study.

Although this was a preliminary study, the main findings and conclusions made by Despain can be summarized as follows: students tended to learn more effectively/efficiently using the computer delivery system; students who completed more exercises using computers learned more; there was a time-savings advantage to using the computer; students who completed the exercises via computer had a more positive attitude toward the listening comprehension exercises, and students using computers had a more positive attitude towards language learning, in general.

Toro (1994) studied the effect of HyperCard-based program creation on the acquisition and retention of Spanish. She also investigated the effect of learning styles on SLA, as well as the effect of HyperCard instruction on attitudes toward computers. She questioned the relationships between learning styles and the participants' knowledge maps; the relationship among learning styles, computer anxiety, attitudes toward computers, and SLA; the effect of a HyperCard-based Spanish instructional unit on the acquisition and retention of Spanish; and the effect of creating HyperCard activities in students' attitudes toward Hypermedia. The sample was composed of undergraduate students at West Virginia University who took Spanish 1. The study lasted one semester. The students were exposed to traditional teaching and HyperCard instruction. The students also created programs in Spanish using HyperCard, and two knowledge maps (a two-dimensional graphical display that presents information in the form of node-link-node assemblies). The first one was created at mid-semester and the second one at the end of the treatment. As independent measures the researcher used a 16-week term, computer anxiety, computer attitudes, and learning styles. The dependent measures used were SLA, information linking, knowledge map construction, and attitudes toward hypermedia. The results of the study indicated that the Hypermedia-assisted instruction improved the students' acquisition of a second language.

Henry (1994) explored the use of oral dialog journals as an integral part of SLA with students between 14 and 30 years old in Morocco. She taught two classes of English; a beginning grammar class with 20 students and an advanced pronunciation course with 11 students. The duration of the classes was 16 weeks. Henry used oral journals with two out of 20

students (for the first class) and all 11 students from the second class. This study focused on the strengths and weaknesses of the use of oral (audiotape recordings) journals and compared them to the use of written journals in teaching English as a foreign language and intermediate Spanish at the college level. In the study the opinions of the teachers and students were examined as to efficacy of the oral and aural aspects of using oral journals in SLA. The researcher found that the use of oral journals significantly increased the students' level of confidence, it improved the teacher–student relationship, and allowed students to develop their own learning styles to help them reach their goals.

Cumming (2005) studied K-12 Spanish teachers' use of and beliefs about computers. In her study of 340 Spanish teachers, she found that those teachers who used computers administratively on a regular basis also reported higher pedagogical use in the classroom. The study intended to determine K-12 Spanish teachers' use of and beliefs about computers in the United States. Cumming used a survey of 340 Spanish teachers who were members of the American Council on the Teaching of Foreign Languages (ACTFL), teachers of Advanced Placement (AP) Spanish or members of the American Association of Teachers of Spanish and Portuguese (AATSP) in Georgia. The survey had questions related to teachers' administrative use of computers, pedagogic use of computers, beliefs about the pedagogical potential of computers, beliefs about computers, and beliefs about the integration of computers in the classroom.

The findings suggest that teachers using computers administratively on a regular basis also reported somewhat higher pedagogical use in the classroom. Findings also showed that the respondents' use of computers was planned to emphasize particular language skills and involved various computer technologies. According to Cumming, these Spanish teachers had strong beliefs about the potential of computers for language learning and computer technology, but had divided beliefs on issues of integration and management of the use of computers. Also, teachers reported both positive beliefs about computers and an increased use of computers in the classroom.

All these previously mentioned studies reported an increase in the learning effectiveness in SLA through the use of technology. Their research did contribute to the understanding of the reasons educators have to use technology in their SLA classrooms. All of the dissertations mentioned above concluded that technology was advantageous in SLA, because students were

more engaged and had more opportunity to practice the target language in a more informal and relaxed environment.

Developing Specific Skills Acquisition with Specific Software Tools

As mentioned before, foreign language educators can choose from a wide selection of software programs or applications that are employed in the classroom, the laboratory, or used independently by students in self-instruction opportunities. Many of the resources that are currently available on the Internet, free of charge, include tutorials.

Educators can help their students develop their second language skills by using instructional tools for creating, delivering, managing or tracking the progress of their learning. Some on-line resources provide a social learning environment, which enjoys popularity among students and adds motivation. Also, they can access "Live tools" for delivering live meetings, screen sharing, or the accessing or building of virtual worlds. The Web is a source for audio and video conferencing, live broadcasting, and 3D or virtual worlds. Of course educators can also create and share documents, PDF files, e-Books and presentations, using a variety of word processing, and presentation tools, files conversion tools, and document or presentation hosting sites. Web and wiki (a website that allows the easy creation and editing of any number of interlinked web pages via a web browser using a simplified markup language) tools are available to create blogs, web pages or sites and wikis, as well as provide interactivity on those sites. Images and sounds can be used to develop specific skills in the second language. Besides providing access to audio and video files of cultural content, educators can also use tools to create avatars, podcasts, screencasts and videos. In this case, educators can use some tools to create, edit and host images, invent avatars, make audio files, podcasts, screencasts and videos. For these purposes one will use image editors, image hosting sites, audio editors, video makers, screencasting tools, and video hosting sites. One cannot fail to take into account the existing use of email, synchronous chat, bulletin boards, and digital video as SLA tools. Finally, in order to assess oral proficiency levels in a second language classroom, speech recognition (SR) software has been used.

All of these tools give students exposure to authentic cultural contexts to promote their development in speaking and writing in the target language.

The Key: Knowing How to Use Technological Tools

How technological tools are used in a second language classroom is the crucial aspect every educator has to consider. It is not enough to know how popular a tool is, for it needs to be used in an appropriate, effective and productive way. Bailey (1996) has stated that technology needs to be used in a creative and imaginative way to generate learning and, according to Lave and Wenger (1991), learning implies becoming able to be involved in new activities, to perform new tasks and functions, to master new understandings. Activities, tasks, functions, and understandings do not exist in isolation; they are part of broader systems of relations in which they have a logical meaning. These systems of relations arise out of, and are reproduced and developed within, social communities, which are systems of relations among persons (p. 53).

In the nineties, many language educators argued that only the use of technological tools was going to affect students and the foreign language curriculum, according to Armstrong and Yetter-Vassot (1994). Then, many articles appeared discussing the need to create computer software based upon sound pedagogy and language learning theories.

This study lays a theoretical foundation for the practical use of instructional technology in the SLA classroom. The study seeks to identify the barriers or factors that influence educators to use or not to use instructional technology in their SLA classrooms in the Modern Languages Department at Kansas State University.

Chapter 3 - Methodology

This chapter describes the methodologies used to identify the main factors influencing Spanish language educators from the Modern Languages Department at Kansas State University (KSU) and other universities of Kansas to use, or not to use, technology in their SLA teaching. This study was centered on the use of technology to improve the skills in the teaching and learning of Spanish as a second language. The framework for this case study is guided by the nature of the research objectives, and these objectives arise from the researcher's interest in her use of technology in teaching Spanish as SLA.

This chapter is divided in four sections. The first section presents the research questions examined by this study. The second section provides the theoretical framework for the study, and the third section discusses the design of the research methods. In the fourth section the data collection and the instrumentation are presented.

Research Questions

The following research questions guided this study:

1. What factors or perceptions among Modern Language (ML) Spanish instructors impact their use (or lack of use) of technology integration in second language teaching at their home institution?

2. What perceptions (or characteristics) do individual cases have along a continuum of non-users to users with respect to the integration of instructional technology?

Theoretical Framework

As it was mentioned before, while many institutions of higher education have implemented the use of instructional technology (IT), there is still difficulty in getting faculty to adopt it willingly, although technology has been shown to facilitate learning. As Stephens, Emesiochi, and Joseph (1995) stated:

> Teachers should be prepared to use teaching methodologies relevant to today's challenges especially regarding the newer and emerging technologies of computers, interactive video laser discs, CD-ROMs, CDI, CAI, simulation and virtual reality (p.19).

The teaching of a second language using technology has been an important topic of study for some years, and the main questions to be answered center around whether and how the uses of technological resources affect SLA and teaching.

The theoretical framework for the first research question deals with the intructors' incidence of self-estimated skill, perceptions, and the magnitude and significance of correlations between self-estimated levels of technological competence and their perceptions of importance for specific technological applications. Many teachers do not want to change the way they teach. Perhaps the most difficult barrier to effective technology integration is the resistance that some professors have to change (Novek, 1999). Also, different studies have identified the lack of educator skills in using technology as a main barrier to effective technology integration.

The second research question of this study addresses a delineation of the perceptions (or characteristics) manifested by individual faculty cases who have differing orientations with respect to the integration of technology applied to course instruction.

A number of studies report insights into what happens in teacher-education technology courses and programs. The majority of these studies explore issues like: a) what teachers are and/or should be learning in technology courses; b) teacher-education students' knowledge of and attitudes toward technology; or c) how teachers think about and use computers in the classroom.

According to Lam (2000) the research approach to educational technology has mainly been concentrated on the learners. To Lam, there is lack of research on technology from the point of view of the instructor.

How technological tools are potentially used in a second language classroom is the crucial aspect every educator has to consider. It is not enough to know how popular a tool is; instead, the tool needs to be used in an appropriate, effective and productive way. Bailey (1996) has stated that technology needs to be used in a creative and imaginative way to generate learning and, according to Lave and Wenger (1991), learning implies becoming able to be involved in new activities, to perform new tasks and functions, to master new understandings. In that sense, the educators can be considered the "gate-keepers" of technology; they not only determine whether it enters the classroom, but also affect how it is used in the classrooms. Warschauer and Meskill (2000) point that with "the advent of networked multimedia computing and the Internet, language teachers throughout the country have been warming up to using computers in the

language classroom. This is particularly true in higher education, where students and teachers have greater access to computer laboratories and Internet accounts than in K-12 schools." Because of these and other reasons, the main purpose of this study was to identify the major perceptions skills and individual characteristics among the SLA faculty and instructors at different levels. The investigator also sought to identify the barriers or factors that influence educators in deciding whether or not to use instructional technology in their SLA classrooms both in the KSU Modern Languages Department, and other universities of Kansas.

Research Design

The purpose of this study is exploratory. That is, the investigator delineates the perceptions and describes the thinking of second language acquisition educators as a group, with respect to the implementation of technology to support instruction. To obtain and delineate the perceptions a survey was designed to collect appropriate data. In addition, using the survey data to assist in identifying specific patterns for interviews, qualitative data was collected in personal interviews. Transcribed interviews thus provided data pertinent to the comparison, along a continuum of non-users to users, of technology integration designed to support SLA instruction. Mixed research methodologies, therefore –descriptive and qualitative- served to address the two research questions and better understand and describe the main factors that influence SLA educators in their decision of using or not using instructional technology.

The survey was administered using a flexible web-based instrument, and the case study was based on four in-depth interviews that allowed the investigator to clarify or follow-up some of the main issues that were prominent from the examination of the survey data collected. The criteria used for selecting participants for the survey was that they had to be collegiate instructors of the Spanish language in the Modern Languages Department -KSU- and in other seven universities of Kansas. The interviews were conducted with four faculty members in Modern Languages at KSU, specifically selected to represent a continuum of technology integration used to support instruction (i.e., non-users -> users).

The Survey

To detect differences in the collegiate instructor's perceptions and practices in integrating technology in Spanish language instruction, a survey was designed and administered. According to Borg and Gall (1996), " … the purpose of a survey is to use questionnaires or interviews to collect data from participants in a sample about their characteristics, experiences, and opinions in order to generalize the findings to a population that the sample is intended to represent" (p. 289). A survey or questionnaire has several advantages, and was appropriate for the sample to be considered in this study. A questionnaire can be readily analyzed, and most statistical analysis software can process them (Walonick, 1993). Questionnaires are cost effective, familiar to most people, and they are less intrusive than telephone or face-to-face surveys. Most important, written questionnaires reduce interviewer bias because there is uniform question presentation (Jahoda, et al., 1962). A survey or questionnaire helps to provide structure and standardization in the research design.

For this study a survey of 43 questions was sent to 80 SLA teachers working in the Modern Language department of eight universities in the state of Kansas: Kansas State University (16), University of Kansas (22), Wichita State University (9), Emporia University (5) Pittsburg State University (7), Forth Hays State University (4), Washburn University (4) and Friends University (3).

The survey was specifically designed to permit an examination of initial response patterns from which probing questions could be constructed and used in the case study component of this investigation. Since the survey was also constructed to contain questions regarding recent changes in technology available (and used or rejected by individuals instructors), no preexisting survey was deemed appropriate. Finally, since the survey was intended as exploratory, the researcher was not overly concerned with issues such as internal consistency reliability (i.e., coefficient alpha), item-to-total correlations, or other statistical data often associated with the construction and administration of questionnaires intended for inferential interpretation.

Qualitative Research and the Case Study

Three features typified this aspect of the investigation: the study was conducted in its natural setting, neither subjects nor the environment were intentionally manipulated, and the data

collected was initially descriptive.

Creswell (1998) recommends that researchers use a rigorous design for a qualitative study, while he also emphasizes commitment of time and resources. He makes it clear that qualitative research has several requirements: to spend more time in the field, to be able to sort complex and time consuming data analysis in order to reduce them to a few categories, to write extensively in order to show the evidence and multiple perspectives as well, and to be aware of the changes of the guidelines and procedures (pp. 16-17).

In order to understand why qualitative research is appropriate to this case study, it is important to state some of its characteristics. Although case study research was much criticized at its inception for different reasons, it has been extensively used in many areas, very recently and importantly in education, because it pays special attention to completeness in the observation, reconstruction, and analysis of the cases under study. One of its most interesting and appealing characteristics is that the views of the participants or "actors" are included as part of the case study, and the methodology is acceptable if the goal of the study clearly establishes the parameters of the qualitative research methods. According to Patton (1987), qualitative researchers empathize and identify with the people they study in order to understand how those people see things. It is a study of people in their own natural process of living, in their particular situation, and environment.

Barritt (1986) emphasizes that it is not the discovery of new elements that is important in qualitative research, as in natural scientific study, but rather the heightening of awareness of experience, which has either been forgotten or overlooked. The purpose is to attain a better understanding of the way things appear to someone else, and through that insight improvements can then be made in practice (p.20). Qualitative researchers want those who are studied to speak for themselves, and to provide their perspectives on their work and other actions. Therefore, qualitative research is an interactive process in which the persons studied teach the researcher about their lives. Qualitative researchers attend to the experiences of those studied as a whole, not as separate variables (Ely, Anzul, Friendman, Garner, and Steinmetz, 1991, p. 4). Creswell (1998), in defining the term "qualitative", stated that it is

> …an inquiry process of understanding based on distinct methodological
> traditions of inquiry that explore a social or human problem. The researcher
> builds a complex, holistic picture, analyses words, reports detailed views
> of informants, and conducts the study in a natural setting (p.15).

The present case study satisfies the three tenets of the qualitative method to provide methodological rigor: describing, understanding and explaining.

Trustworthiness

In qualitative investigations, one of the most important challenges of the researcher is to persuade the reader that the research findings of an inquiry are worth paying attention to or are worth taking into account (Lincoln & Guba, 1985). The use of criteria for validity and verification in the production of knowledge of the social world is called "trustworthiness" (Denzin & Lincoln, 2000; Guba, 1981).

Triangulation

Qualitative research, then, places an emphasis on the trustworthiness of data. How can the researcher assure that the objectivity of qualitative research can be supported? The researcher can use various techniques which can be evaluated in terms of the reliability and validity of the researcher's observations (Kirk & Miller, 1986). To establish trustworthiness, triangulation was achieved through two different methods: in-depth interviews and a survey.

Peer Debriefing/Review

The first validation procedure was peer debriefing or review based on regular meetings with advisors that allowed the researcher to focus and discuss the progress of the research. The feedback, suggestions and advice given by advisors also helped the investigator to achieve greater understanding.

Member Check

"Member check", according to Lincoln and Guba (1985), is the single most crucial technique for establishing credibility. A "member check" is conducted by the researcher by going back to those studied and asking them if the findings were accurate or if they need correction, elaboration or other clarification. In this study member check was held with each of the teachers interviewed regularly to clarify and explain any perceptions that required clarification.

Thick Description

Sufficient contextual and detailed information will enable readers to make judgments about whether or not any particular case can reasonably be applied to their own specific field of practice. The reader is also provided with a thick description of the data, and the subjects (the Spanish teachers who were participating in this case study).

Lincoln and Guba (1985) state that in a naturalistic study the researcher cannot specify the external validity of an inquiry; he or she can provide only the thick description necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility (p. 316). For this reason, the researcher in all of the data collection methods provided a thick description of each element that was important to the study: participant interviews, and the patterns obtained through the survey.

Following Stake's (1980) recommendations, this case study was directed toward gathering information that has practical and functional uses (p. 70). The use of mixed data collection methods permitted the description of the aspects of this research to achieve its goal, which was to focus on selected contemporary phenomena in which in-depth descriptions were essential to gaining a more personal understanding of them. The results can potentially make a valuable contribution to knowledge for the community of scholars.

Case Study

This investigation is a case study of the academic, social-economic, cultural, and technological factors that are related to the decision that SLA faculty make to use or not to use instructional technology in their classrooms.

To conduct a carefully designed research project it is necessary to use a case-study protocol (Yin, 1994). The following sections are included:

- Overview of the project (project objectives and case study issues)
- Field procedures (credentials and access to sites)
- Questions (the specific questions that the investigator will keep in the data collection)
- Guidelines for the report (outline, format for the narrative) (Yin, 1994, p.64)

This case study presents a holistic understanding of cultural systems of action and the interrelated activities engaged in by the actors in a social situation from which we learned in a

certain period of time. We learn from multi-perspective analyses, because the voices of the actors are considered in it, thereby allowing us to understand a social problem.

This case study is set in a midwestern public university of about 23,000 students from all 50 states and more than 90 countries. The university offers 65 masters degrees, 45 doctoral degrees and 22 graduate certificates in multiple disciplines. More than $151 million are allocated to students and faculty in scholarships, grants, loans, and work-study. Its main campus is located in Midwestern college town, with a total population of 52,000. This university has ranked first nationally among state universities in its total number of Rhodes, Marshall, Truman, Goldwater, and Udall scholars since 1986.

As with other public institutions of higher education, the institution faces important challenges. One of them is to keep current with new technology. At this university technology decisions are client-oriented, with a service attitude, meaning that they try to keep the interest of the students in mind. In other words, technology is utilized to serve the students needs. One of the departments to receive university funding for contemporary technology is Modern Language. In June 2006, the Office of the President assigned monies for improvements and the administration has focused on the importance of having appropriate technological tools to improve SLA because of the increased demand in learning second languages.

This department was aware of the increased demand for second language acquisition and offers classes in Arabic, Chinese, Czech, French, German, Hindi, Italian, Japanese, Latin, Russian, Spanish and Swahili. The Department is making efforts to improve the technological resources available, while at the same time trying to persuade some of the faculty to use them. The department has a Language Learning Center (LLC) that is open to all students enrolled in a language course and to all students needing to take language placement tests for French, German, and Spanish. It provides audio, video, and computer multimedia services for both undergraduate and graduate level courses, and to faculty.

The use of instructional technology in this university is very broad, and this case study is concerned only with the factors that influence the SLA faculty to decide to use or not to use instructional technology in their Spanish classrooms. As is the nature of the qualitative inquiry, initial questions were expected to change as the research progressed and the data started to unfold.

Participants

The participants of this case study were four professors who teach Spanish as a second language. All of them hold a Ph. D degree in Spanish. Three are Spanish native speakers with experience and competence in teaching. Since this research intended to explore a single group, that is Spanish instructors who, under specific conditions, are asked to identify the main factors that influence them to use or not use instructional technology in their classrooms, the sample was appropriate. Two female and two male educators were chosen for this case study. The educators that were selected are working as Spanish teachers and have been able to use instructional technology in their classes. To Merriam (2001), "purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (p. 61).

Before the collection of interview data, the participants to be interviewed received a consent form to read and sign (See Appendix 1). Those who agreed to participate in this case study were interviewed. The information was collected through a variety of data sources: interviews that were audio tape-recorded, actual participant sharing sessions, and a survey. The participants in the study had access to instructional technology such as smart carts, Internet, video projectors, laptops, Elmos, video cameras, and audiotape consoles. Pseudonyms were used to protect the participants' anonymity. Those pseudonyms were given once the participants signed the consent forms.

Data Collection Methods

In the present exploratory case study two main methods of data collection were used. The primary method was a survey sent to SLA educators at KSU and seven other universities of Kansas. The second method was semi-structured interviews (informal and formal) with educators, following a set of predetermined questions. Creswell's recommendations (1998) were followed, especially regarding interrelated activities in order to obtain useful data. Selected sessions were audio-taped.

Data Analysis

Survey and interviews were the two methods used in this case study. Every detail from the questionnaires and interviews was considered in this research.

Interviews

In qualitative research, interviews are one of the most common methods to collect data, and, as Kvale (1996) defined them, they are conversations. They are attempts to understand the world from the subjects' point of view; they are a way to know people's experiences prior to scientific explanations. However, unlike daily conversations, in qualitative research the conversation has an interviewer who is in charge of structuring and directing the questioning. In some occasions, the power of the questioner is much greater than the power of the one being questioned. To Kvale, interviews for research or evaluation purposes may also promote understanding and change, yet the emphasis is on intellectual understanding rather than on producing personal change.

Open-ended responses to questions provide the evaluator with quotations, which are the main source of raw data. To Patton (1987), those quotations reveal the respondents' levels of emotion, their thoughts, experiences, and their basic perceptions. The qualitative evaluator has the important task of providing a framework for people to respond in a way that represents accurately and thoroughly their point of view.

Three basic types of qualitative interviews for research are emphasized by Patton (1990): the informal conversational interview, the interview guide approach, and the standardized open-ended interview. All of them can vary in the format and structure of questioning, but they share common trait that the participant's responses are open-ended and not restricted to choices provided by the interviewer. The closed, fixed-response interview, is a fourth type of interview. In quantitative or structured interviews, the respondent is asked to choose from a predetermined set of response categories. Each type of qualitative interview has advantages and disadvantages.

What are those advantages and disadvantages? The "informal conversational interview" (Sewell, 2007) may occur spontaneously in the course of fieldwork, and the respondent may not know that an "interview" is taking place. Questions are spontaneous and the wording of questions and even the topics are not predetermined. The most important advantage is that the interview is highly individualized and relevant to the individual. Here, the interviewer needs to

be very knowledgeable and experienced in the content area and strong in interpersonal skills, in order to direct the interview. The main disadvantage is that it can be very difficult and time-consuming to analyze the data.

According to the Free Management Library (2007), one of the most widely used formats for qualitative interviewing is the "interview guide approach", in which the interviewer has an outline of topics or issues to be covered, but is free to vary the wording and order of the questions to some extent. The major advantage is that the data are more systematic and comprehensive than in the informal conversational interview, while the tone of the interview still remains conversational and informal. This type also requires an interviewer who is relatively skilled and experienced to make sure that all topics on the outline are covered. A possible disadvantage is that the outlined topics can limit the freedom to raise other important topics. With this type of interview it is also still difficult to compare or analyze data because of different respondents and different questions.

In the "standardized open-ended interview" (Sewell, 2007), the interviewer adheres to a strict script, and there is no flexibility in the wording or order of questions. This is the most structured and efficient technique because it reduces bias when several interviewers are involved, when interviewers are less experienced or knowledgeable, or when it is important to be able to compare the responses of different respondents. It is useful when there are limitations of time and money for analyzing the data. The disadvantage is that the interviewer has little flexibility to respond to the particular concerns of the individual, and it could happen that the questions asked would not cover the issues that are most relevant to this particular respondent.

This case study utilized semi-structured interviews with some pre-determined questions. The role of the interviewer was paramount. According to Glesne and Peshkin (1991) the researcher needs to make good interviews, and this is possible only if the researcher considers important issues, like being: a) anticipatory (always to ask 'what is next' during the interview process); b) alert to establish rapport (to show interest in respondents' answers, suggestions and comments); c) naïve (the researcher needs to avoid making conclusions or assumptions based on what he or she hears or sees); d) analytic (always deciding if good and meaningful data is gathered); e) paradoxically bilateral (to be dominant but also submissive). In this way, the researcher has to look for a cooperative relation with the respondent. Another approach is to be non-reactive, non-direct, and therapeutic. This is when the researcher needs to show

understanding of the topic of the research in order to avoid making the respondents shape their own answers to the reactions of the researcher. Finally, the researcher must be patiently probing (demanding more explanation and clarification, evaluation and description).

Recording and Management of the Data

It is important to keep every piece of data organized from the beginning in order to use it appropriately once that the data collection is done. For the analysis, the data were segmented into manageable units, synthesized, and organized for patterns, to discover what is important and what is to be learned, and to decide how it was going to be reported in order to tell others what was learned. As Patton (1990) recommends, an inductive method was used in the analysis of data. It was a challenge, and creativity was needed, to put the raw data in logical and meaningful categories, examine it in a holistic fashion, and summarize it effectively in writing form.

The analysis can involve many pages of interview transcripts, field notes and documents. It is convenient to go from physically sorting and storing slips of paper. The analysis begins identifying themes emerging from the raw data by coding the information. Strauss and Corbin (1990) recommend using "open coding" because it is possible to identify and make tentative categories and groups of the phenomena observed. The themes will be separated by different colors. Using "open coding" allows a framework to be created with descriptive, multi-dimensional categories. Words, phrases or events that appear to be similar can be grouped into the same category. The advantage is that those categories may be gradually modified or replaced during the subsequent stages of analysis that follow.

A laptop was used as an aid during the data collection and data organization. Microsoft Word was used for the transcription of the data. According to Miles and Huberman (1994), the computer offers several advantages for the organization of the data:

- To write and edit the field notes;
- Coding data and providing tags for easy reference;
- Storing and organizing databases;
- Searching and retrieving databases;
- Linking data to categories of themes;
- Analyzing data through counting frequencies and similarities between words and phrases;
- Displaying data in condensed formats such as matrix for inspection;

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- Drawing conclusions and interpreting data;

- Providing systemic analysis of findings;

- Presenting theories in diagrams and graphic maps and,

- Writing up final reports.

Once the raw data are divided in small descriptive chunks separated by color, a more complete and interpretative conceptual model of the phenomena is defined to finally translate it into a story line that will transmit the "reality" obtained throughout the case study.

Data Organization

Data was collected on 7 x10" cards with different colors for the notes. It permitted easy access to the information in the data. At the top left corner of the card, information was written, and on the right side the date and location appeared. The colors represented different themes of the case study. The themes and their representing colors are shown in Table 3.1:

Table 3.1 Color Representation of the Different Themes of the Study

Color	*Theme*
Blue	Spanish instructors' opinion/attitudes/perceptions towards technology and its use in SLA teaching. Feelings, emotions and psychological states of mind experienced by the faculty using technology, and the ones choosing not to use it.
Yellow	What kind of technological resources are available for the Spanish instructors. Areas in which Spanish instructors think technology can have the greatest impact. Tools that Spanish instructors use in order of usefulness.
White	The way the participants use instructional technology to enhance the teaching (pedagogy) of Spanish.
Clear blue	How educators perceive their role when using instructional technology in SLA teaching.
Green	The change in the participants' pedagogical methods if technology is used. Factors that influence language instructors' use or non-use of different

	technological tools in their teaching.
Pink	Current technological context in which faculty do their work. How the opportunities, facilities, and training contribute to instructors' acceptance and use of such technology resources in their teaching.
Orange	Main barriers that the Spanish instructors have in using the technology in their classes. Main incentives.
Navy	Main incentive/s behind adopting instructional technologies to teach Spanish in their department. Benefits. Support.
Purple	Main learning from the use of technology in their teaching.
Gray	General themes, such as the participants' comments on personal experiences and personal points of view about factors influencing the use of technology in the classroom.
Black	Stakeholder-generated themes through open-ended questions, which do not fit other categories.

Interviews to Be Used

The informal and formal interviews of this case study with the SLA educators were one of the methods of data collection, because the purpose was to have purposeful conversations with the participants. As Patton (1990) has said, the purpose is to find out what is "in the mind" of each participant.

Good interviews will depend on proper preparation and planning. The personality and the mood of the participants will be considered in asking questions and to set a tone for the interview. Since most of the participants in this case study teach in the morning and in the afternoon. The interviews were made in the mid-afternoon. Participants' preferences for a place to be interviewed were accepted.

Each interview was not intended to last longer than two hours, and required the use of a digital voice recorder and a digital video camera, both with a high quality microphone. A good interview depends on many things, such as where the interview is held, the seating arrangement, how the researcher dresses, the interviewer's style, or approach, and question quality. It is important to ask questions which begin with "I need to know…, What did you think of …, How

did you feel about …, Where do you get …, What do you like best about… When interviewing, it is also very important to avoid dichotomous questions ("yes" or "no" answers); to focus in a sequence from general to specific; to ask uncued questions first, cued questions second; and to ask the respondents to "rank" their answers.

A key element during the interview was to use "probing open-ended questions" (University of Illinois) to encourage conversation without influencing the answer, and also for probing clarity and for additional information. Probing for clarity is important because it allows the interviewer to ask for more specific responses, especially when open-ended questions are used. These tend to be very general and respondents tend to answer in a general way, and to use general adjectives to describe situations and opinions. When probing for additional information, the interviewer should probe for additional responses to the question, and should use pauses and probes. It is also recommended to start the interview with some basic "ice-breaking" questions, such as, "Tell me about your class and how many students do you have?" The use of active listening techniques, such as nodding the head, saying "uh-huh," or "Can you tell me more about that?" is a way to make the participant feel comfortable.   It could happen that if a really good rapport and listening are established, it may be difficult to break off the interview. At the end of the interview it is important to write a summary of what the interviewees have said to give the researcher the opportunity to verify that the information obtained is accurate.

Some techniques are available for the researchers to be used in the natural course of the conversation to aid clarity, depth and validity (Hannan, 2007). For instance, the researcher should:

- Check on apparent contradictions, exaggerations, or inconsistencies ('Why?' 'Why not?' 'What was the point of that?');
- Search for opinions ('Do you believe that?');
- Ask for clarification ('Can you say a little more about…?');
- Ask for explanations, pose alternatives ('Couldn't one also say…?');
- Seek comparisons ('How does that relate to…?');
- Pursue the logic of an argument ('Presumably,…?');
- Ask for further information ('What about…?')
- Aim for comprehensiveness ('Have you any other…?');
- Put things in a different way ('Would it be fair to say that…?' 'In other words…?');

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- Express incredulity or astonishment ('In the fourth year?' 'Really???');

- Summarize occasionally and ask for corroboration ('What you're saying is…?');

- Ask hypothetical questions ('Yes, but what if…?');

- Play devil's advocate ('What would you say to the criticism that…?').

Transcriptions

Transcribing the interviews required a large amount of time. It was necessary to schedule between 10 and 20 hours per transcription. A transcribing device was used, and the notes were saved in Microsoft Word. Also, the data was coded during the transcribing process.

Revision and Validation

It was very important to match the interviews with the tapes, once they were transcribed. When there were doubts related to the interpretation of the interviews, it was necessary to visit the participants again to clarify information. Those visits were also taped and transcribed.

Interviews: Data Analysis

Large volumes of material are produced in qualitative interviews. The transcripts needed to be condensed, categorized or otherwise interpreted, and made meaningful. This is one of the most costly and time-consuming aspects of the evaluation. Qualitative analysis requires some creativity, for the challenge is to place the raw data into logical, meaningful categories; to examine them in a holistic fashion; and to find a way to communicate this interpretation to others.

Once data were displayed, it was necessary to draw conclusions from it, and it was a great challenge for the researcher. Because a large amount of data would be expected, a coloring method to organize the data was helpful and effective in sorting the data, and reducing duplication. The data was reduced by simplifying, selecting and focusing the relevant facts in order to be able to see regularities, common beliefs and conceptions, change in pedagogical methods, suggestions for technology use improvement, changes in teachers' roles, and profiles of the participants. It was also possible to see common beliefs between the participants. Kvale (1996) describe five different methods for analyzing and interpreting data: 1) meaning

condensation, 2) meaning categorization, 3) narrative structuring, 4) meaning interpretation, and 5) the generation of meaning.

Because it is recommended by researchers such as Erlandson, Harris, Skipper, & Allen (1993), the data were analyzed once the data collection started. In qualitative research there are three different levels of data analysis, according to Lincoln and Guba (1985):

- Factual level
- Interpretive level
- Evaluative level.

The research questions guided the analysis of the data, and the use of quotations supported the conclusions.

Ethical Issues

Patton (1990) suggests that, because of the very personal, conversational nature of interview situations, many of the basic ethical issues of any research or evaluation method are prominent. Among these issues are:

1) Confidentiality - Because respondents may be sharing very personal information, it is important to honestly assess how much confidentiality you can promise. Also consider how the confidentiality of individuals will be preserved when the data are analyzed and reported. Related issues include who has access to the data and who "owns" it.

2) Informed consent - Most studies, including program evaluations, are covered by some kind of human subjects review process. This will usually require that respondents sign a permission form agreeing to participate, after being informed of potential risks and benefits.

3) Risk assessment - It is important to consider all potential risks and include them in the informed consent process. Even though "just talking" may seem harmless, people who participate in open-ended interviews may experience psychological stress, legal or political repercussions, or ostracism by peers or staff who believe that the participant has said unflattering things about them to the interviewer.

4) Promises and reciprocity - What do interview participants get in return for sharing their time and insights with the researcher? Will they or their communities benefit in some

way from the results of the study? If promises are made (such as copies of reports or monetary payments), then those promises should always be kept.

5) Interviewer mental health - Interviewing experiences can be an intense interpersonal experience. Just as participants may experience psychological stress from disclosing more than intended or being reminded of painful experiences, interviewers may be overwhelmed by the sensitive nature of what is seen or heard, especially in home- or field-based interviews. Some form of debriefing after the interview may be necessary. Interviewers should always know whom to go to if they need advice or consultation on handling practical or emotional issues that arise from an interview.

Maxwell (1996) also emphasizes research ethics in studying participants. The participants should be protected against any harm. The participants' identity should be confidential and their privacy should be respected. The participants should be protected from any deception. Finally, consent forms explaining the study and their role in the study should be given to the participants prior to their involvement in any part of the study.

The participants in this case study understood their roles and the study itself. They were willing to participate and cooperate in this research. The researcher prepared a consent form that told them of the nature of the study and what they were expected to do. The consent form had two parts: the first explained the study, the participant rights, and the aim of the study. The participants were requested to sign the consent form and a copy of the document was given to them. The second part of the consent form was the voluntary consent form which the participants were requested to sign and date. The purpose of this form was to make sure that the participants read and understood the consent form.

Validity

Validity is always an issue that concerns the researcher during a study. Rigor needs to be established from the beginning, and it is a challenge. Lincoln and Guba (1985) argued that certain characteristics like 'audit-trailing, member checks when coding, categorizing, confirming results with participants, peer debriefing, negative case analysis, and structural corroboration' could ensure qualitative rigor and demonstrate trustworthiness.

Biases are another aspect to be seriously considered in qualitative research. According to Miles & Huberman (1994), there are three common bias types:

1) Holistic fallacy—the researcher's interpretation of events in a more congruent perspective than they are in the real world; outliers are ignored. To avoid this, it is recommended to conduct team research to compare findings, or intentionally scanning the data for possible outliers or extremes;

2) Elite bias--to give to some responses more importance than others, mainly because of the short time spent in the field research; and

3) "Going native"--here, the researcher loses his or her own objectivity and takes the respondents' perception. The researcher becomes part of the problem instead of being able to evaluate it as an outsider.

Lincoln and Guba (1985) connected research 'reliability' to its 'dependability' and distinguished two kinds of validity; 'internal validity or credibility' and 'external validity or transferability.' Merriam (2001) relates qualitative research reliability to the extent that findings can be replicated, and research validity to the correspondence between the findings and the real world. The outcomes resulting from the study are described, interpreted, verified, and evaluated in order to explain the factors that influence educators.

Summary

Chapter Three has presented a description of the qualitative research methods that were used in the case study regarding the use of technology in teaching Spanish as a second language (SLA). This chapter presents the definitions of qualitative research and the case study, the research questions that will guide the study, and a description of the participants. Data collection methods are described. The concepts of trustworthiness and triangulation, revision and validation, data analysis, ethical issues, and validity are also presented in this chapter. The questionnaire that was used in the study is provided as an appendix (See Appendix 2).

Chapter 4 - Results and Analysis

Chapter Four presents the results of an analysis of the quantitative and qualitative data collected from the survey "Perceptions of Technology Integrations in Spanish Language Instruction" and four in-depth interviews. The survey was administered in eight universities of Kansas in January of 2010. The four interviews were held in March at the home institution of the researcher.

Description of the Sample of the Survey

A survey was chosen as one of the research instruments (See appendix 2) for this study to obtain general patterns concerning the perceptions of Spanish instructors towards the integration of technology in their classes. The initial sample for this study consisted of 80 Spanish as Second Language instructors in Kansas. The survey instrument asked the participants to respond to a series of items by indicating whether they Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), or Strongly Disagree (SD). Of this sample, a total of 58 (72.5%) surveys were returned and subject to analysis. Table 4.1 shows the frequency and distribution of subjects by total and subgroup factors.

The survey contained two sections. The first section focused on demographic information, and the second section had 43 items that dealt with perceptions related to instructional technology. These items addressed mainly the instructors' attitudes towards the use of instructional technology use in the language classroom.

Table 4.1 Frequency and Distribution of Subjects by Total Group and Demographic Variables

Group Factor	n	%
Total Group	58	100
Gender		
Female	37	64
Male	21	36
Total	58	100
Age		
Under 30 years	6	10
30-40 years	23	40
40-50 years	13	22
50 years or older	16	28
Total	58	100
Years teaching Spanish		
Between 1 and 10 years	27	46.6
Between 11 and 20 years	17	29.3
Between 21 and 30 years	5	8.7
Between 31 and 40 years	7	12.0
Between 41 and 50 years	2	3.4
Total	58	100
Level taught		
First year	13	22
Second year	18	31
Third year	8	14
Fourth year	19	33
Total	58	100
Level of education		

Doctorate	32	55
Masters	24	41
Bachelors	2	3
Total	58	100
Self-estimate of technological expertise		
None	0	0
Some	5	9
Low	6	10
Average	39	67
High	8	14
Total	58	100
A course taken in educational technology		
Yes	19	33
No	39	67
Total	58	100

Note: Fifty-eight individuals responded to the survey; however, upon the completion of the demographic section, not every individual responded to every question in the survey. Hence, there is a discrepancy between the total responses and the number of individuals responding to given survey items. (See appendix 3 for survey results.)

Participants

Selection Method

Participants in the study were instructors, working in higher education institutions and teaching Spanish as a second language. Eighty instructors, working in eight universities in Kansas, were contacted and asked to participate in the study. Participation in the study was voluntary.

Response Rate

Out of 80 instructors originally contacted, 58 completed the survey (72.5% return rate). The surveys were sent –via email- to the directors of the Spanish programs in the eight universities. The return rate was acceptable, according to Gay and Airasian (2003). The authors state that a response rate of 60% or lower may lead to some questions about the generalizability of a study's results. The response rate for the present study was much higher than 60%.

Sending the survey via e-mail protected the instructors' identity, preserved anonymity and prevented the possibility of sorting the samples based on any work place information. All surveys were analyzed collectively and categorized based on the nature of each survey's content.

Gender

In this study, subjects were asked to indicate gender in order to potentially provide data that could prove significant when compared to other perception-based sections of the survey and interviews protocols. The return rate of this study was disproportional with respect to the gender of the subjects who completed the survey instrument. Out of a total of 58 respondents, 64% (n=37) were female; male respondents accounted for 36% (n=21) of the total number surveyed. This is not surprising given that more women are in the field than men.

Age

Age was chosen as a demographic variable that could potentially provide significant data when compare to other perception-based sections of the survey. The information was analyzed and partitioned into four separate categories of age: (1) Under 30 years, (2) 30-40 years, (3) 40-50 years, and (4) 50 years or older.

Ten per cent (n=6) of the Spanish educators who responded to this survey are under 30 years old. This category represented the lowest number of respondents.

The educators between 30-40 years old accounted for 40% (n=23) of the total responses and were the highest group ranked category for age.

Responses from instructors between 40-50 years old were the third highest ranked category with 22% (n=13).

The percentage and number of respondents within the four category of being 50 years old, or older, represented the second highest with 28% (n=16).

Years Teaching Spanish

"Years teaching Spanish" was included in the survey instrument to detect possible significance between the amount of time an individual has taught the language and how she/he perceived the importance of using instructional technology.   Respondents were asked to provide the total number of years they had been teaching Spanish as a second language. A total of 58 (100%) individuals responded to this category.

Survey respondents with one to 10 years of Spanish teaching experience (n=27, 46.6%) were the highest ranking; educators with 11 to 20 years of Spanish teaching experience (n=17, 29.3%) were the second highest group. A third group was formed by instructors with 21-30 years of teaching experience (n= 5; 8.62%), and a fourth group was concentrated in educators with teaching experience between 31-40 (n=7; 12%).   In the last group are the instructors with 41-50 years of teaching experience (n=2), which represented the lowest percentage of 3.4.

Level Taught

Another demographic variable included in the survey instrument was targeted at the respondents' overall level of instructional concentration. Respondents could mark one of the four categories that the survey offered. These categories were: (1) first year, (2) second year, (3) third year and (4) fourth year.

Educators who indicated that the fourth year of Spanish was the highest level they taught comprised the largest percentage (33%) of respondents (n=19). However, instructors indicating the second year as the highest level taught were very similar to fourth-years respondents (n=31; 53.44%). Combined, the fourth and second years of Spanish instruction described the highest level taught by 64% (n=37) of total respondents (N=58). Spanish instructors who indicated that the first year of instruction was their highest class taught accounted for 22% (n=13); the lowest number and percentage ranked was for the third year of Spanish instruction (n=8; 14%).

Level of Education

"Level of education" was also included in the survey instrument so that potential significance between an educator's educational preparation and her/his perceptions about

instructional technology could be detected. A categorical representation was obtained as the survey asked respondents to list the highest level of education attained by college degree. Three categories were presented: (1) doctorate, (2) master's degree and (3) bachelor's degree. Of the 58 respondents 55% reported their highest completed degree as a doctorate (n=32). Respondents holding master's degrees (n=24) accounted for the second largest percentage (41%), while only 3% (n=2) of all instructors surveyed held only bachelor's degree.

Self-Estimate of Technological Expertise

Another variable included in the survey was the self-estimate of technological expertise in instruction. Five categories were available for the respondents: (1) none, (2) some, (3) low, (4) average, and (5) high.

The 'average' option was the highest category ranked with 67% responses (n=39). The 'high' category was the second highest ranked (n=8, 14%). 'Low' and 'some' were the categories with lower numbers (n=6; 10%) and (n=5; 9%) respectively. None of the respondents chose 'none' as a self-estimate of technological expertise.

A Course Taken in Educational Technology

The final demographic variable included in the survey instrument was, again, targeted at the respondents' overall level of instructional sophistication. Respondents were asked to say if they had taken a course in educational technology. More than 50% answered no (n=39; 67%), and 19 respondents said yes (33%).

Total Group

When data were analyzed, the sample group indicated that they had positive perceptions towards the use of technology in their Spanish as a second language classes. Of total responses (n=58), the overall mean positive perception (MPP) score (adding percentages for Strongly Agree plus Agree) was 62.79. The standard deviation was 19.61.

Nine of the 43 items had a MPP score of 80% or higher, when adding the categories 'Strongly Agree' and 'Agree'. [Note: 80% represents both a natural break point in the data and is approximately one standard deviation above the MPP]. Table 4.2 presents these statements.

Table 4.2 Items with Higher Positive Scores (80% or more)

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Items with Higher Positive Scores (80% or more)

Statement 3   87%

Statement 6   82%

Statement 11   89%

Statement 21   83%

Statement 22   85%

Statement 33   80%

Statement 40   81%

Statement 41   92%

Statement 42   88%

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Technology:

Statement 3: Is effective in promoting student understanding of cultures related to the language.

Statement 6: Is useful for improving student's listening proficiency.

Statement 11: Is effective for accelerating student vocabulary development in the language.

Statement 21: Must serve to motivate and inspire students to learn the language.

Statement 22: Adds value to students' language learning.

Statement 33: Enhances student language learning since the WEB, as a learning tool, is available as they need it.

Statement 40: Should depend on the reliability of software, hardware, and Internet language sources for teaching the language.

Statement 41: Should include time, technical support and incentives for faculty to use the technology.

Statement 42: Should pinpoint the most efficient and effective uses of the technology.

According to these results, nine overarching emergent themes were ranked with high scores. Six of them formed a super-ordinate category showing that instructors consider IT useful to teach culture and general knowledge. In this super-ordinate category, the six emergent themes are considered subordinate themes: understanding of culture; listening proficiency and vocabulary development; motivation; adding value to language learning, and enhancing language learning through use of the Internet. The other three emergent themes formed another super-ordinate category with three subordinate themes: importance of software reliability, the use of

hardware and Internet language sources, and the need to have appropriate preparation time, technical support, and the availability of effective and efficient technological tools in order to integrate technology in their classes.

Again, most of the instructors have positive attitudes towards technology for teaching culture in the target language, and general knowledge, as supported by the responses to statements 3, 6, 11, 21, 22, and 33. Also, as revealed by answers to items 40, 41 and 42, instructors considered technology valuable, if supported.

Of the 43 items, statement 41 -*Should include time, technical support and incentives for faculty to use the technology*- received the highest overall MPP score (92%) by instructors of Spanish as a second language in the eight universities in Kansas. It had an overall MPP score of 2.472, which would indicate that this item was perceived as being highly important. This may be due to a lack of knowledge about technology or due to a lack of training in technology use in language instruction.

As revealed by the significant distribution of responses to statement 11 -*Is effective for accelerating student vocabulary development in the language*, most participants (89%) also believe that technology can be a good supplement to support teaching. Statement 42 –*Should pinpoint the most efficient and effective uses of technology*- was the third item with the highest overall MPP score (88%).   The combination of these three highest overall MPP is interesting. These findings may be interpreted to mean that the Spanish as a second language instructors are generally positive about technology, but not sure about using it in the classroom without having enough time and support to use it efficient and effectively.

The same can be said of the findings for items 3 -*Is effective in promoting student understanding of cultures related to the language* (87%), 22 -*Adds value to students' language learning* (85%), 21 -*Must serve to motivate and inspire students to learn the language* (83%), 6 -*Is useful for improving student's listening proficiency*, (82%), 40 -*Should depend on the reliability of software, hardware, and Internet language sources for teaching the language* (81%) and 33 -*Enhances student language learning since the WEB, as a learning tool, is available as they need it* (80%). Here, again, we see that instructors perceive technology as a support tool, but may feel unable to use technology in teaching because of a lack of knowledge or training. Although the item regarding their self-estimate of technological expertise 67% of the respondents (n=39) reported an average expertise, 39 of them (67%) reported that they haven't

taken a course in educational technology. The findings for these two items suggest that the instructors are generally positive about integrating technology in their classrooms, but yet their self-estimate of technological expertise is still not enough to feel very confident doing it. They need to be more informed about technology and receive further training to consider technology integration as the item 41 MPP score showed.

Ten of the 43 items had a MPP score of 44% or lower, when adding the categories 'Strongly Agree' and 'Agree'. [Note: 44% represents both a natural break point in the data and is approximately one standard deviation below the MPP].   Table 4.3 presents these statements.

Table 4.3 Items with Lower Positive Scores (44% or less)

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Items with Lower Positive Scores (44% or less)

Statement 7   44%

Statement 9   36%

Statement 13   34%

Statement 15   42%

Statement 17   43%

Statement 20   32%

Statement 24   9%

Statement 25   26%

Statement 29   39%

Statement 32   34%

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Technology:

Statement 7: Promotes and improves student conversation in the language.

Statement 9: Is useful for promoting student speaking in the early stages of language acquisition.

Statement 13: Is useful for monitoring and detecting students' errors in speech production in the language.

Statement 15: Prompts students to respond more often and to make longer responses, thus producing more language discourse.

Statement 17: Support student's personal and social interactions during the study of the language.

Statement 20: Through the on-line or distance format provides a productive environment for second language learning.

Statement 24: Improves students' class attendance rates.

Statement 29: Increases the students' rate of learning the language.

Statement 32: Through the on-line format is useful for promoting student conversations and interactions.

Although these items had a MPP score of 44% or lower, the distribution of responses for these items is still positively significant. The general impression is that the instructors seem to agree that technology can be useful in developing second language learner skills, for promoting interaction, and in engaging students in group work. One interpretation for the low MPP scores could be that these instructors used technology in their classes and had good results, but not

optimal ones. Also, the low MPP scores could be based on the way they use technology in the classroom; it is possible that they use very traditional technology having, as a result, a not very dynamic or positive class environment.

Distribution of the responses to statements 7, 17 and 15 represented the higher MPP scores under 44%. Statement 7 indicates that 24 instructors (n=58, 44%) agreed considering that technology promotes and improves student conversation in the language. In response to statement 17, 24 participants (n=58, 43%) think that technology supports student's personal and social interactions during the study of the language. Lastly, 23 respondents (n=58, 42%) agreed saying that technology prompts students to respond more often and to make longer responses, thus producing more language discourse, in statement 15.

A second group with a MPP score lower than 44% is formed by items 20, 13, 32, 9 and 29. Here the percentages range from 32% to 39%. Item 29 shows that 21 instructors (n=58, 39%) think that technology increases the students' rate of learning language, while 20 participants (n=58, 36%) consider technology useful for promoting speaking skills in the early stages of language acquisition. Items 13 and 32 show the same scores (34%). In response to statement 13, 19 instructors (n=58) consider technology useful in monitoring or detecting students' errors in speech production in the language. A total of 18 (n=58) participants agreed that the instructional delivery using an on-line format is productive for promoting student conversations and interactions.

Item 25 (26%) shows that 14 respondents (n=58) believe that technology improves students' ability to work in groups. Lastly, item 24 was the one with a lowest score. Only 5 instructors (n=58, 9%) thought that technology improves students' class attendance rates. Actually, 32 (59%) participants said that are undecided and 17 respondents (31%) answered 'disagree'. In these cases, again, the results may imply that many instructors acknowledge the importance of using technology in teaching but it is probably the way they use the technology, and the type of technology they use, that are not giving them more positive experiences. What they lack may be more knowledge and sufficient training support to integrate technology in their instruction, thus preventing them from using innovative ways to teach using technology.

Four Interviews

Four in-depth interviews were conducted to elucidate richer descriptions and to potentially corroborate patterns identified from analysis of the survey data. The researcher chose four colleagues at her home institution, purposely selected by their levels of experience in using technology in their teaching. Participant 1 was selected to represent those individuals who had used very little technology integration in their Spanish classes. Participant 2 was selected to represent those who had used some technology; participant 3 represented those who had used technology on a more consistent basis, and participant 4 was selected to represent those instructors who reported using technology with great frequency in their classes. Table 4.4 offers a summary of the criteria for the selection of the participants.

The interviews were recorded and transcribed by the researcher, and complete interview transcripts can be found in Appendix 4.

Table 4.4 Summary of the Criteria for the Selection of Participants

Participants	Represents…
Participant 1 (P1)	those individuals who had used very little technology integration in their Spanish classes.
Participant 2 (P2)	those who had used some technology.
Participant 3 (P3)	those who had used technology on a more consistent basis.
Participant 4 (P4)	those instructors who reported using technology with great frequency in their classes.

Selecting the Participants

Once the data gathered from the survey was analyzed, four instructors were chosen for the interviews. To select the interview participants the following criteria were considered: Whether the participant had used technology in his or her teaching, had used it at some point, or had not used it at all. The researcher used her own judgment to select the colleagues based on her previous knowledge about them and their experience regarding technology in their classrooms. The semi-structured interview addressed four different instructors representing the diversity of the responses given by the participants in the survey.

A total of ten interview questions were prepared for the participating Spanish instructors. However, since the interviews were semi-structured, follow up questions were made according to the answers received. Thus, the number of the questions asked to the participants varied because of the nature of the interview. Also, the interviews were carried out in English. The interviews were held the first week of March, 2010 and each one lasted between one and two hours. The interviews were analyzed through categorization, and in order to discern recurring patterns in data collected through interviews, the researcher examined the data focusing particularly on the following main questions:

- What are Spanish instructors' opinions/attitudes towards technology and its use in language instruction?

- What kind of technological resources are available to the Spanish instructors?

- What is the situational technological context in which faculty currently do their work?

- What factors influence language instructors' use or non-use of different technological tools in their teaching?

- In what areas do Spanish instructors think technology can have the greatest impact?

- What are the tools that Spanish instructors use in order of usefulness? Cite two or three.

- How do opportunities, facilities, and training contribute to instructors' acceptance and use of such technology resources in their teaching?

- What are the feelings, emotions and psychological states of mind experienced by the faculty using technology, and the ones who choose not to use it?

- What are the main barriers that the Spanish instructors have against using technology in their classes?

- What is the main incentive behind adopting instructional technologies to teach Spanish in their department?

Again, findings from the interviews are presented to support analyses and interpretations.

Perceptions and Practices in Integrating Technology in Spanish Language Instruction

The questions in the survey were designed to investigate Spanish instructors' perceptions and practices in integrating technology in Spanish language instruction. In general, the results obtained from the survey showed a positive perception of the use of technology in Spanish instruction. To confirm or dismiss this general positive perception, the four instructors were asked about their opinions and attitudes towards technology and its use in language instruction. All of them said that technology is useful in instruction. Nevertheless, all of them also made clear that technology for technology's sake should not be a factor. "I think it has to be carefully evaluated in terms of how it is used in the classroom. Technology as such doesn't guarantee effective teaching. That's my point of view", said participant 1 (P1), while technology for participant 4 (P4) is "cool because the range of possibilities becomes wider, the number of resources is theoretically unlimited and because it brings the possibility of using realia which sometimes are not at hand. You can use the Web; you can get sound, movies, whatever. So, it's an open world. That's my general opinion, with so many caveats… Technology won't replace pedagogy. It won't. I can think of a classroom without technology, but I can't think of technology without the classroom." For participant 2 (P2), technology in Spanish instruction

> "can kind of enhance what we do in a classroom. I think that it would be possible to have a language class where all you did was use books and people, and that would be fine, but with using different technological resources you can kind of help students make more connections to things outside of the class, and you can help students who are shy find ways to participate that are more comfortable for them. You can help people who are visual learners have something to look at, or people, you know, who need to work on their listening skills have somebody else to listen to besides people who are in their classroom; so I think it's kind of enhancement, maybe not totally fundamental. I think you can do a class without it, but it wouldn't be as good."

Participant 3 (P3) believes that technology is an empty tool that

"helps you, but you need to give the content to the tool. In my 23 years of teaching I haven't been afraid of technology. I think I belong to a generation that was already using it, even if it was primitive technology. I remember that first computer that I had was a TV set. I bought a computer as soon as the computers came out, and they sold you a keyboard and higher memory, and you had to create your own programs. Actually the memory was in the keyboard. You couldn't do anything with those

computers, but it was fun to see that the thing was going to be good
eventually for something… I am a believer in technology because it makes
my life easier… To use technology, you always need to go with an open
mind. You give always the benefit of the doubt."

According to the interview data, the four Spanish instructors have positive attitudes towards technology in general. These opinions reinforce the outcomes obtained from the survey which affirmed a positive role for applied technology. The interview participants agreed that technology is useful in Spanish instruction but everything depends on the attitude and purposes of the instructors to use it effectively, and it seems also, that they perceive technology as a support tool rather than a tool for direct instruction.

In the results of the survey, the participants gave nine statements higher scores. These statements serve as emergent themes and are related to the contribution that technology can make: 1-in promoting the understanding of cultures, 2-in listening proficiency, 3-in vocabulary development, 4-in motivation, 5-in language learning value, 6-in learning enhancement, 7-in reliability of software, hardware and internet sources, 8-in importance of time, technical support and incentives, and 9-in its effective and efficient uses.

The four participants interviewed in some way confirmed the importance of those statements. The interview results show that instructors commonly use technology for electronic mail, Internet, materials design, and office work. Also, they use technology to type. The Spanish instructors use technology to assign homework via e-mail, and make recommendations to students. None of the participants interviewed indicated the use of technology for designing audio and video multimedia work, but all of them confirmed that they design PowerPoint presentations for their classes. This might be related to lack of self-confidence among Spanish instructors, which might be caused by lack of familiarity with technology designing resources. Although it appears that they are not familiar with those resources, it is not the same case when they were asked what kind of technological resources are available for the Spanish instructors. They decidedly mentioned that there are many options available. P1 said that

"the instructors of Spanish are using modern technology because of the quality of
the information. I think the capacity to explore more is very important. Dealing
with Internet and the web, can really cut time. And it is easier to do research; you
can go faster locating articles, catalogs. It is fantastic! These are advantages and
you can be more selective having that spectrum of options. You can select what
you really need for your classes and your research."

P2 expressed similar enthusiasm, but with personal reservations: "I can use the Internet in class, I can use a projector to show films, or to show things that are on the Internet. When I have a chance I like to have the class in the language lab so that each student can have a computer and I can help them do research online. We use PowerPoint. But, I'm sure that there are other technologies that I don't know how to use that also are not available."

P3 thinks that currently the Spanish instructors can have access to many resources because

> "now everything is done for you; what took hours of time before, now it takes seconds to do. Library is a support for you. Also if you are using a computer in the classroom you can go to Internet and show the students how to do the search. It is very easy to teach that now, which you can do in few minutes instead of going to the library. That also has changed a lot! Also the databases that the library has. For instance for the [ ] class I use [ ], a database. Also there are free databases in Internet. KSOL is fantastic because it allows you to have all the materials there. I would say that the students only come to office hours to retake things because they don't have to ask for their grade anymore, because the grade is online, they can check it anytime. If they have missed the class they will know what they missed on class because it is on line."

In that sense, P4 has a similar opinion about the usefulness of Internet, mainly.

> "If you see my classes on Kansas State Online site, you will see readings that I've produced, I have texts that I selected, and I have readings for them to consult like entire magazines, you know. They are not required to read one article or the other. It is that they can have access if they want. But also provide music and movies, for instance. So, it's reading, listening, you know. They do chat, and they use this kind of resources."

These opinions show that technology is being used by the Spanish instructors to prepare and enhance their classes, and to help their students. According to their experience, the use of instructional technology is effective in promoting student understanding of cultures related to the language. Actually, the contribution of technology to help students to better understand the culture in the Hispanic world is one of the aspects most emphasized by two of the interviewees. P1 thinks that technology "facilitates to learn culture. For instance, movies, of course! I use lot of visual material, from PBS, Podcasts, NPR and the BBC which focus on 'Latinoamérica', and students have really loved it." For P4 "technology can have a big impact in culture, in the cultural areas, in the broader sense of the word. Literature, art, architecture, cinema… I would say in the four skills and culture. Also to provide context, yeah."

The findings suggest the four skills are also developed and enhanced through technology, according to the interviewees. For instance, for P1 technology has the grater impact in listening comprehension, but at the same time says that technology can be used outside of class as well to help students develop their skills.

"There are a lot of things that they [students] can do on their own. I wish I had access to the technology that they have now when I was learning English, because I think that if the students want to learn a language on their own, there is a lot they can do. If they have a class that is supportive as well in their own efforts, it is good. I always tell them please listen to Podcasts, there are a lot of newspapers in Latin America, a lot of journals, magazines that have Podcasts. So, I ask them please listen to Podcasts, and I integrate some of those to my classes, but I think there are additional things they can do on their own. There are songs. The lyrics can be found everywhere. So, if they listen to the songs, they are going to be learning vocabulary, pronunciation, and they have a model that they can follow when they are speaking. Movies come now with subtitles. They have subtitles, and they [students] can read subtitles in the same language or in Spanish. They can hear the speaking part and they can read at the same time. There are a lot of things that they could use to improve their skills, and that is wonderful!"

To P2, "people perceive that technology can help beginning students to have practice speaking, listening, reading, and writing." P3 thinks that to develop the main four skills "the main tools that could help the students I would say are mp3 players, images (video, DVD, Youtube)."

Regarding the use of technology to develop students' motivation, some of the participants agreed in considering technology useful. P2 thinks that "it helps students' motivation if they [the instructors] have the technology to make things more relevant to them and helps to have a more immediate connection to things by being able to see them and interact. Like I said, helping students who have difficulty participating in class, I think that technology helps with that." P4 has a different opinion:

"this is another caveat I have. I'm very sensitive to the idea of motivating students, because we are dealing with adults here. You have to come motivated from home; it is not my job to motivate anybody. If you are not motivated, you do not belong here. I can do many things. I can provide you with the resources, to orient you in the right direction, to answer your questions, to direct your efforts to the right direction, but I cannot motivate you. You are an adult. That technology is for students a vogue, it is a must, but it doesn't mean it has to be a must for me. I'm a professional. So I need to weigh it very carefully. I don't want them to do it just because it is on Facebook. It is not my job to make it easier. My job is to make it come through. Ok? If I want to make it easier, I can do so but always with a sense of measure. Making a lesson more attractive and accessible is a plus. But a lesson has to be functional."

As mentioned before, the findings suggest that technology also can add value to the language learning process, if students are guided properly by their instructors, and the instructors use the technology in class for that purpose. For example, P1 says that "I use technology as a point of reference, you know. Sometimes it depends on the quality of the information; so, if I see any limitations then I try to go beyond the limitations of the material. I use it as a point of departure for class discussion, and it's kind of supporting material." P2 also agrees, saying that "I think that technologies are so much a part of these students' worldview, that I think to relate to them and for them to get the most possible out of the class, I would like to be able to do more with technology." For P3, it is important to be capable of choosing adequately the resources:

> "In a composition class, when the students are working, I use all the time the dictionary in English and Spanish on line. What I would do in the class is to be sure that the students have access to Microsoft Word so that they have access to that and use it to their advantage. They need to know how to use the dictionary of the Real Academia. The Real Academia offers the conjugations of the verbs, which I use."

P4 has the following opinion based on the idea of cultural transaction and functionality.

> "One of the things I am convinced of is the idea of cultural transaction, for instance. Sometimes there is a cultural difference, and there is also a cultural equivalent. So you have to find the right example in their culture [students], so that they can relate. You see what I mean? To do that, is to make it attractive, but more than that it is to make it functional, to make it work. Now, if it works, you bet it's going to be attractive for them. If they feel that they are acquiring some mastery of the subject it will become attractive. If the language has to be Facebook, fine. But the language is only the support."

One of the statements that obtained a high score in the survey is the one that referred to the enhancement of student learning since the Web, as a learning tool, is available as they need it. In this case, P1 thinks that there should be a balance.

> "Sometimes I think students are kind of exhausted of technology. Because they live in such a technological word sometimes the one to one interactions that you provide in class might be helpful for them, because they can have the chance to deal with the material in a different way. Human interaction cannot be substituted by technology, you know. You need to be there to provide a lot of guidance and

give feedback and there is a kind of exchange of energy that technology cannot provide. And I count on that."

P2 has a similar opinion.

"Yes, I think that especially for students, the majority of them, the average age of the students, are students who are used to having Internet as part of their life. They can't remember a time without it. For them, I think, it makes things seem a lot more relevant if they can see video rather than just reading a description of something. I think putting those two things together works very well for them… When I use Skype they're working in pairs…I also have them do chat online."

P4 does not use the Web in the classroom but thinks that the Web helps students prepare before class.

"In a specific class one of the problems could be the cultural difference. How are they going to put the text in context? They don't know the context, ok? So, I have to set pre-reading activities, have them research certain topics, and those topics for me need to provide the context. I have to figure out what is useful and have them research and contrast what they know with other sources out there. They will be using them at home but it's pertinent for class time; it is preparation. At the end I can do both readings and have them, for instance, consider whatever concepts they acquired in the class with other texts. There may be some use of the Web in there. For me the essential in the classroom is interaction, but for the preparation I consider the Web essential."

Another statement with a higher score in the survey was related to the reliability of the software, hardware, and Internet language sources for teaching the language. In this case, the participants believe that, although there are many resources available, they prefer to use what they already know based on their successful experience. For instance, P1 is thinks that

"lately I have been using more because technology has changed, for example, DVDs, some PowerPoint, and e-mail. I have been using Podcasts. I do not produce them but I use what is available… The resources that I have been using have been enough and effective in my teaching. I am aware about programs like Audacity that is very good for conversation, but for me it takes too much time. I prefer to give the students the feedback in the class, right there. If they are not pronouncing in the right way, I can help them after class, and I can give them feedback. For me it's more effective to do it that way. Because if I do it with Audacity, it seems to me that I will need to review all the recordings. I would need a secretary!

P2 also is confident in the resources already used in class.

"I have my own iPod and speakers so it is easy to use that. I can take them with me and it's not a big deal to use some kind of audio recording… I wish that I did have more time to learn about other things that I don't know how to use. I really like to just have a computer with an Internet connection, and speakers, and a DVD drive. If I had that in every classroom I taught in, then whenever I wanted to, I could show short video clips, or websites, or you know, a PowerPoint presentation. I could show images, photos, and listen to songs. You could do all of that if you had that kind of equipment available.
Besides that, in your free time do you explore the web to learn more about other resources or how to use a specific software?
No, I can't say that I do. I can't think of anything like that. I think that at some point I'm going to learn more about Translation Memory software, which I will use in teaching eventually, when I get to teach translation classes."

P3 recognizes the change in the use of pedagogical methods and is feeling confident in the reliability of the resources used.

"I started using some technology in my classes, like VHS and tape players. Then I used slides, for many years for the [   ] class. Now for the [   ] class everything is on line. So I have all the lessons, which I developed; they don't come from the book, they are my own lessons in [   ]. What used to be in the slides now they are PowerPoint. The big advantage of the PowerPoint over the slides only happens once in class, when the students can go again and again over the PowerPoint as many times as needed. Also I use online for all the announcements for class. In more conventional [   ] classes I don't use that much technology. Also there has been an evolution from the overhead projector to the Elmo because the Elmo allows you to show pictures; you can't do that with the overhead projector."

P4 was not very convinced at the beginning but "I think for me the point of conviction was the Web, and as it became generalized you had access to press, to TV, to radio, to libraries. It's a more than an open world, is a way to the world. It is a window to the world."

Again, these findings may imply that the Spanish instructors are generally positive about technology use in language instruction and they are willing to integrate technology resources in their teaching. Yet, they need to be more informed about additional technology resources and receive further training to consider more technology integration.

It is apparent that to be more informed and trained are two of the main considerations that are having an influence on the instructors' attitude towards the use of other resources in their teaching. Actually, it is useful to recall statement # 41 of the survey, regarding time, technical support and incentives for faculty to use the technology. It was ranked very highly in the survey.

Time and training are considered very important also by the participants in the interviews, and they also shared the same point of view regarding incentives. Yet, such factors as lack of time and training may prevent them from using new resources in their teaching.

Time

P1 pointed out that "I mainly use what is available because I don't have the time… I have to balance my time… I am using some videos, but I am not videotaping the students. It depends on my time availability. If I had the time, I would do that, but the problem is that when you have a very heavy teaching load and research, and everything, you cannot spend all of your time in technology."

P2 "Yeah, I have very little extra time. I feel like I have the bare minimum amount of time needed to do the basics right now, because every semester I'm teaching lot of classes… probably if I had more free time I would learn about the existence of other software or other types of technology that would be really great to my teaching."

P3 "I am not very knowledgeable about many types of software like Atajo… I don't know, maybe there is something out there that is very good and I am missing. I don't have time. You have to use what is giving to you, or by the big publishing houses."

P4 "Things have become easier, but when the preparation of whatever materials using a technology becomes more time consuming, then the actual used time that is going to have for the students, etc. becomes ridiculous… People who are using two technologies are more likely to learn the third one faster; so, that would be one reason to be on top of it. It is a matter of economy. You want to invest time and effort that is going to be proportionally profitable… We don't have time dedicated, allowed, to do this kind of activity. So, to produce these materials has taken me 10 years!"

Training

Regarding this aspect, the participants expounded enough on the topic to emphasize that this aspect is crucial in their decision to increase or limit technology in their teaching. The findings suggest that training results in a change in instructors' perceptions of themselves; it means that having received technology training, Spanish instructors feel more prepared to integrate technology tools and resources in their language instruction.

P1 "I don't have the technology, I don't have the know-how… The university offers computers training to students in the labs, iTac does a good job with troubleshooting, but for faculty I am not sure the institution is providing what we need… I have signed up for many courses that they mentioned were going to

teach you many things that you needed to know, but I did not find them very helpful. I don't know if I went to the wrong sessions, but they were not very helpful to me. Some colleagues of mine had the same experience. I think they [those in charge of the training] have the best intentions and try to do their best, but I don't think they are very effective. I think they teach the minimum and you already know the minimum, and what you want is to improve and I don't see that option there. I think they should really target their instruction. If your specialty has to do with sounds or languages, what is it that you can do in order to get some guidance in the process of learning how to implement techniques or strategies to develop oral skills, you know what I mean? Those workshops should be focused according to specific academic fields or departments, so that we learn to maximize the technology according to our goals."

P2 "I think at the beginning, when we first start teaching as GTA's, we need training in all the possibilities for enriching the teaching that exist through using different technologies, so the person can become aware of the possibilities and then to be able to actually use them. Then the technical side of using technologies, and that can begin when we first start teaching, and then throughout our careers we need to keep getting continuing education by going to meetings or having workshops, I guess, in the department, or things like that. Because things are always changing."

P3 also thinks that technical support is important, and would be happy to get more help from the Language Learning Center (LLC) of the department.

"New technologies will be improving the teaching. The problem is that the teacher has to structure things, and we need more support to structure a class… What the lab [LLC] can really do for me? Because technology evolves, those things are never clear. For instance, maybe I can get help with the video and sound part; I don't know that right now. I don't do that; maybe in the lab they can do that. I don't know. It is important to know what the LLC can do. We need help. I need audio, video and perfect PDF to be able to upload the files in KSOL."

For P4, training is crucial because

"Training, again, is essential. It makes you more conscious of the reality of technology. But training can be overwhelming too. In the communication with the technicians, this is probably the weakest link, the training. Because if you have an hour workshop and you blink, and you miss something, everything is going to fall on top of you. The person who is giving the workshop takes things for granted… There is a condition that is endemic in our environment here in the Midwest. It happens with our students, but it happens with us too. This general attitude of saying I am not going to speak in class because if I am going to say something stupid, people are going to think that I am stupid. And that happens to us when we go to training as well. We go to workshops with the same attitude because we think that somehow it is shameful not to be on the top of all of it. The

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training is definitely essential and the trainers being good teachers, basically. For the trainees it is essential and it is not always the case. The fact that you have the more knowledgeable person on campus talking about many things doesn't mean that he is the best person to make it understood. So, that's weak."

The last statement with a high score in the survey was related to the most efficient and effective uses of the technology. The participants are using technology in class because the resources have been efficient and effective.

For P1 the most effective source is "anything that is visual like videos, DVDs and programs that you can watch on line, in general the Web. The second one, just for my classes, is the Podcast; it is very helpful. I know that many people use PowerPoint, and I use it sometimes, but I don't think it is very crucial. Probably I don't understand very well what the PowerPoint is (laughing)."

P2 "In order of usefulness, I guess I will say the Internet is the most useful because it has the most possibilities. It includes videos and audio and has chat and message boards and newspapers; all kinds of authentic material. That's probably the most useful. And probably video, even though that is kind of included in the Internet, but it's good to watch films. DVDs and CDs and MP3. We do use a lot of songs. I know because my office is next to some classrooms and I know that whenever they play *"¿Dónde jugarán los niños?"* they're learning the future tense (laughing). So Internet, video and sound."

P3 "Among my favorite tools are word processors -Microsoft Word-. It is the more basic, but still the more important one. It allows you to write. Then, the PowerPoint on line. With technology, you can go fast and you have everything in TV format. The use of technology depends on the subject… Sometimes the technology is very good but what you are given is raw material, and you have to structure that for the classroom… I like to use technologies that are already proved."

To P4 technology is effective, but it is the sensible use of technology what should be pursued.
"It depends on the class the selection of the tools. In one of my classes, class time is PowerPoint, because it gives you the possibility to structure the contents the way I want to, and to show examples that I want. But if you go to my Web site I have music, movies. I have my writing commenting those, other people's writing commenting those and then, monographs. So, you have a whole variety… So it's a matter of availability, it's a matter of functionality, economy even."

In the interviews, the Spanish instructors confirmed that they would use more technological resources in their teaching if they had a better context or improved conditions in which to do their work, and more opportunities.

For instance, P1 says that in the department they have some services available; they have computers, and the Language Learning Center (LLC), but P1 also thinks that they need more workshops.

"I do feel that we need more workshops on how to use the equipment that is available. I do need them; that would be helpful. We need anything that is supportive… Opportunities, facilities and training play a big part, and I think they are really key factors. I wish we could have those more implemented here. The opportunities need to be increased, they need to be expanded and focused according to the field. Because it is not very effective to have a training session oriented towards people in business and at the same time you are dealing with people in the Humanities or Art, you know. If people are handling more visual material, I think we should be targeting technologies that are more relevant to the visual field."

It is a matter of time and money according to P2

"I think that we could do a lot more if we had more time and money. I think that there are a lot of opportunities that we just can't take advantage of because 1) we're sort of limited by what we already know and tend to use that more because it is more efficient maybe. And then 2) we're limited by what actual equipment is available."

To P3

"You cannot use the technology if you don't have the technology, and it happens a lot still on campus. You are sent to buildings and there is nothing there. It means that technology is not available to you. The only thing that you can maybe borrow is a TV or there is maybe an overhead projector in the classroom. But what it is Internet and computers, or Elmos are not there."

P4 states that has a hard technological context,

"but I can sleep with it because one of the problems is expectations. People, who have or think they have a conversation with their entire family, all their friends and all the people from high school on one screen at the same time, are going to have expectations if they enter a classroom and you mention technology. Apart from not having all the resources to respond to all the expectations, which I don't, it is humanly impossible because there's only one me, you know. And Facebook has great teams of people working on that. So, I am very realistic about that. The resources I have are rich, are not the best, but they may be sufficient. Ok? If you don't have the facilities obviously you are not going to think about it… In our

department we don't have the funding. We don't have a regular funding to support a technology plan, which doesn't mean that we shouldn't have a plan. Ok?"

Besides all the issues mentioned earlier, the instructors also made reference to other feelings and emotions that they have and Spanish instructors could also have, in general, regarding the use of technology. For instance, P1 is not afraid of technology but "I am afraid if I don't know how to use something, and I am going to be in front of a group using it, I would be afraid in that case. This does not mean that I am afraid of technology as such. I want to learn how to use it." P2 also tries to adapt:

"I think that probably the way we learned when we were students has a big influence on the way we teach. And I'm trying to remember, I haven't really thought about this, but when I was a student, e-mail was a new invention, and the Internet, so we really didn't use it in class at all. We had a VCR and overhead and I learned a lot, you know? I guess probably some fundamental things about my teaching don't rely on these new technologies because when I learned that they were not a part of my learning."

P3 accepts in a natural way the changes in technology and also adapts:

"I have taken some training sessions here and there; in the lab, in the library. I remember some years ago when PowerPoint was presented the first time to the professors of the university, but it was a very complicated program, and I said I am not going to use this because it very difficult to prepare a PowerPoint presentation, I am talking about thirteen years ago or something like that. There have been gradual changes, little by little you get used to something, and then you see the advantages of how technology has advanced even in things like printers."

P4, likes to master technological tools as much as possible.

"Whatever I use, I try to master it. I am not afraid of it at all. When I can't master a specific tool, I look for people, I look for help. Even when asking for help, the more efficient you are, the more efficient is going to be the help. It's a matter of communication. I am sure it is an advantage not to be afraid of technology. And it is a plus in my teaching. But again, not been afraid is the safest way not to make it bigger than it really is. It is a way to keep it balanced, you know. The main question is why do you want to do that? Just to use this technology? Just because it is available, you see? …Again, you have the technology, but the choice of materials is not necessary technological, is pure pedagogy."

P4 also says that among all the caveats regarding technology, the main one is that

"We cannot let the technology become a goal, because, for instance, when we are reviewing activities, we consider a plus the use of technology, but we cannot use the technology just to get that plus. There has to be a sense of it. The caveat is to keep the sense of how useful it is, keep the sense of the real goal… You are replacing the means; you are taking the means as a goal, and it shouldn't be that way. How do we avoid it? One way is good old style interaction, a good solid pedagogy. You are dealing with people. So, in the classroom the use of technology maybe to show something, to make a point, etc. but not to do the whole thing based on technology."

Barriers also exist to the use of technology. Time and training were referred to before, in the survey and in the interviews, as key factors in integrating technology into teaching. Although most Spanish instructors believe in the usefulness of technology resources in improving language instruction, they still need to deal with other factors out of their control. For P1, again, one main barrier is the lack of knowledge "… the how to. Not knowing how to do it. For me, that is the main factor, because if I knew how to do it, I would approach the technology, you know, more often. I haven't been able to navigate [many options], but I really want to learn how to do it, and then I can decide what I want to integrate or not." P2 believes it is a matter of equipment availability, because "If I'm in a class that only has an overhead projector and it's not even in the same building as our language lab, I am just not willing to lug around a laptop all day long, you know, because it's very impractical. So the classroom I'm in has a lot to do with how much on a daily basis I would use technology in my lesson plans." In the case of P3, one barrier could be related to physical conditions. For instance, "What I haven't been able to achieve is to read compositions online. I have a poor sight. I can't grade; I refuse to do that. It is extremely difficult for me; I am handicapped in that sense. I haven't evolved enough as to grading of compositions online." P3 also makes reference to the lack of technology classrooms as a big barrier: "You have classrooms without technology, or technical support. Sometimes you need to go to the lab and get the equipment and take it with you. Sometimes you say this should be easier!" P4 also agrees with this point of view, saying that

"There is a lack of technology in the classroom. I am talking about the software, about hardware. And I am not even talking about instructional software. There is a lack of elemental software. I mean, I don't have in my office an Adobe Pro, so I cannot produce a decent PDF. How do I do it? Because I have my own copy; but I am not provided with one, you know. And that's an elemental tool. I don't have it. As far as hardware in the classroom, well we have some and not certainly in the best conditions. And we have conflicts like having laptops and chalk within a yard of distance, and things like that… So, the lack of technology in the

classrooms, time and consideration for the work are serious barriers. The work in the preparation is not valued by the institution or your boss, but it is valued by the students."

When referring to incentives, the participants sadly confess that they do not exist, at least from their institution and department. There are no incentives for them for the time and effort they expend preparing their classes. Nevertheless, most of them think that they feel rewarded by their students in their semester evaluations. To P2, for instance,

"I guess that if the student feels that the technology has really enriched their learning they can put that in the student evaluation of the instructor and mention it, and it might help the number to go up, the number they base the teaching evaluation on, but I guess it would be good as an indirect incentive… I mean if the students give me a good evaluation then the department will give me a good evaluation, but they might not pay so much attention to the particular role of technology in the success of the class."

P3 confirms the feeling, saying that "In my department is none the incentive to use technology. The incentive for me is to do my best for my students, but you are not rewarded by the department." P4 also thinks the same way:

"I have no idea about the incentives in my department for using technology in my teaching. The main incentive for me, ok, is personal and professional. It's to make the effort and to see that it works, and to see that my students have advantages, and my teaching is more valuable, more effective and even more comfortable for me."

Among the lower positive score statements in the survey, # 24: *Technology improves students' class attendance rates*, had the very lowest score. The researcher asked the four participants their opinion about this issue, and their answers explain how to avoid low class attendance while putting materials for students on line, for instance. Almost all of them agreed on the importance of having a class attendance policy, but besides that, they also mentioned that having materials on line does not mean that the students are going to have all that they need during the semester. P1 explains that "I was not afraid of having everything on line because I have a very strict attendance policy, and the class is very demanding. So, if they don't show up, it is the students loss, because I am not repeating in class what is on line, I am expanding." P2 is careful about the content offered on line: "I've thought about that because I put a lot of notes and handouts on K-State Online, but I don't put them all on at the beginning of the semester. I

put them on after I've given them out in class, so that if someone loses their handout or was not there that day, they can still get it. But I don't put them up beforehand because I don't want them to think, "Oh, I don't need to go to class." The same criteria is practiced by P3 who says that

"I have a very strict policy of attendance. I don't allow them no to come to class… Although I am using technology, it is necessary to come to class because you need the explanation. In class I can make connections and go back to previous lessons. While I am explaining something, I can go back to the slides, the text. The class is important."

In this sense, P4 makes sure of class attendance by assigning homework.

"I make sure that they attend class by the attendance policy. But more than anything, I don't have the whole course published from the beginning of the semester. I publish as I am going to use it in class, and I notify them and I require to have certain readings and certain input from the site before class, and the content of the class is discussion. They know that they need to attend class in order to expand."

Other issues mentioned by the participants show the feeling, emotions and ideas that Spanish instructors have about instructional technology. The following statements summarize their additional reflections on instructional technology:

- "Students benefit from having a visual representation of countries and cultures that are alien to them, so thanks to technology there is a sense of cultural immediacy."
- "Technology can help students who have a hard time participating in class… and it helps them to gain confidence and lessen their anxiety about speaking, especially."
- "There are people that are completely blocked about technology, they are reluctant… There is a generation gap. A younger person should be more familiar with technology. Also, it has to be with education."
- "Nobody is going to tell you that technology is bad; nobody is going to tell you that they don't use technology; nobody is going to tell you that they are not open to use technology. Because it would look bad."

Conclusions

In this chapter the researcher has presented findings of the analysis of data obtained from a survey and the in-depth interviews. These data were related to the perceptions and practices in integrating technology in Spanish language instruction.

Themes emerging from survey data, corroborated in the interviews, are summarized in table 4.5 below.

Table 4.5 Emerging Themes from Survey Data

Category	Thematic statement. Technology …	Example Quotes
Statement 3	Is effective in promoting student understanding of cultures related to the language.	"From using technology in the classroom, I have learned, especially in terms of culture, the need for students to have a visual representation of countries and cultures that are so alien to them; so there is a sense of immediacy." (P 1)
Statement 6	Is useful for improving students' listening proficiency.	"Technology has the biggest impact in listening comprehension… The second one, just for my classes, is the Podcast; it is very helpful." (P 1)
Statement 11	Is effective in accelerating student vocabulary development in the language.	"If they listen to the songs, they are going to really be learning vocabulary, pronunciation, and they have a model that they can follow when they are speaking." (P 1)
Statement 21	Must serve to motivate and inspire students to learn the language.	*Basically, for you, technology can help the students to become more participative?* Yes, that is one of the things I use it for." (P 2)
Statement 22	Adds value to students' language learning.	"I like to have an Elmo in class because I can show the pages that I want the students to see. I like to use images in my classes." "In fact, it can promote critical thinking but you [instructor] have to be there." (P 3)
Statement 33	Enhances student language learning since the Web, as a learning tool, is available as they need it.	"I can promote an open reading to students and they would find texts of their interest, whatever their interest is, because otherwise with the classic textbook, this reading maybe interesting for someone but not for others, also it is not contextualized. So, the selection process is on their part, not in my part." (P 4)
Statement 40	Should depend on the reliability	"You have classrooms without technology, or

	of software, hardware, and Internet language sources for teaching the language.	technical support… So, you cannot use the technology if you don't have the technology, and it happens a lot still on campus." (P. 3) "To help my students to learn more, I have to be aware of the resources that are out there, to suggest." (P 4)
Statement 41	Should include time, technical support and incentives for faculty to use the technology.	"The responsibility of the boss is to provide the means, to provide the training…" (P 4) "You don't want a professor to waste a whole week getting familiar with a program." (P 4) "…it is important to value the effort that faculty make to take the steps to know, the workshops they go." (P 4)
Statement 42	Should pinpoint the most efficient and effective uses of the technology.	"To choose what to use as a technological tool is a matter of availability, is a matter of how effective is going to be." (P 4) "The resources that I had been using had been enough and effective in my teaching." (P 1)

Spanish instructors seemed to have positive attitudes towards technology in general and towards the use of technological sources or tools in improving language instruction and learning. At the same time, not all the instructors feel comfortable and confident that they can integrate more technology resources into their teaching practices.

Although the majority of instructors know how to use a computer and how to surf the Internet, few of them include new technologies in their teaching. It seems that instructors are using Internet mainly to look for supportive materials for their classes, to be informed themselves, and to be in communication through e-mail. The main reasons for this seems to be the lack of knowledge about technology sources, limited or no training in how to use equipment and tools to integrate these resources into instruction, and limited time required by the "learning curve" in using technological resources. Indeed, the analysis of survey results and interview findings revealed that training could have an impact on attitude change regarding their perception of technology use in language instruction. For instance, some of the participants in the interviews declared that they would like to learn how to produce Podcasts or other didactic

materials, but do not have the know-how. It seems that the Spanish instructors still lack the knowledge or interest in using interactive applications, like social networks, to interact with students and colleagues.

Although some training is offered by the institution, instructors still think that the way training is taught is not effective because of the lack of teaching skills that trainers have. It has been suggested that the training content should be more supportive and guided in terms of how to better integrate technology resources that Spanish instructors themselves learn about in order to add new classroom instruction practices.   Too often the instructional technology courses do not apply to the specific needs of world language instructors.

In general, it is clear that knowledge and training alone may not be enough to produce the use of technology resources in Spanish instruction. Time to master and be aware of the know-how is also important for the instructors. It seems certain enough that without the technological know-how and awareness, instructors will continue to miss opportunities to use valuable resources to supplement their instruction.

Chapter 5 - Summary, Recommendations and Conclusions

In this study the researcher explored Spanish instructors' perceptions and practices in integrating technology in Spanish language instruction. This chapter presents (1) an overall overview of the study, (2) conclusions targeted at the study's research questions (3) recommendations for future related research.

Overview of the Study

In this study the researcher investigated perceptions and practices in integrating technology in Spanish language instruction through the exploration of instructors' perceptions and attitudes towards the general use of technology resources in language instruction.

To collect the data for the study, a survey and a case study were conducted. The survey was designed specifically to obtain initial patterns, and was intended to be exploratory; it consisted of 43 items. The survey was sent to 80 Second Language Acquisition (SLA) instructors working in the Department of Modern Languages at Kansas State University (KSU) and instructors working in seven other universities in Kansas. In addition, the case study portion of this study involved the participation of four professors who teach Spanish as a second language at KSU. Four in-depth interviews, following 10 predetermined questions, were conducted to elucidate richer descriptions and to potentially corroborate patterns identified from the analysis of the survey data. All of the educators have been able to use instructional technology in their classes. Pseudonyms were used to protect the participants' anonymity.

The two overarching research questions were leading the collection of the data:

1. What factors or perceptions among Modern Language (ML) Spanish instructors impact their use (or lack of use) of technology integration in second language teaching at their home institution?
2. What perceptions (or characteristics) do individual cases have along a continuum of non-users to users with respect to the integration of instructional technology?

The importance of perceptions and practices regarding instructional technology in Spanish as a second language instruction is presented and discussed in the following two sections

derived from the data analysis. These sections are directly related to the nine major themes emerging from the study.

Findings

From Chapter 4, the findings of the data analysis are presented below as they relate to the two research questions that guided this study: "What factors or perceptions among Modern Language (ML) Spanish instructors impact their use (or lack of use) of technology integration in second language teaching at their home institution?" and "What perceptions (or characteristics) do individual cases have, along a continuum of non-users to users, with respect to the integration of instructional technology?"

As mentioned earlier, in this study a mixed methodology was used. The survey *'Perceptions of Technology Integration in Spanish Language Instruction'* was designed to gain knowledge about the use of technology in Spanish language classrooms. When data were analyzed, the sample group indicated that Spanish instructors seem to have positive perceptions/attitudes towards technology in general, and towards the use of technological resources or tools in improving language instruction and learning. From the survey, nine overarching emergent themes were ranked with high scores. Six of them formed a super-ordinate category showing that instructors consider IT useful to teach culture and general knowledge. In this super-ordinate category, the six emergent themes are considered subordinate themes: understanding of culture; listening proficiency and vocabulary development; motivation; adding value to language learning, and enhancing language learning through use of the Internet. The other three emergent themes formed another super-ordinate category with three subordinate themes: importance of software reliability, the use of hardware and Internet language sources, and the need to have appropriate preparation time, technical support, and the availability of effective and efficient technological tools in order to integrate technology in their classes.

Most of the instructors reported positive attitudes towards technology for teaching culture and promoting general knowledge in the target language. Also, educators considered technology very valuable, if supported.

These results are important, but should not be surprising. In current times, in the age of 'Digital Natives' (also known as Millennial, NetGen or Ygeneration) these results were not unlikely due to the fact that we live in a time of advanced technological resources. The learning

of a second language is not excluded from this current tendency. As Chapelle (2001) has stated, administrators and educators are developing new and innovative teaching techniques using the computer as a main tool to assist in the acquisition of a second language. Maybe this is the reason for which a growing number of universities are investing tens of thousands of dollars and a great deal of time in program development to assure the effective use of modern technology in their classrooms. Ehrmann (2000) supports this idea saying that the investment in instructional technology helps students learn another language other than their native language.

Survey

All of the 43 items stated in the survey had positive scores from the instructors, revealing that their perceptions and attitudes support the use of technology in second language instruction, in spite of few, but strong, factors that keep them from integrating more technological tools in their classes. These results give a slightly different perspective from the one sustained by Bradshaw (2002) who had mentioned that some [educators] enjoy discovering new uses for it [technology] at home and in the classroom, while others have little interest in turning on a computer.

Although there is a consensus about the usefulness of instructional technology in language acquisition instruction, it is also important to mention that the results from the survey showed that an important number of respondents remain undecided about the effectiveness of technological tools in promoting speaking. This is probably because instructors are using traditional applications that are pre-packed for immediate use and are not aware of some applications in the area of spoken language practice, namely in speech recognition and speech synthesis. This is unfortunate due to the fact that people want to learn a second language mainly to be able to communicate verbally. And as Godwin-Jones (p.6) has stated, "the commercialization of speech technologies, and the tremendous interest in making the World Wide Web voice-accessible have led to interesting developments in these areas". It seems that programs like IBM's *Via Voice, Wimba, TriplePlay* and others, are not being used by educators, leaving behind the potentially significant contributions that computer technology could make in enhancing students' oral language development, as Barr, Leaky, and Ranchoux (2005) have stated. Although all the statements from the survey (n=58), showed positive scores resulting in an overall mean positive perception (MPP) score of 62.79, it is important to mention that other

three of the 43 items also showed that instructors are still 'Undecided" about technology effectiveness in some aspects. Items 28, 31, and 43 were ranked with scores in the range from 36% - 39% in that category. The first two items are related to the technology effectiveness in increasing students' confidence and their equitable participation in class. Item 43 states that technology allows the instructor to accelerate the use of methods in the language teaching process. The doubts regarding statements 28 and 31 could be related to the fact that the instructors are conscious that they are not fully aware of the effective technological sources that already exist. If they were informed about them, they could make decisions on specific pieces of software or applications that could help them to achieve their goals and objectives by having their students really engaged and relaxed in their classes. One way instructors can help their students is, for example, by requiring them to retrieve assignments on line, to search the Internet, to use articles in electronic form, requiring them to write their work using word processing software, or requiring them to create their own web pages in Spanish, and other kind of activities. Statement 43, again, could be related to the lack of knowledge and the know-how. Once instructors can use multimedia, for instance, they will realize that technology could help them not only to give more colorful, stimulating lectures, but also to use their time wisely when planning their lessons.

In general, it can be said that the findings from the survey affirm that Spanish instructors have a positive attitude towards technology use in language instruction, and they are also very willing to integrate more technological resources into their teaching to help students who have a variety of learning preferences. Nevertheless, they are still not aware of available resources and they need further appropriate training to integrate additional technological tools, as many researchers have noted in previous literature (Butler and Sellbom, 2002; Leggett & Persichitte, 1998; Rogers, 2000; Tien and Luff, 2001; Chizmar & Williams, 2001). We are making progress, but we are "not there yet."

Interviews

The four in-depth follow-up interviews supported the main patterns obtained from the survey. The participants interviewed said that technology is useful in instruction, but first it needs to be evaluated in terms of how it is going to be used in the classroom, because technology as such does not guarantee effective teaching and cannot replace more traditional pedagogy.

Participants in the case study also confirmed the use of technology to promote the nine emergent themes derived from the survey: understanding of culture; listening proficiency and vocabulary development; motivation; adding value to language learning, and enhancing the language learning using the Web; importance of software reliability, hardware and Internet language sources, and having the appropriate time, and technical support, to develop effective and efficient tools in order to integrate technology in their classes. Only one participant had a different opinion regarding the statement related to motivation. This participant claims to not use technology to motivate the students, because in class students are treated as adults, and thus it is their responsibility to be self-motivated.

The interviews revealed more interesting findings regarding the adaptation to new tools, maybe because the colleagues interviewed are "Digital Immigrants" (individuals that experienced life without this technological invention/phenomenon.) Although the participants started their careers using basic technology like slides, overhead projectors or VHS tapes, they have been integrating more modern tools in their teaching along the way. But this change rests in the willingness to use tools that do not require programming or 'complicated' production, like PowerPoint presentations, laptops and projectors, Elmos, Podcasts, audio and video available on Internet, or CDs/DVDs. The Spanish instructors said that they are using these tools to enhance their teaching and students' interest, but they always make it clear that the interaction in class is the most essential class priority. One participant was emphatic about the usefulness of technology to help shy or sensitive students to avoid embarrassing or frustrating situations.

Again, the findings in the interviews show that definitely Spanish instructors have positive perceptions/attitudes towards technology and they are willing to integrate what they find appropriate in their teaching. Nevertheless, the analysis of the survey and interviews reveal that there are three main concerns or barriers that interviewees repeatedly made reference to: lack of preparation time, lack of appropriate training, and availability of software and hardware. In fact, statement 41 in the survey: Technology -*Should include time, technical support and incentives for faculty*- received the highest overall MPP score (92%), and those perceptions were strongly supported by the interviewees. With the exception of incentives, time and training were mentioned often as problematic issues, and this is not surprising because faculty generally feel pressured for time in all areas of their curriculum, and without a sufficient amount of time they cannot seize the opportunities to integrate technology to its fullest extent. Instructors are very

busy, handling many tasks at the same time. They have little or no time to 'play' with the computer and become more familiar with its features, nor do they have free moments to learn new innovations in technology that may meet their needs. All participants said that they do not have the time to explore what is offered by technology, and this suggests that they are not fully aware of resources that are available and could be potentially rich and useful. For some instructors, if these resources were integrated into the curriculum and in the course syllabi of classes they are assigned to teach, Spanish instructors could make a better use of those tools. But having heavy teaching loads plus research duties, their time is very limited and they resign themselves to work with the sources available or to use the ones provided by large publishing houses. It goes without saying that preparation of materials for class is per se very time consuming and does not give faculty to have extra time to explore supplementary resources. This main concern related to time could become less stressful if instructors had effective training in the use of the computer and technology in general, and practical software applications. Once again, this issue is also supported in the literature (Chun, 2000).

Besides the time factor, most of the interviewees said that training is crucial. They have had interest in attending training sessions to equip themselves with more knowledge of how to use computers and its different applications, and to upgrade their technology skills in general. They recognize that they do not have the know-how, and in order to maximize technology according to their goals, they need help. Unfortunately, their experience has not been positive due to the lack of teaching skills of the trainers and the lack of specificity of the sessions to their discipline. While the sessions provide general information about computer technology resources, they fail to provide instructors with ways to incorporate them into language instruction and because of that, those sessions are considered ineffective and unproductive by participants. It is clear that Spanish instructors perceive that traditional training sessions or one-time-only workshops have not been effective in making instructors comfortable enough. One individual would like to attend training sessions specially designed for the department of Modern Languages, for instance. Two of them said that they like to play with new tools, and if they cannot master them, they look for help from KSU technicians. Another participant goes to the Modern Languages Language Learning Center to look for help when that person needs to know how to operate specific equipment. Because technology is always changing, all participants agreed on the need for having continuing education in this matter.

Time and training are only two of the main barriers for educators in integrating technology in their instruction. The third important finding in this study has to do with access to technological resources. This issue represents a major concern that limits the integration of technology in class and generates a lot of frustration. The interviewees agreed on the fact that the university offers technology but not all the departments and faculty benefit from it. There are classrooms on campus without technical support and it forces Spanish instructors to carry the equipment that they check out from the lab, going from one building to another. Some of them pointed out that there are departments on campus that have more resources, and that in general there are many disparities in funding. Some of them said they feel very frustrated because of this impediment, and one of the participants argued that all the classrooms on campus should be tech classrooms, especially given that the institution has made important investments in technology. The participants said that in order to use technology they need to have technology available, and currently that is not their situation in their current context; they would like to see equipment in all the classrooms in which they teach.

Implications of the Study

The findings obtained in this study amplify our understanding of factors that contribute to Spanish instructors' positive perceptions and attitudes towards the integration of technology in instruction. They use the available resources they know best, but would like to be more trained and aware of other resources that could be useful in Spanish instruction. The implications of these findings indicate that the amount (or lack) of training attained by instructors has an effect on how they decide to use technology in their classes and design classroom material or activities. They perceive the need for effective and efficient training, especially when the results collected show that most Spanish instructors are strong believers in the usefulness of technology resources in language instruction to enhance their classes and allow the students to access more language input. They are, for the most part, "believers," and they want to add more depth to their teaching through technology. The positive perception/attitude towards technology is strongly related to its perceived classroom utility, an important issue to be considered in the design of the curriculum. The instructors desire useful training that can teach them how to improve the quality and effectiveness of their instruction, and they are willing to devote time necessary to have continuing education in technology.

Overall, one would expect to find more motivated instructors to be using technology in their classes.   With training, they would master the know-how of the resources they want to use to help their students acquire the Spanish language. But faculty need a well-planned, ongoing professional development program tied to their curriculum goals, and designed and sustained by adequate financial and staff support. Will the support be provided? The best solution may be to have a full-time technical specialist in the department to provide technical support on a full-time basis, and to oversee applications in classrooms. It could be helpful to have appropriate individualized support from peers to experiment with new strategies for technology use, too. Of course these actions require funding, upgrades, and maintenance. The obvious limitation in their case is the budget restrictions that virtually all departments face in these difficult economic times.

Recommendations for Further Research

The design and findings of this exploratory study should serve as a guide for future research on the limitations in the integration of instructional technology in Spanish as a second language. Although the scope of this study was focused on Spanish instruction only, the findings could be generalized to other languages. Thus, it would be of value to repeat similar research with other languages such French, Chinese, Italian and other languages. It could be very interesting to compare the perceptions and actual limitations regarding instructional technology in languages for which fewer resources are commercially available, at least in the United States. How would Arabic instructors compare to their Romance language counterparts?

The study specifically investigated Spanish instructors' perceptions and attitudes toward technology and the data was gathered from a survey and a case study with four in-depth interviews. However, the researcher did not make classroom observations, and it could be useful to apply this technique in further research to have a better interpretation of what the instructors report.

The findings of this study show that although Spanish instructors are very willing to use more technological tools in their classes, the need may not be of equal value or importance to administrators who make decisions regarding faculty development. For this reason it is important to include decision makers in further research.

In future research could be very productive to include the use of "texting" and how both Hispanics and African-Americans have used this technology earlier than other ethnicities in expanding the digital divide between "natives" and "immigrants" (those individuals who grew up without digital technology and adopted it later.)

As a final recommendation it is strongly suggested, for a similar future studies, to obtain a larger survey sample. A wide-scale survey sent to a more diverse sample and a larger case study could help to strengthen the results.

Conclusions

The findings obtained in this study show that Spanish instructors are not utilizing technology as much as they could, principally because of a lack of knowledge, training, time and institutional infrastructure. They know the importance of enhancing and making their instruction more attractive to their students, 'Digital Natives', who have sophisticated technology skills and habits. They are also aware that technology gives students the opportunity to engage the target language through in different ways, opening a world of opportunities to develop their skills and to understand Hispanic culture better. Technology offers the meaningful exposure that students need to learn a new language, and instructors are trying to use technological sources to guide them in their learning. Of course students can opt for study abroad, but technology offers opportunities that were unknown to students just a generation ago.

Although the instructors have positive perceptions and attitudes towards technology, they reported a limited use of technological resources because they themselves do not have the know-how. Besides email, Elmos, digital projectors, and laptops, they are using the Web to search for video, sound and texts that can enrich their classes. Nevertheless, none of them said that have tried to design their classes producing blogs, collaborative slideshows, casting tools, audio, word recognition, or other applications that can be produced for free using different learning tools that are offered on the Internet.

There is no doubt about the Spanish instructors' willingness to be more knowledgeable about technology and the personal efforts they have made to use it, despite the aforementioned obstacles. For instance, it was surprising to find in this study that the participant chosen as a limited user of technology in class, turned out be the one using Podcasts, Ipods, PowerPoint

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presentation, Skype and the Kansas State University online system –KSOL-, to mention only some tools. This shows that technology can be utilized by those who have limited technical experience and knowledge. What instructors need is the opportunity to become familiar with the resources that are appropriate for their instruction. They need more information, more support, and more training in their specific field.   The participants interviewed were firm and clear: they desire technology support from an individual who understands the needs of modern language instruction; they just do not want someone who knows software, devices, etc. out of the context of their actual needs.

Instructors are no longer afraid of technology, and this is a good finding, taking into account that almost a decade ago, authors like Lam (2000) for example, stated that some "educators do not see audiovisual equipment and computers as educational tools that can help their students, but to the contrary many times they show their fear of being supplanted by machines."

In summary, this exploratory study represents a body of research targeted at the Spanish instructors' perceptions and attitudes towards the integration of technology in instruction. Spanish educators teaching in higher education were surveyed and interviewed, and their perceived importance of technology in their instruction was analyzed. It was found that they have positive perceptions and attitudes towards technology. The participants shared notable and insightful opinions about technology. "I think you can teach a class very well with just people and maybe a chalkboard", said participant 2. Participant 4 stated, "I can think of a classroom without technology, but I can't think of technology without the classroom." "Technology… is an empty tool," emphasized participant 3. All of them agreed that technology would certainly add value and a new dimension to their classes. As one of the participants indicated, technology is a tool that reaches its potential by the productive use of the instructor.

Instructional technology, interactively and with guidance, can be an extraordinary tool for Spanish language learning and for the development of higher order thinking skills, in general. When appropriately used, instructional technology can be of great benefit for instructors and students.

Overall, the results of this study have provided a foundation for future research and analysis of perceptions and attitudes toward technology in Spanish instruction, especially when the innovative nature of technology is continually changing and expanding.

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Appendix 1: Consent Form

KANSAS STATE UNIVERSITY

INFORMED CONSENT TEMPLATE (with instructions)

(If you are performing research involving human subjects, it is your responsibility to address the issue of informed consent. This template is intended to provide guidance for crafting an informed consent document. The Committee for Research Involving Human Subjects (IRB*)* *strongly* recommends that you model your consent form on this template. However, if you choose a different approach, it must contain at a minimum the same elements as this standard version. Language and terminology used in the consent form must be written at no more than the 8th grade level, so that the potential participant can clearly understand the project, how it is going to be conducted, and all issues that may affect his or her participation. In addition, please write the consent form in a manner that addresses your subjects directly instead of writing it in a manner that addresses the University Research Compliance Office directly. *Information on the important issue of informed consent can be found in 45 CRF 46 at* *http://ohrp.osophs.dhhs.gov/humansubjects/guidance/45cfr46.htm#46.116*. **Federal law mandates that all signed and dated informed consent forms be retained by the P.I. for at least three years following completion of the study.**)

WAIVER OF INFORMED CONSENT: *There are limited instances where the requirement for a formal informed consent document may be waived or altered by the IRB. Guidance for when informed consent maybe waived can be found at: http://www.ksu.edu/research/comply/irb/images/slide1.jpg*

45 CFR 46 states that " An IRB may waive the requirement for the investigator to obtain a signed consent form for some or all subjects if it finds either:

1) *That the only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality.*

Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or

2)   *That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context."*

(if a study employs only questionnaires and surveys as the source of their data, it may generally be assumed that to answer and return the questionnaire is an appropriate and sufficient expression of free consent.   However, there are circumstances that might call this assumption into question – e.g., teacher-student relationship between the investigator and the subject, etc. However, a statement should be included on the questionnaire or survey form indicating that participation of the subject is strictly voluntary, the length of time reasonably expected to complete the questionnaire or survey form, and that questions that make the participant uncomfortable may be skipped.)

This form is designed to word process in the spaces provided – Microsoft Word. If you use this form, please delete all explanatory or administrative text in brackets. If you have questions, please call the University Research Compliance Office (URCO) at 532-3224, or the Chair of the Committee for Research Involving Human Subjects.)

PROJECT TITLE: (if possible, the title should be identical to that used in any funding/contract proposal)

APPROVAL DATE OF PROJECT: EXPIRATION DATE OF PROJECT:

(both dates will be provided in the approval letter, dates must be in place before distributing to subjects)

PRINCIPAL INVESTIGATOR: (must be a regular member of the faculty)

CO-INVESTIGATOR(S):

CONTACT NAME AND PHONE FOR ANY PROBLEMS/QUESTIONS: (This should be the phone number and/or email address of the P.I.)

IRB CHAIR CONTACT/PHONE INFORMATION*: (This information is for the subject in case he/she has questions, or needs or wants to discuss any aspect of the research with an official of the university or the IRB)*

- Rick Scheidt, Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224.

- Jerry Jaax, Associate Vice Provost for Research Compliance and University Veterinarian, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224.

SPONSOR OF PROJECT: (funding/contract entity)

PURPOSE OF THE RESEARCH: (Explain in lay terms that this is a research project, and why the research is being done.)

PROCEDURES OR METHODS TO BE USED: (Explain in lay terms and in language understandable at the 8th grade level how the study is going to be conducted and what will be expected of participants. Tell participants if they will be audio or videotaped, if they will be paid, etc.)

ALTERNATIVE PROCEDURES OR TREATMENTS, IF ANY, THAT MIGHT BE ADVANTAGEOUS TO SUBJECT:

LENGTH OF STUDY: (estimate the length of time the subject will be expected to participate)

RISKS OR DISCOMFORTS ANTICIPATED: (Describe any foreseeable risks or discomforts from the study. If there are no known risks, make a statement to that effect)

BENEFITS ANTICIPATED: (describe any *reasonably expected* benefits from the research to the participant or others from the research)

EXTENT OF CONFIDENTIALITY: (explain how you plan to protect confidentiality)

IS COMPENSATION OR MEDICAL TREATMENT AVAILABLE IF INJURY OCCURS: *(in cases where more than minimal risk is involved)*

PARENTAL APPROVAL FOR MINORS: (if minors or those who require the approval of a parent or guardian are participants, you should include a space for their consenting signature)

TERMS OF PARTICIPATION: (Include the following statements or one minimally modified)
I understand this project is research, and that my participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

(Remember that it is a requirement for the P.I. to maintain a signed and dated copy of the same consent form signed and kept by the participant

Participant Name: _____

Participant Signature: _____   **Date:** _____

_____   _____

Witness to Signature: (project **Date:**
staff)

<div align="center">KANSAS STATE UNIVERSITY</div>

<div align="center">INFORMED CONSENT TEMPLATE</div>

PROJECT
TITLE:
> Collegiate instructors' perceptions and practices in integrating technology in Spanish language instruction.

APPROVAL DATE OF PROJECT: _____   EXPIRATION DATE OF PROJECT:

_____

PRINCIPAL INVESTIGATOR: CO-
INVESTIGATOR(S):
> Lawrence C. Scharmann (P.I), Lorena Barboza, Bradley Shaw (Co-P.I.)

CONTACT AND PHONE FOR ANY
PROBLEMS/QUESTIONS:
> Lorena Barboza, 532-2437

IRB CHAIR CONTACT/PHONE
INFORMATION:

SPONSOR OF
PROJECT:
> Secundary Education and Modern Languages

PURPOSE OF THE
RESEARCH:
> Doctoral Dissertation

PROCEDURES OR METHODS TO BE USED:	Electronic Survey and Purposive Interviews

ALTERNATIVE PROCEDURES OR TREATMENTS, IF ANY, THAT MIGHT BE ADVANTAGEOUS TO SUBJECT:
N/A

LENGTH OF STUDY:	8 months

RISKS ANTICIPATED:	None

BENEFITS ANTICIPATED:	Enhanced awareness of multi-media instructional tools for enhancing modern language instruction.

EXTENT OF CONFIDENTIALITY:	Anonymity (electronic survey); pseudonyms (interviews)

IS COMPENSATION OR MEDICAL TREATMENT AVAILABLE IF INJURY OCCURS:	N/A

PARENTAL APPROVAL FOR MINORS:	N/A

TERMS OF PARTICIPATION: **I understand this project is research, and that my participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.**

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

(Remember that it is a requirement for the P.I. to maintain a signed and dated copy of the same consent form signed and kept by the participant

Participant Name:
_____

Participant   **Date:**
Signature:
_____   _____

Witness to Signature: (project   **Date:**
staff)
_____   _____

Appendix 2: Survey as Research Method Used

Perceptions of Technology Integration in
Spanish Language Instruction

This survey attempts to gain knowledge about the use of technology in Spanish language classrooms. Your responses to this survey are appreciated. Any personal information that you provide will be kept in strict confidence.

For the purpose of this questionnaire, "technology" is limited to the following equipment or resources (internet, email, videos, audio, projectors, computers, software) used as an important component in the classroom.

Gender: **Female** _____ **Male:** _____

Age:
Under 30 years _____
30-40 years _____
40-50 years _____
50 years or older _____

_____ Years teaching Spanish

What level do you normally/ usually teach? Please choose <u>one</u> that corresponds.
First year _____ Second year _____ Third year _____ Fourth year _____

Level of Education: (Please mark the highest degree that you hold)

_____ Doctorate　　　　　_____ Master's　　　　　_____ Bachelor's

Self-estimate of technological expertise.　(Please check one of the following that best describes your expertise in using technology in Spanish courses)

None _____　　　　Some _____　　　　Low _____　　Average _____　　　High ____

Have you taken a course in educational technology? Yes _____　　　No_____

Please respond to the following items **<u>by circling</u>** the response that most adequately reflects your perception of technology integrations in Spanish language instruction.　The scale for numbers is as follows:

5 = strongly agree

4 = agree

3 = undecided

2 = disagree

1 = strongly disagree

In your Spanish class/es (lab work included), technology

1.　　Is effective in promoting the communicative elements of language learning.

　　　　　　　　　　5　　　4　　　3　　　2　　　1

2.　　Promotes specific language skill acquisition and development, and, accelerates the mastery of these skills.

　　　　　　　　　　5　　　4　　　3　　　2　　　1

3.　　Is effective in promoting student understanding of cultures related to the language.

　　　　　　　　　　5　　　4　　　3　　　2　　　1

4.   **Is effective in promoting the learning of grammar concepts.**

<div align="center">

5   **4**   **3**   **2**   **1**

</div>

5.   **Is useful for reducing embarrassment and stress that students may experience in acquiring and learning the language.**

<div align="center">

5   **4**   **3**   **2**   **1**

</div>

6.   **Is useful for improving student's listening proficiency.**

<div align="center">

5   **4**   **3**   **2**   **1**

</div>

7.   **Promotes and improves student conversation in the language.**

<div align="center">

5   **4**   **3**   **2**   **1**

</div>

8.   **Is useful for developing student writing in the language.**

<div align="center">

5   **4**   **3**   **2**   **1**

</div>

9.   **Is useful for promoting student speaking in the early stages of language acquisition.**

<div align="center">

5   **4**   **3**   **2**   **1**

</div>

10.   **Is useful for promoting student speaking in the advanced stages of language acquisition.**

<div align="center">

5   **4**   **3**   **2**   **1**

</div>

11.   **Is effective for accelerating student vocabulary development in the language.**

<div align="center">

5   4   3   2   1

</div>

12.   **Is useful for developing student reading comprehension in the language.**

<div align="center">

5   4   3   2   1

</div>

13.   **Is useful for monitoring and detecting student errors in speech production in the language.**

<div align="center">

5   4   3   2   1

</div>

14.   **Is useful for student self-examination, self-reflection and self-correction in videotaping their conversations in the language.**

<div align="center">

5   4   3   2   1

</div>

15.   **Prompts students to respond more often and to make longer responses, thus producing more language discourse.**

<div align="center">

5   4   3   2   1

</div>

16.   **Supports students' accelerated mastery of language concepts.**

<div align="center">

5   4   3   2   1

</div>

17.   **Supports students' personal and social interactions during the study of the language.**

<div align="center">

5   4   3   2   1

</div>

18. **Improves students learning in grammar, spelling and translation.**

                              5   4   3   2   1

19. **Using electronic tools such as email, texting, synchronous chat, and electronic bulletin boards adds to the students' language learning.**

                              5   4   3   2   1

20. **Through the on-line or distance format provides a productive environment for second language learning.**

                              5   4   3   2   1

21. **Must serve to motivate and inspire students to learn the language.**

                              5   4   3   2   1

22. **Adds value to students' language learning.**

                              5   4   3   2   1

23. **Increases student time spent on the task of learning a language.**

                              5   4   3   2   1

24. **Improves students' class attendance rates.**

                              5   4   3   2   1

25. **Improves students' abilities to work in groups.**

          5   4   3   2   1

26. **Improves students' abilities to work alone.**

          5   4   3   2   1

27. **Works to adapt instruction for different learning styles in the language learning process.**

          5   4   3   2   1

28. **Increases student confidence in learning the language.**

          5   4   3   2   1

29. **Increases the students' rate of learning the language.**

          5   4   3   2   1

30. **Contributes to instructor effectiveness through the use of course management tools.**

          5   4   3   2   1

31. **Ensures greater and equitable student participation in language learning.**

          5   4   3   2   1

32. **Through the on-line format is useful for promoting student conversations and interactions.**

5   4   3   2   1

33.   Enhances students' language learning since the WEB, as a learning tool, is available as they need it.

5   4   3   2   1

34.   Increases instructor effectiveness in teaching the language.

5   4   3   2   1

35.   Increases instructor confidence in teaching the language.

5   4   3   2   1

36.   Increases the instructor's work load.

5   4   3   2   1

37.   Provides a productive basis for language instructors to manage and monitor the ongoing proficiency of students' language acquisition.

5   4   3   2   1

38.   Should depend on the appropriateness of software, hardware, and internet language sources for teaching the language.

5   4   3   2   1

39.   Should depend on the availability of software, hardware, and Internet language sources for teaching the language.

5   4   3   2   1

40.   Should depend on the reliability of software, hardware, and internet language sources for teaching the language.

5   4   3   2   1

41.   Should include time, technical support and incentives for faculty to use the technology.

5   4   3   2   1

42.   Should pinpoint the most efficient and effective ways to enhance selected skills.

5   4   3   2   1

43.   Allows the instructor to accelerate the use of methods in the language teaching process.

5   4   3   2   1

Appendix 3: Results of Survey "Perceptions of Technology Integrations in Spanish Language Instruction"

1. Your gender:	%	Total
Female	64%	37
Male	36%	21

2. Age:	%	Total
Under 30 years _____	10%	6
30-40 years _____	40%	23
40-50 years _____	22%	13
50 years or older _____	28%	16

3. Years teaching Spanish: Answered questions: 58

4. What level do you normally/ usually teach? Please choose one that corresponds.

	%	Total

	%	Total
First year	22%	13
Second year	31%	18
Third year	14%	8
Fourth year	33%	19

5. Level of Education: (Please mark the highest degree that you hold)

	%	Total
Doctorate	55%	32
Master's	41%	24
Bachelor's	3%	2

6. Self-estimate of technological expertise. (Please check one of the following that best describes your expertise in using technology in Spanish courses)

	%	Total
None	0%	0
Some	9%	5
Low	10%	6
Average	67%	39
High	14%	8

7. Have you taken a course in educational technology?

	%	Total
Yes	33%	19
No	67%	39

8. Please evaluate your satisfaction level with the following statements: In your Spanish class/es (lab work included), technology

	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Total
1. Is effective in promoting the communicative elements of language learning.						
	22% (12)	56% (31)	16% (9)	5% (3)	0% (0)	(55)
2. Promotes specific language skill acquisition and development, and, accelerates the mastery of these skills.						
	20% (11)	60% (33)	20% (11)	0% (0)	0% (0)	(55)
3. Is effective in promoting student understanding of cultures related to the language.						
	38% (21)	49% (27)	9% (5)	4% (2)	0% (0)	(55)
4. Is effective in promoting the learning of grammar concepts.						
	18% (10)	53% (29)	20% (11)	9% (5)	0% (0)	(55)
5. Is useful for reducing embarrassment and stress that students may experience in acquiring and learning the language.						
	11% (6)	45% (25)	35% (19)	7% (4)	2% (1)	(55)

6. Is useful for improving student's listening proficiency.

     47% (26)   35% (19)   16% (9)   2% (1)   0% (0)   (55)

7. Promotes and improves student conversation in the language.

     9% (5)   35% (19)   36% (20)   15% (8)   5% (3)   (55)

8. Is useful for developing student writing in the language.

     9% (5)   56% (31)   20% (11)   15% (8)   0% (0)   (55)

9. Is useful for promoting student speaking in the early stages of language acquisition.

     7% (4)   29% (16)   38% (21)   20% (11)   5% (3)   (55)

10. Is useful for promoting student speaking in the advanced stages of language acquisition.

     24% (13)   29% (16)   33% (18)   15% (8)   0% (0)   (55)

11. Is effective for accelerating student vocabulary development in the language.

     13% (7)   76% (42)   9% (5)   2% (1)   0% (0)   (55)

12. Is useful for developing student reading comprehension in the language.

     22% (12)   53% (29)   18% (10)   7% (4)   0% (0)   (55)

13. Is useful for monitoring and detecting students errors in speech production in the language.

     9% (5)   25% (14)   36% (20)   27% (15)   2% (1)   (55)

14. Is useful for student self-examination, self-reflection and self-correction in videotaping students' conversations in the language.

     18% (10)   44% (24)   33% (18)   5% (3)   0% (0)   (55)

15. Prompts students to respond more often and to make longer responses, thus producing more languages discourse.

     9% (5)   33% (18)   49% (27)   9% (5)   0% (0)   (55)

16. Supports students' accelerated mastery of language concepts.

     9% (5)   49% (27)   35% (19)   7% (4)   0% (0)   (55)

17. Supports student's personal and social interactions during the study of the language.

     5% (3)   38% (21)   33% (18)   22% (12)   2% (1)   (55)

18. Improves students learning in grammar, spelling and translation.

     5% (3)   60% (33)   25% (14)   9% (5)   0% (0)   (55)

19. Using electronic tools such as email, texting, synchronous chat, and electronic bulletin boards adds to the students' language learning.

     18% (10)   56% (31)   20% (11)   5% (3)   0% (0)   (55)

20. Through the on-line or distance format provides a productive environment for second language learning.

     7% (4)   25% (14)   42% (23)   24% (13)   2% (1)   (55)

21. Must serve to motivate and inspire students to learn the language.

     26% (14)   57% (31)   7% (4)   9% (5)   0% (0)   (54)

22. Adds value to students' language learning.

     24% (13)   61% (33)   15% (8)   0% (0)   0% (0)   (54)

23. Increases student time spent on the task of learning a language.

     30% (16)   41% (22)   19% (10)   11% (6)   0% (0)   (54)

24. Improves students' class attendance rates.

     2% (1)   7% (4)   59% (32)   31% (17)   0% (0)   (54)

25. Improves students' abilities to work in groups.

     7% (4)   19% (10)   39% (21)   35% (19)   0% (0)   (54)

26. Improves students' abilities to work alone.

    22% (12)   54% (29)   20% (11)   4% (2)   0% (0)   (54)

27. Works to adapt instruction for different learning styles in the language learning process.

    17% (9)   54% (29)   19% (10)   9% (5)   2% (1)   (54)

28. Increases student confidence in learning the language.

    6% (3)   50% (27)   39% (21)   6% (3)   0% (0)   (54)

29. Increases the students' rate of learning the language.

    2% (1)   37% (20)   50% (27)   11% (6)   0% (0)   (54)

30. Contributes to instructor effectiveness through the use of course management tools.

    20% (11)   57% (31)   19% (10)   4% (2)   0% (0)   (54)

31. Ensures greater and equitable student participation in language learning.

    11% (6)   42% (22)   36% (19)   11% (6)   0% (0)   (53)

32. Through the on-line format is useful for promoting student conversations and interactions.

    13% (7)   21% (11)   42% (22)   23% (12)   2% (1)   (53)

33. Enhances student language learning since the WEB, as a learning tool, is available as they need it.

    25% (13)   55% (29)   17% (9)   4% (2)   0% (0)   (53)

34. Increases instructor effectiveness in teaching the language.

    23% (12)   53% (28)   15% (8)   9% (5)   0% (0)   (53)

35. Increases instructor confidence in teaching the language.

    23% (12)   30% (16)   32% (17)   15% (8)   0% (0)   (53)

36. Increases the instructor's workload.

    19% (10)   40% (21)   25% (13)   11% (6)   6% (3)   (53)

37. Provides a productive basis for language instructors to manage and monitor the ongoing proficiency of students' language acquisition.

     9% (5)   58% (31)   26% (14)   6% (3)   0% (0)   (53)

38. Should depend on the appropriateness of software, hardware, and Internet language sources for teaching the language.

     30% (16)   40% (21)   25% (13)   6% (3)   0% (0)   (53)

39. Should depend on the availability of software, hardware, and Internet language sources for teaching the language.

     23% (12)   49% (26)   23% (12)   6% (3)   0% (0)   (53)

40. Should depend on the reliability of software, hardware, and internet language sources for teaching the language.

     30% (16)   51% (27)   17% (9)   2% (1)   0% (0)   (53)

41. Should include time, technical support and incentives for faculty to use the technology.

     60% (32)   32% (17)   4% (2)   2% (1)   2% (1)   (53)

42. Should pinpoint the most efficient and effective uses of the technology.

     45% (24)   43% (23)   11% (6)   0% (0)   0% (0)   (53)

43. Allows the instructor to accelerate the use of methods in the language teaching process.

     11% (6)   45% (24)   36% (19)   8% (4)   0% (0)   (53)

Appendix 4: Interviews as Research Method Used (Transcripts)

<u>**Participant 1**</u>

For how long have you been teaching Spanish as a second language? For a very long time; I think about probably 20 years or more. Let's say about 25 years including GTA, as instructor and now as a professor. I have been going through different steps in different levels.

When I started I used much technology; I used slides, songs, movies. Whatever was available at the time, I use it. Lately I have been using more because technology has changed for example DVDs, some PowerPoint, and things like e-mail to e-mailing students. I had been using podcasts. I do not produce them but I use what is available. I only produce some pertinent presentations in PowerPoint but I do not produce any DVDs or podcasts. I mainly use what is available because I do not have the time. I don't have the technology, I don't have the know-how. I remember looking in the Internet to see how to produce an Apple podcast and it is very complicated, and I don't have the time to do any of it. I have to balance my time. The resources that I had been using had been enough and effective in my teaching. I am aware about programs like Audacity that is very good for conversation but for me it takes too much time. I prefer to give the students the feedback in the class, right there. If they are not pronouncing in the right way, I can help them after class, and I can give them feedback. For me it is more effective to do it that way. Because if I do it with Audacity, it seems to me, I will need to review all the recordings. I would need a secretary!

I am using some videos, but I am not videotaping the students. It depends on my time availability. If I would have the time to do that, I would, but the problem is that when you have a very heavy teaching load and research, and everything, you can not spend all of your time in technology. I don't think technology make things faster. I don't think it does. I think it sometimes slows you down. Think about e-mails. I think that sometimes you need a secretary on a daily basis to answer all the emails you get. And that's very hard.

My students do not make comments about the use of the technology in the class. If they know how to use something that I don't know how to use, then I asked them to volunteer. If they have a project in which they want to use some kind of technology that I am not familiar with, I said okay I am more than happy to help you; just let me know what you need for the activity and I will get it for you. So I don't think they feel the limitations from that respect. I am supporting what they want to do, and there are times when I don't know how to do something and they come and rescue me. That's fine, I have no problems with that and then they seemed to enjoy it, they don't hold it against me. They do well because I don't think they feel the limitations. Sometimes

I think students are kind of exhausting of technology. Because they live in such a technological word that sometimes the one to one interactions that you provide in class might be helpful for them, because they can have the chance to deal with the material in a different way.

Technology helps with the interaction between students, but the human interaction cannot be substituted by technology, you know. You need to be there to provide a lot of guidance and give feedback and there is a kind of exchange of energy that technology cannot provide. And I count on that.

When I am in class I tried to explore more the material that is been presented. I add or I make corrections, or I provide additional examples. So, I use technology as a point of reference, you know. Sometimes it depends on the quality of information, so if I see any limitations then I tried to go beyond the limitations of the material. I use it as a point of the departure for class discussion, and it is a kind of supportive material.

I never have not taken a class in technology, but I have being on a couple of workshops in the use of computers given by the University, but I am sorry to say that they have not been very good. What they are teaching is the minimum of the minimum of the minimum, and there are like 100 people there, and you don't get really much a hands on experience. I did not in enjoy them, and I don't plan on going back to any of those, it was a total waste of my time. What I got was what I already knew, and I went there to expand because I wanted to improve. When I went I wanted to know various things regarding PowerPoint or the Isis program or online, but I am sorry the one that I attended were a waste of my time. And it also bothered me that when I went to some of those meetings they were only one hour, and those people were talking about the weather for about 15 or 20 minutes. I walked out of some of them because I said I don't have time to talk about the weather; and then you know, what is the amount that is going to be spent really dealing with the issues that I am interested in learning about, 20 minutes? I think that it would be wonderful to have courses in which they really teach faculty how to deal with the technology.

I was talking to a friend of mine who teaches in another University and she was telling me that her department organized a series of mini workshops where she learned many things about using technology. They wanted the faculty to be savvy and knowledgeable in technology. She is not a wizard, but now she knows how to make clips, and other material for her classes. And that is wonderful because they also learned how to use blackboard, blender technology and they were mixing everything. The program was not a one-week program, no. It was a program throughout the semester, consistent, and allowing them to upgrade their skills. Whoever is teaching you needs to know how to teach. That person needs to make clear the contents because you have not much time, and they cannot start improvising because it does not work. I would be happy to participate in workshops like that one. I would happily take my time to do that, because I know that is going to be good for me. I am not afraid of technology, I am afraid if I don't know how to

use something, and I am going to be in front of a group using it, I would be afraid in that case. That it is not that I am afraid of technology. I want to learn how to do it. The same thing with digital cameras you know. I don't know how to use digital cameras, but I would like to know how to use them because I have an interest in photography. I really want to learn. I want to learn also what is called neuroplasticity of the brain. I think the more you learn about more things, the more active your brain is. I am interested in getting my hands into different things because that will help my brain.

I think there are some instructors of Spanish that are very active in the use of technology, and they are very, very good while trying to integrate the new technologies into the classroom. I also know that there are many that don't use it that much. I would say that may be 50/50 or something like that. It really depends on the institution, it depends on the technology available because some departments have less resources. Our department has less resources so, it really depends on a lot of factors, you know. The university offers computers to the students in the labs, iTac does a good job with troubleshooting, but for faculty I am not sure if the institution is providing what we need. As I said before, I have signed up for many courses that they mentioned were going to teach you many things that you need to know, but I did not find them very helpful. I don't know if I went to the wrong sessions, but they were not very helpful to me. Some colleagues of mine had the same experience. I think they have the best intentions and tried to do their best, but I don't think they are very effective. I think they teach the minimum and you already know the minimum, and what you want is to improve and I don't see that option there.

I think they should really target their instruction. For example, if you are using audiovisual material, what is it that you can do in the area of audiovisual material. If your specialty has to do with sounds or languages, what is it that you can do in order to guide you in the process of learning how to implement techniques or strategies to develop oral skills, you know what I mean? Those workshops should be focused according to the specific fields or the departments, so that we learn to maximize the technology according to our goals.

The instructors of Spanish are using modern technology because of the quality of the information. I think the capacity to explore more is very import. Also, time. Dealing with Internet and the web, can really cut the time. And it is easier to research; you can go faster locating articles, catalogs. It is fantastic! These are advantages and you can be more selective having that spectrum of things. You can select what you really need for your classes and your research. It is like a whole world. I don't know anybody that doesn't use the library resources, and I would say that it depends on the resources, whether the instructors use them or not. If the instructors don't use more the technology, maybe it is because of time, the lack of time. That is my case. Because if you are dealing with, let's say, 30 students, and you have to do Audacity for 30 students, when do you have the time to check 30 answers? Before Audacity, I used recording with my students. I recorded them in tapes, and I listened the tapes. It took 18 hours just to check the speech of my students, and I said this is the last time I am doing it! From now on, I am

doing it in the spot, where they can get immediate feedback.

Technology is not necessary in class to help students to develop their skills. There are a lot of things that they can do on their own. I wish I had access to the technology that they have now when I was learning English, because I think that if the students want to learn a language on their own, there is a lot they can do. If they have a class that is supportive in their efforts, it is good. I always tell them please listen to podcasts, there are a lot of news papers in Latin America, a lot of journals, magazines that have podcasts. So, I ask them please listen to podcast, and I integrate some of those to my classes, but I think there are things they can do on their own. There are songs. The lyrics can be found everywhere. So, if they listen to the songs, they are going to really be learning vocabulary, pronunciation, and they have a model that they can follow when they are speaking. Movies come now with subtitles. They have subtitles, and they can read subtitles in the same language or in Spanish. They can see the speaking part and they can read at the same time. There are a lot of things that they could use to improve their skills, and that is wonderful. I don't think students should be limited to what we do in class, and I think that they can do that on their own. It is a combination of my feedback, plus all that is available out there. For instance, I am going to start a Skype program between the students from Kansas State and students from the university in my country. That's an advantage, but I am not going to be using that as such in my class. It is something that they are going to do in their extra time. If they want to learn, they have to do it on their own walking; I will give them the list of things that they need to do.

In my department I think we have some services available, which I appreciate, you know. We have computers, and we do have the lab, which is very important, but I do feel that we need more workshops on how to use the equipment that is available. I think that we need that. I do need it; that would be helpful. We need anything that is supportive.

Technology has the biggest impact in listening comprehension. I think it depends. I am sure that there could be an effective tool for reading, for writing, for speaking in terms of interaction. Culture also. Everything is fantastic to learn in culture. For instance, all kind of movies, of course! I use lot of visual material, even from PBS, podcasts, NPR, whichever focuses on Latinoamérica, and students have really loved it.

Cite two or three effective tools. For me number one is anything that is visual like videos, DVDs and programs that you can watch on line, in general the web. The second one, just for my classes, is the podcast; it is very helpful. I know that many people use Power Point, and I use it sometimes, but I don't think it is very crucial. Probably, I don't understand very well what Power Point is. The power that I know from PowerPoint is the representations, and they present these outlines and I don't see the point of going through so much trouble to present an outline using PowerPoint. I use the blackboard for that. I write the main points and explain, and I won't use PowerPoint for that. I am sorry! So I benefit from visual material, but I don't see the usefulness of PowerPoint they way I know it.

Opportunities, facilities and training play a big part, and I think they are really key factors. I wish we could have those more implemented here. The opportunities need to be increased, they need to be expanded and focused according to the field. Because it is not very effective to have a class oriented towards people in business and at the same time you are dealing with people in the Humanities or Art, you know. If people are handling more visual material, I think we should be targeting technologies that are more relevant to the visual element.

Feelings: probably some people may be afraid of using technology or probably some people don't see that in certain areas it is very useful. I don't think that technology for technology's sake should be a factor. I think it has to be carefully evaluated in terms on how it is used in the classroom. The fact that is technology as such doesn't guarantee that is going to be effective. That is my point of view. Time, wasting time, for sure may be an element. Is technology going to be helpful in terms of really dealing with the material or it is going to be a waste of your time? So, if it is going to be a waste, then don't use it. Probably some people think that they can be replaced by technology. I don't. Some people may think that way, but I am not particularly afraid of that. It is not a factor for me.

Barriers: I would say that is just the lack of knowledge, the how to. Not knowing how to do it. For me, that is the main factor, because if I knew how to do it, I would approach the technology, you know, more often. I have not been able to navigate, but I really want to learn how to do it, and then I can decide what I want to integrate or not. Because it may be that I do learn how to do it, and then I say this is not really very useful for my goals, it is not very effective and decide to stick to what I have.

I have my courses on line. I have all the course content on line. I have questions for students on line, all the homework on line. I communicate with them regularly on line. I use all that. I was not afraid of having everything on line because I have a very strict attendance policy, and the class is very demanding. So, if they don't show up, the student looses, because I am not repeating in class what is on line, I am expanding. Yes, they do show up. I have an attendance policy, they can miss three classes in the semester, no questions asked, but beyond those three times they are responsible for not being there.

Your evaluation of the following concepts (from very important to not important):
-Previous training -- very important
-Information -- very important
-Motivation -- very important
-Technical support -- very important
-Students' needs -- very important
-Supervisor request -- very important
-Economic cost -- very important

-Personal habits regarding technology -- very important
-Amount of personal effort -- very important
-Fashion -- not important.
-Time -- very important
-Economic reward -- not very important
-Administrative difficulties -- important
-Academic traditions -- not very important
-Control of the class -- important
-Previous negative or positive experiences -- not very important

From using technology in the classroom, I have learned, especially in terms of culture, the need for students to have a visual representation of countries and cultures that are so alien to them, so there is a sense of immediacy. For me it is important that students learn to appreciate and look with new eyes at the material that is presented. I think of the limitations of the writing word as such. If they don't have contact with people from other cultures, or have not traveled or haven't been exposed to international experience, the technology can be a wonderful tool because they can access that world that is so unfamiliar to them. I know that it has a big impact on them. For instance, this semester they see Machu Picchu or the archeological sites in Yucatan, and they want to travel, they want to study. I think technology motivates them to study more. For me technology provides that kind of support.

The technology helps with the immediacy of my experience of having communication with them through the semester. I can contact students through email, or online and I think that it provides them special support in their effort to study. If they have difficulties, I can respond and help them. In general, it is a way to expand, put them in contact with a wider context to go beyond the classroom. I don't think the world is the classroom, and I think that by having access to the web and different technology the students have the opportunity to go beyond the limitations on campus. They are more globalized in this respect because we can make different associations, so for me it is very valuable. Technology provides benefits for them and me. There is much talk about diversity and multiculturalism and I think that we need to use technology in a way that paves the way to that goal.

Participant 2

I have been teaching Spanish as a second language for about 10 years. I taught as a GTA, as a Master's student, and then as a doctoral student, and now as a professor. Three years as a professor now.

According to your experience in these ten years, what would you say are the Spanish instructors' opinions or attitudes towards technology in the language classroom? I feel like, I think that in general people who are close to my age are more receptive to technology than people who are older and don't …. People who when they began teaching didn't have the same technology available, I think that they tend to be less open to using as much technology in their teaching. I also think that in general the availability of the equipment is a big factor in people being able to use technology in their teaching. I think that In my experience, it seems like people would use technology more if the equipment were more readily available, if it were there in the classroom without having to make arrangements and bring it there every day, and things like that.
In these 10 years have you always been using technology in the classroom? Yes.

What kind of technology? Well, It depends a lot in particular, I hate to say this but it depends a lot on the classroom. If you classroom that only has an overhead projector I'm more likely to use mostly the overhead projector. But if the classroom has other resources I'm pretty likely to incorporate them on a more of a regular basis. And I have my own iPod and speakers so it is easy to use that. I can take it with me and it's not a big deal to use some kind of audio recording. But, I just don't have time and can't carry all the heavy equipment as much as I would like to.

You said that if you would have more equipment in the classroom you would be more willing to use it. Are you talking about equipment that you already have an idea how it works, how to master that software or equipment? Have you always been willing to learn about new technologies or have you been afraid…? That's a good point. Yeah, I wish that I did have more time to learn about other things that I don't know how to use. The things that I know how to use… I can use the Internet in class; I can use a projector to show films, or to show things that are on the Internet. When I have a chance I like to have the class in the language lab so that each student can have a computer and I can help them do research online. We use PowerPoint. But, I'm sure that their other technologies that I don't know how to use that also are not available, so…

The technology that you are using now is fine for your purposes of teaching language? Yeah, I have very little extra time. I feel like I have the bare minimum amount of time needed to do the basics right now, because every semester I'm teaching lot of classes, I'm teaching things that I've never taught before. But in the future, when I have a basis to work off of, I would like to incorporate more things and learn new things to incorporate into my teaching.

So far how do you feel [about] the use of these particular resources in your classes? Have these resources   been effective, or do you think that there is a need to incorporate more? What is your feeling? I think that technologies are so much a part of these students' worldview, that I think to relate to them and for them to get the most possible out of the class, I would like to be able to do more with technology.

For you, what is technology? [Laughing] That's a good question, because I think the overhead projectors is counter technology. And then, you know, we've got computers, and then speakers and an iPod is a technology. And then there are other things. I've never used an Elmo. I need to learn how to use the translation memory software, if I am ever going to teach the translation classes someday. It's a very broad term.

What is the role of technology in the classroom for you? I think that the role of technology in the classroom is to kind of enhance the students' opportunity to communicate, both with each other and with people outside of the classroom sometimes, and I think that it will be really helpful for them to… I think that technology can kind of enhance what we do in a classroom. I think that it would be possible to have a language class where all you did was use books and people, and that would be fine, but with using different technological resources you can kind of help students make more connections to things outside of the class and you can help students who are shy find ways to participate that are more comfortable for them. You can help people who are visual learners have something to look at, or people, you know, who need to work on their listening skills have somebody else to listen to besides people who are in their classroom, so I think it's kind of enhancement, maybe not totally fundamental.   I think you can do a class without it, but it wouldn't be as good.

When you are teaching, using technology, what is your role? What is my role? What do you mean? *… When your students are using technology to search the web, or doing other things, what is your role in the classroom?* I guess in that sort of situation, when all the students are using the Internet or something to do research, then I monitor them and I serve as a resource if they have questions or don't understand something that they are reading, I can answer their questions and I also have to make sure that they're not trying to do something else that will not benefit their learning.

And when you are planning the class, how do you decide what technological resources to use? Planning the entire semester or planning one class session? *How do you work? Do you plan for the whole semester? Do you plan for every week?* Well, I guess what I do is before the semester starts I decide generally what I am going to do each day of the semester: and what homework they will have to prepare, and what the general subject will be for the day, because I like to plan everything beforehand, so I have an idea of when it would be useful to be able to include some sort of technology, but the classroom that I'm in has a big influence on how much I actually do

with the technology because if I'm in a class that only has an overhead projector and it's not even in the same building as our language lab, I am just not willing to lug around a laptop all day long, you know, because it's very impractical. So the classroom I'm in has a lot to do with how much on a daily basis I would use technology in my lesson plans.

Let's assume that you have the technology available. What tools will you use to teach particular issues or to help students develop some of the skills. What would you choose? What would you use? I really like to just have a computer with an Internet connection, and speakers, and a DVD drive. If I had that in every classroom I taught in, then whenever I wanted to I could show short video clips, or websites, or you know, a PowerPoint presentation. I could show images, photos, and listen to songs. You could do all of that if you had that kind of equipment available.

Do you think these media resources help the students to increase their interest and also to help them develop their skills? Yes, I think that especially for students, the majority of them, the average age of the students, are students who are used to having Internet as part of their life. They can't remember a time without it. For them I think it makes things seem a lot more relevant if they can see video rather than just reading a description of something. I think putting those two things together works very well for them.

So it's an advantage? Yes, I think so.

Are you afraid of that advantage? No. *No?* [Laughing] No, I don't think so. I think there is a generation gap between me and students even though there's not a huge age difference between us. But the way they use their phones all the time, they're always plugged into something. I can't really identify with that, but I'm not afraid of it. I try to understand it.

Assuming that in the classroom that you are going to teach, and there are many resources available, how do you get the training to use those? I know that I could go to the language learning center and someone could train me. For instance, if I had an ELMO in my class and I wanted to learn how to use it, I know the LLC would give me training on it.

Besides that, in your free time do you explore the web to learn more about other resources or how to use a specific software? No, I can't say that I do. I can't think of anything like that. I think that at some point I'm going to learn to more about Translation Memory software, which I will use in teaching eventually when I get to teach translation classes. *Because it's a need for you?* Right, yes. It's something that I need to know about so that I can effectively teach that kind of class. But, probably if I had more free time I would learn about the existence of other software or other types of technology that would be really great to my teaching. *So, it's a matter of time?* Yes, it really is.

When you were a GTA, for instance, was time also a limitation? Yes, although sometimes as a GTA I was required to learn to use certain technologies as part of my job. We used clickers. One year, I guess it was. So I had small experience with the clickers. That would be an example. *You need time, more time?* Probably going to more meetings, too; I could learn about new approaches. Eventually I will.

Have you thought, for instance, of helping your students in developing their oral skills using a specific software or tool? Aside from the smart-cart, I have my students work using some software out of class activities since I don't have a computer for all of them, I can't have them do that in class. We use Skype so they can talk with people in Mexico and that's a semester long project where they have a conversation partner. And that's been really useful. And I have them use message boards outside of class for written conversations. My idea there is that students who are shy in class can kind of get their foot in the door outside of class when they have time to think of exactly what they want to say, in writing. And then, in class we continue that conversation that they already had outside of class and they will be more comfortable to continue with what they already got started outside of class.

Basically, for you, technology can help the students to become more participative? Yes, that is one of the things I use it for.

That participation is more individual or "groupal"? It is more of a group; it is always some kind of a group. When I use Skype they're working in pairs. Message board, it's usually the whole class. I also have them do chat online. I use different sizes of groups.

You already talked about this a bit, but what is the situational context in which faculty do their work? Are you talking about all the different kinds of work that we do, or just teaching; the kind of research or just teaching? *Teaching.* OK, Can you repeat the question? *What is the current technological situational context in which faculty do their work?* The current situational context in which I do my work? *For instance, the resources available obviously are more now than they were 20 years ago.* Yes, that's true. *For instance, you're working at Kansas State and you already have the experience at KU. Comparing both, and having to account for time, what would you say is the current context for teachers?* I think that we could do a lot more if we had more time and money. I think that there are a lot of opportunities that we just can't take advantage of because 1) we're sort of limited by what we already know and tend to use that more because it is more efficient maybe. And then two) we're limited by what actual equipment is available. I had a job interview at Missouri Western State University which, I don't know, is sort of like Emporia State University, a smaller university, but they got some kind of grant and they have the equivalent of a smart card in every classroom. It was just amazing; I was impressed. I wish that we had that here.

Do you think that other institutions have more than you have here? [Laughing] Yes, I think so.

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Do you think that's a contradiction? For instance, Kansas State has in the last years been saying and offering all the new students or potential students that this university pays a lot of attention to the amount of technology and they offer students this and this and this. It's very unequal, I think. Maybe different colleges and different departments they have a lot more and I think in general there are a lot of disparities in funding in different parts of the campus. So it's probably true to some extent. But, I have noticed just in the years I've been here that students are more and more having their own laptops that they take with them everywhere and they have their iPods all the time and their phones can do all kinds of things, so that might start to solve the problem.

Solve the problem for the students, not for the teachers? It would be interesting to see what happens in the next few years.

Besides the factors that you already mentioned, like time and money, what other factors influence language instructors in their use or non-use of technological tools in their teaching? I think that probably the way we learned when we were students has a big influence on the way we teach. And I'm trying to remember, I haven't really thought about this, but when I was a student e-mail was a new invention, and the Internet, so we really didn't use it in class at all. We had a VCR and overhead and I learned a lot, you know? I guess probably some fundamental things about my teaching don't rely on these new technologies because when I learned that they were not a part of my learning.

To teach with technology or to teach without technology makes a difference? I mean, it does. I think it helps students' motivation if they have the technology to make things more relevant to them and helps to have a more immediate connection to things by being able to see them and interact. Like I said, helping students who have difficulty participating in class, I think that technology helps with that.

So, how do you explain that some teachers don't use technology in class? Well, like I said, I think it can be an enhancement. That's not to say that it wouldn't be possible to teach a class well without using technology. I think you can teach a class very well with just people and maybe a chalkboard. But it would certainly add a new dimension to the class to add technological components.

Have you ever been afraid of technology? I hate it when I'm trying to teach my class and I have a plan of what to do and I want to show a film or something and the technology doesn't cooperate. And it happens to me all the time. It doesn't matter. I feel like I know what I'm doing. But then, when it's in a class and I'm trying to do things quickly and not waste their time by having me fool around with the computer or the projector. Several times a semester this happens to me and it's embarrassing and frustrating, but I'm not going to give up. I do feel like it's worth it, but it is frustrating. I think that if the equipment was in the classroom all the time,

or if I had a very light, portable system that I could carry around with myself al the time, either way it would make it a lot easier to set things up and use particular pieces of equipment that I'm not familiar with. So, I don't know if fear is a good description but maybe it's a love-hate relationship. *Frustrating?* Yes.

In what areas do Spanish instructors think technology can have the biggest impact? What areas. Like…? *We're talking about skills.* Like listening? Speaking? *And culture or interaction.* Just thinking about what people think, what Spanish instructors think in general. I think on the one hand, people perceive that technology can help beginning students to have practice speaking, listening, reading, and writing, a sort of streamlined participation if there's software that can give students feedback or help the instructor give them feedback. I think that's one area that people perceive that technology can be especially useful because students need a lot of feedback and there's a limit to what one instructor can do in an hour of class. I don't know if we're thinking about technology in a broad sense. I think that another area instructors feel that technology is useful is in reaching different kinds of learners; helping people who need something visual to work on different types of input.

According to your experience, what would be two or three of tools that Spanish instructors use in order of usefulness? The tools we use in order of usefulness, in teaching? Do you want me to talk about any sort of tool? Are you including books or just technology? *Talking about technology. We're talking about all kinds of Spanish classes in general.* In order of usefulness, I guess I will say the Internet is the most useful because it has the most possibilities. It includes videos and audio and has chat and message boards and newspapers, all kinds of authentic material. That's probably the most useful. And probably video, even though that is kind of included in the Internet, but it's good to watch films. DVDs and CDs and MP3. We do use a lot of songs. I know because my office is next to some classrooms and I know that whenever they play "¿Dónde jugarán los niños?" they're learning the future tense. So Internet, video and sound. *How do the opportunities, facilities, and training contribute to instructors and acceptance and use of such technologies in their teaching?* They are absolutely fundamental. And resources, because if people don't know the resources exist or if they know they exist but don't know how to use them, they can't use them. Especially for me I feel that it is very important.

What are the main barriers that the Spanish instructors have to use technology in the classroom? Lack of education, and lack of resources and things. *When you talk of education what do you mean?* The awareness of their pedagogical possibilities and specific ways to use technology in teaching; then also knowing how to use the basics of using the actual technology. Kind of a combination.
To get that education, is it the teacher's responsibility, or is it the institution's responsibility? They're probably both together. I think that the institution has the responsibility to support us in continuing professional development to give us the time and resources that we need to be able to

do that. And then the individual has to be willing to commit some time and effort into the educational opportunity.

Okay. What would you say is the main incentive behind adopting instructional technology to teaching Spanish in your department? An incentive in my department? *If that's an option, yes.* I don't know there's a particular incentive beyond knowing that it will help students to enrich their learning. *So your evaluation as a teacher doesn't depend on if you are using the technology?* I don't think so. *In other words…?* I guess that if the student feels that the technology has really enriched their learning they can put that in the student evaluation of the instructor and mention it, and it might help the number to go up, the number they base the teaching evaluation on, but I guess it would be good as an indirect incentive. *At least for the students?* Right. I mean if the students give me a good evaluation then the department will give me a good evaluation, but they might pay so much attention to the particular role of technology in the success of the class.

Let's assume that the teacher always uses technology to do everything and actually the teacher has everything online. Because of that, will the result of having the resources available for the students make them attend the class, or probably give them the opportunity to be absent? I've thought about that because I put a lot of notes and handouts on K-State Online, but I don't put them all on at the beginning of the semester. I put them on after I've given them out in class, so that if someone loses their handout or was not there that day, they can still get it. But I don't put them up beforehand because I don't want them to think, "Oh, I don't need to go to class." They need to go to class […] because they can't be absent more than three times during the semester, but … *Is it because of the attendance policy?* Right, but I do think that that could be a potential problem if everything were online, the student might feel that class was not necessary.
OK. Now I will mention some words and you will tell me, please, "it is very important", "not important, " or "more or less important." Ok.

-Previous training: very important
-Information: very important
-Promotional motivation: not very important
-Technical support: very important
-Student needs: very important
-Supervisor request: not very important
-Economic cost: very important
-Personal habits regarding technology: very important
-Amount of personal interest: very important
-Fashion: somewhat important
-Time: very important
-Economic reward: not very important
-Administrative difficulty: somewhat important

-Academic tradition: somewhat important
-Culture of the class: very important
-Previous negative or positive experience: somewhat important

Can you tell me some things you have learned from using this technology? Do you mean things that I have learned using the technology in my teaching? Or learned about teaching through…? *The first option.* Some things I have learned…. About teaching… That's a broad question. Things that I have learned through…. Well, one of the things like I mentioned before is that technology can help students who have a hard time participating in class and I think that it helps them to gain confidence and lessen their anxiety about speaking, especially. It helps them to become more comfortable with other people in the class and also to be more comfortable speaking with native speakers. Both types of experience help him to gain more confidence and I think that at the level I'm teaching, especially the 400 level classes, I think that gaining confidence is one of the most main things that students need because their anxiety really hinders them, a lot of them, from interacting with each other in class and with native speakers. So that is one thing that I have learned. Did you ask me to mention several things? I don't know. One other thing that I learned that I never thought of until this happened. I had a student who had epilepsy and he couldn't look at a computer screen and that made me aware that it is really great to incorporate computers and other visual things into teaching, but for some students that creates a big obstacle for them. As much as it can be helpful for a lot of students it can also create obstacles for other students. So that was something that at a specific moment I learned something.

Very Important. Very good example. Ok. This is the last for now. What kind of support do Foreign Language educators need in order to change their methods and use instructional technology? I think at the beginning when we first start teaching as GTA's we need training in all the possibilities for enriching what exist through using different technologies, to become aware of the possibilities and then to be able to actually use them, then the technical side of using technologies, and that can begin when we first start teaching, and the throughout our careers we need to keep getting continuing education by going to meetings or having workshops, I guess, in the department, or things like that. Because things are always changing. *A person has been working for 20 years. How can we persuade that person to start using technology?* I think probably one thing that would be useful would be to have faculty observe one another and that probably won't be so popular with some. I think it would be really useful to help us generate new ideas, and to all sorts of ideas, not just about using technology, but help us get new ideas in our teaching. Observing one another and attending meetings I guess. I think if they see the technology in action and [see] what it can do they will be more likely to use it. That, and they need to not be intimidated by it, or have too many frustrating experiences. It needs to be available and acceptable, also. *Have you ever taken classes in technology, or a workshop or something very specialized?* No, I started… When I was undergraduate, I was an elementary education major, but before I changed my major I started to take a class in instructional media or

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something like that, but I found the tone of the class very condescending and I thought the professor thought we were stupid and I dropped the class. Anyway, I started to take one, but I dropped it.

Would you say that the technician tries to teach teachers in a good way? Can you say that again? *The way experts in technology try to teach the teachers?* No. I think that I've learned mostly from other teachers. I mean, sometimes, for example, the Language Learning Center staff helps me with specific questions, like, "How do I use this thing?" You know, this digital voice recorder. They showed me how to use it, and it was very effective, but I think most of the time, you know, I try to figure it out myself, which works alright, or I have my husband help me with it, or I have another teacher who shows me how to do it.

Have you ever attended an ITAC workshop or something? No. If I had more time I would love to do that. Yes, I use their tutorials, I mean. I use their online tutorials, so that would be sort of the same thing in written form. I feel like I can usually figure things out if I just read about it. *Have you learned from them?* Yes.

Participant 3

I have been teaching Spanish for 23 years. I started using some technology in my classes, like VHS and tape players. Then I used slides, for many years for the [   ] class. Now for the [   ] class everything is on line. So I have all the lessons which I developed; they don't come from the book, they are my own lessons in [   ]. What used to be in the slides now they are Power Point. The big advantage of the Power Point over the slides only happens once in class, when the students can go again and again over the Power Point as many times as needed. Also I use online for all the announcements for class. In more conventional [   ] classes I don't use that much technology. Also there has been an evolution from the overhead projector to the Elmo because the Elmo allows you to show pictures; you can' do that with the overhead projector.

I have taken some training sessions here and there; in the lab, in the library. I remember some years ago when Power Point was presented the first time to the professors of the university, but it was a very complicated program, and I said I am not going to use this because it very difficult to prepare a Power Point presentation, I am talking about thirteen years ago or something like that. There have been gradual changes, little by little you get used to something, and then you see the advantages of how technology has advanced even in things like printers. The first printer we had in Arizona State we have a Diablo printer for the whole department! And there were two or three computers with Internet for the whole department. This was a department five times the size of our department. But had training.

Another thing regarding technology is the library. When I started, the Modern Languages catalog, it was a book. You had to go to the library, go through the book, find the author, go to the year, and go to the following volume, so it could take forever to do a bibliography. Right now everything is done for you; what took hours of time before, now it takes seconds to do. Library is a support for you. Also if you are in a computer in the classroom you can go to Internet and show the students how to do the search. It is very easy to teach that now, which you can do in few minutes instead of going to the library. That also that has changed a lot! Also the databases that the library has. For instance for the [   ] class I use [   ], a database. Also there are free databases in Internet. K-SOL is fantastic because it allows you to have all the materials there. I would say that the students only come to office hours to retake things because they don't have to ask for their grade anymore, because the grade is online, they can check it anytime. If they have missed the class they will know what they missed on class because it is on line. The use of technology in class doesn't increase the absences in the class. I have a very strict policy of attendance. I don't allow them no to come to class. There are some exceptions with special classes. Although I am using technology, it is necessary to come to class because you need the explanation. In class I can make connections and go back to previous lessons. While I am explaining something, I can go back to the slides, the text. The class is important. What I haven't been able to achieve is to read compositions online. I have a poor sight. I can't grade, I

refuse to do that. It is extremely difficult for me; I am handicapped in that sense. I haven't evolved enough as to grading of compositions online.

If I have to define technology, I will say it is an empty tool; it helps you, but you need to give the content to the tool. In my 23 years of teaching I haven't been afraid of technology. I think I belong to a generation that was already using it, even if was primitive technology. I remember that first computer that I had was a TV set. I bought a computer as soon as the computers came out, and they sold you a keyboard and higher memory, and you had to create your own programs. Actually couldn't do anything with those computers, but it was fun to see that the thing was going to be good eventually for something.

Between my favorites tools are word processors –Microsoft Word. It is the more basic, but still the more important one. It allows you to write. Then, PowerPoint on line.

With technology, you can go fast and you have everything in TV format. The use of technology depends on the subject. There are classes that do not allow to use much technology.
Maybe in the future we can have more audio books in Spanish, for instance. Once I tried to use one and it didn't work. You cannot listen without a visual aid because there are many details that you can miss. If you are driving, you will miss much because you need to drive carefully, and to do that you need to stop listening. For me it was good to listen the audio books to learn English, but I don't see audio books as very helpful.

When I am planning my classes, I decide if I want to use technology. It has to do with the classes that I teach. I have to have some kind of visual aid. But again, I don't teach those one where you can have more tools used.   In the classes that I teach I tried to use technology that can be useful. The instructor needs to be capable to decide when to use it. In a composition class can be useful to have an Elmo or an overhead projector, because for instance you can have the rules of the composition, or grammar. It is technology but is not very modern. Maybe someday they develop software to be used in composition. That is why I like Microsoft Word because it allows you to check spelling, it helps you! I use it in English and Spanish. I always have open the Thesaurus. In a composition class, when the students are working, I use all the time the dictionary in English and Spanish on line. What I would do in the class is to be sure that the students have access to Microsoft Word so that they have access to that and use it their advantage. They need to know how to use the dictionary of the Real Academia. The Real Academia offers the conjugations of the verbs, which I use. I would say that the Microsoft Word, an overhead projector and an Elmo could make it for a composition class. Maybe there is something out there that I don't know…

I am a believer in technology because it makes my life easier. Maybe others don't use technology because there is a generation gap. If a young person doesn't know the now-how, maybe is going to be reluctant to use it. Maybe they belong to a conservative family that does

not have cable TV and they have a miserable life. So, maybe their kids also have a miserable life. I think that they haven't been in contact with the technology and because of that they don't see the advantage of the technology. Maybe there is an ideological reason, maybe they are very conservative or "hippiesh" people. Both in the right and in the left makes people anti tech. People that want everything organic and things like that.

To develop the main four skills, the main tools that could help the students I would say are mp3 players, images (video, DVD, Youtube).

You need to use something more structured and specific. You need to listen to conversations in a specific field. If you are learning about the weather listen to weather conversations. So, use MP3 or anything other device, images in DVD or Youtube. And right now the word processors. I don't use softwares only the word processor. I don't want to work for a month to produce software that I can use in class. The PowerPoint presentations that I use in my classes have taken an unending number of hours. But I can use them for many classes. Only one PowerPoint presentation can have 10 to 20 hours of work, and one class can have 12 or 15 PowerPoint presentations. Again, you are investing in the future. I am not very knowledgeable about many types of software like Atajo. I haven't been exposed to those much, I don't know, maybe there is something out there that is very good and I am missing. I don't have time, and you have to use what is giving by you, or by the big publishing houses, because you don't need to know the name of the software, you just need to use it. It doesn't take so much to get familiar and comfortable with those softwares. You need to play some hours with them and you see if it is worthy or if it is not worthy.
To use technology, you always need to go with an open mind. You give always the benefit of the doubt. I always give the benefit of the doubt to the technology. If you go with a reluctant attitude you won't find anything there. Your attitude is a very important element. Sometimes the technology is very good but what you are given is raw material, and you have to structure that for the classroom.

Right now one of the main barriers to the use of technology is that you don't have tech classrooms. You have classrooms without technology, or technical support. Sometimes you need to go to the lab and get the equipment and take it with you. Sometimes you say this should be easier. So, you cannot use the technology if you don't have the technology, and it happens a lot still on campus. You are sent to buildings and there is nothing there. It means that technology is not available to you. The only thing that you can maybe borrow is that TV or there is maybe an overhead projector in the classroom. But what it is Internet and computers, or Elmos are not there. It is absurd not to use technology if it is available. I like to have an Elmo in class because I can show the pages that I want the students to see. I like to use images in my classes. If you have technology available in the classroom you need to find a way to use it. But there are people that are completely blocked about technology, they are reluctant. I also think that there is a generation gap. I younger person should be more familiar with technology. Also, it has two be with education.

In my department is none the incentive to use technology. The incentive for me is to do my best for my students, but you are not rewarded by the department. The personnel committee does a very poor job in evaluating the teaching materials or how you use technology in the classroom. The head of the department does not see the need, and you use technology because you want the best for your students. There is not a reward or incentive in the department. Our Spanish section is, in general, an old section. Until we have a generation change, there will not be a bigger push for technology. So, I think we will need a generation change. That change also needs to happen at the university level. The University needs to understand that you cannot have classrooms without technology, as we have. All the classrooms need to be tech classrooms. In the future they will be; that are many universities in which they already are. It is cheaper; it's not the same to buy 200 projectors or if you buy five. Once that you have those 200 projectors the maintenance cost is lower.

-Previous training -- not important. You need to learn
-Information – important, because it depends on what kind of information if technology is needed or not
-Promotional motivation -- not important
-Technical support -- very important
-Students needs -- very important
-Supervisor requests -- not important
-Economic cost -- important
-Personal habits regarding technology – important
-Amount of personal effort -- important
-Fashion -- not important
-Time -- important
-Economic reward -- not important. It is the opposite because I have more advantage software at home that I purchased with my own money.
-Administrative difficulties -- not important
-Academic traditions -- not important
-Control of the class -- very important
-Previous positive or negative experiences -- important. Feedback is always important.

I have learned from technology, I say this reluctantly.

My use of the Language Learning Center depends of my classes. It depends on the classroom that I am using. Last semester and this semester I am using the LLC more often. What the lab can really do for me? Because technology evolves, those things are never clear. For instance, maybe I can get help with the video and sound part; I don't know that right now. I don't do that, maybe in the lab they can do that. I don't know. It is important to know what the LLC can do. We need help. I need audio, video and perfect PDF to be able to upload the files in KSOL.

I think that the lab should provide the technical support for the whole department. If the lab is going to have a future, it needs to centralize the technical support for the department.
New technologies will be improving the teaching. The problem is that the teacher has to structure things. We need more support to structure a class. We are now using the cellular phones, and it could be a good tool in the class experience. I like to use technologies that are already proved.

Participant 4

I have been teaching Spanish as a second language for almost 20 years.

My attitude towards technology is that technology is cool. It is cool because the range of possibilities becomes wider, the number of resources is theoretically unlimited and because it brings the possibility of using real data which sometimes is not at hand. You can use the Web, you can get sound, movies, whatever. So, it's an open world. That's my general opinion, with so many caveats. 20 years ago, you wouldn't use the web. We had a classic language lab, for instance, and that was about it. It wasn't an open world yet. In the last 20 years technology has changed a lot. I used only tapes at that time.

I started using modern technology as it came up, practically, because I was already in the States. The novelty was email. We did not use the web as much we use it today. I have to say that at the beginning, I wasn't very motivated to use technology in class, but it was the thing to do. You had to be up to dated. I wasn't fanatic about it. I had an interim –away from teaching- and I was in Europe, and I had to use the technology. So, let's say that I had the knowledge of the technology, but what I lacked was the educational point of view, how to use it for education, how you put them together.

I think for me the point of conversion was the Web, and as it became generalized you had access to press, to TV, to radio, to libraries. It's more than an open world; it is a way to the world. It is a window to the world. Technology helps the instructor to teach better because you teach real. I don't have to use a textbook, which provides a cut from a newspaper. I can use the actual newspaper. I can promote an open reading to students and they would find texts of their interest, whatever their interest is, because otherwise with the classic textbook, this reading maybe interesting for some, but not for others, also it is not contextualized. So, the selection process is on their part, not in my part. And that gives me a lot of ground to approach the teaching process. I think other colleagues use technology in this way too.

I can think of a classroom without technology, but I can't think of technology without the classroom. So it is a tool. I am not as fanatic as to think that technology is the only tool. A library is still a library; do you know what I mean? Ultimately, students can be a tool for other students, and a resource for other students. We learn from another's mistakes, we discover each other interests, etc. etc. This is one more element, I don't think is essential. It is great to have, but is not essential. One caveat: We cannot let the technology become a goal, because, for instance, when we are reviewing activities, we consider a plus the use of technology, but we cannot use the technology just to get that plus. There has to be a sense of it. The caveat is to keep the sense of how useful it is, keep the sense of the real goal. If the goal is cultural sensitivity, it is a wonderful tool, but you cannot over use it in such a way that it becomes the

goal; or in grammar, if you want to do subjunctive, you want to do subjunctive. You cannot let the use of technological resources take over. That wasn't a risk with the classic language lab, but it is a risk with the Web.

To help my students to learn more, I have to be aware of the resources that are out there, to suggest. Also, you need to be aware of what they are doing to avoid dispersion, for instance. You want them to keep focused. It is very important to keep interaction between them to see how well or badly they have digested the material, and I don't see how we can see that using the Web. They still need the interaction.

In my classes, I don't use the Web. In a specific class one of the problems could be the cultural difference. How are they going to put the text in context? They don't know the context, ok? So, I have to set pre-reading activities, have them research certain topics, and those topics for me need to provide the context. I have to figure out what is useful and have them research and contrast what they know with other sources out there. They will be using them at home, but it is pertinent for class time; it is preparation. At the end, I can do both readings and have them, for instance, consider whatever concepts they acquired in the class with other texts. There may be some use of the Web in there. For me the essential in the classroom is interaction, but for the preparation, I consider the Web essential, even though I may or maybe not use it in the classroom.

For skills: I have used technology to help students. If you see my classes on K-SOL site, you will see readings that I have produced, I have texts that I selected, and I have readings for them to consult like entire magazines, you know. They are not required to read one article or the other. This gives them access if they want, but also provides music and movies, for instance. So, it is reading and listening, you know. They do chat, and they use these kinds of resources. I make sure that they attend class by the attendance policy, but more than anything, I don't have the whole course published from the beginning of the semester. I publish it as I am going to use it in class, and I notify them and I require them to do certain readings and certain input from the site before class, and the content of the class is discussion. They know that they need to attend class in order to expand.

Technology will not replace pedagogy. It won't.

My role in the classroom, when they are using technology, is as a conductor, like an orchestra director, monitoring. I look for materials that will be catchy and very expressing, going to the point. For me there are two things: their attention is one element, and finally wrapping up and going to the point is the other thing. So, materials have to be catchy, but they have to be effective too. Again, you have the technology, but the choice of materials is not necessary technological, is pure pedagogy.

To choose what to use as a technological tool is a matter of availability, this is a matter of how effective is it going to be. There is really not much difference. You can put a movie from the Web; that is what I do. It depends on the class, the selection of the tools. In one of my classes, class time, is Power Point, because it gives you the possibility to structure the contents the way I want to, and to show examples that I want. But if you go to the Web site I have music, movies, I have my writing commentaries, other people's writing commentaries, and then monographs. So, you have a whole variety. I mean a monograph is the same as having a printed publication in your hand, it is a different support but it is the same thing. Now, a movie… I could not possibly make a movie available for my students any time of the day unless I have the Web. So it is a matter of availability, it is a matter of functionality, economy even. But one supports the other? I have no preference. That is a choice you make after the pedagogical fact. What I want to teach are good examples, etc. You have to make those decisions with or without technology. Now, the next step is how do I make it more available, how I make it more attractive. During class time, if I have to play music and show movies, then maybe there wouldn't be an opportunity for me to use those materials, while if they can access them from home I still can mix and cook the whole thing during class time. So, I am conductor; I have all these instruments, but I am conducting the orchestra. But the choice of whether the orchestra is going to play Beethoven or Mozart, that's the first step.

I do not think there is a rule in order to use technological tools in the classroom. That has to do with the way you approach the subject, the content that you want to give to the subject, and the kind of interaction, and sometimes even from one class to another is going to differ. Ok. For instance, in one of my classes they are doing chat all the time, and they are brainstorming and using that kind of contact all the time. I tried to encourage this kind of activity in other classes and it did not work. There is no general rule. For instance, Facebook. This is the bomb! Everybody is doing Facebook, and I am very cautious about it. I see the uses, I see the possibilities and I also see it is a vogue and the kids love it. They do it anyway.

Regarding motivation, this is another caveat I have. I am very sensitive to idea of motivating students, because we are dealing with adults here. You have to come motivated from home; it is not my job to motivate anybody. If you are not motivated, you do not belong here. I can do many things. I can provide you with the resources, to orient you in the right direction, to answer your questions, to direct your efforts to the right direction, but I cannot motivate you. You are an adult. That technology is for students a vogue, it is a must. It does not mean it has to be a must for me. I am a professional. So I need to weight very carefully. I do not want them to do it just because it is on Facebook. It is not my job to make it easier. My job is to make it come through. Ok? If I want to make it easier, I can do so but always with a sense of measure. Making a lesson more attractive and accessible is a plus. But, a lesson has to be functional. One of the things I am convinced of is the idea of cultural transaction, for instance. Sometimes there is a cultural difference, and there is also, a cultural equivalent. So, you have to find the right example in their culture, so that they can relate. You see what I mean? To do that, is to make it attractive, but

more than that is to make it functional, to make it work. Now, if it works, you bet it is going to be attractive for them. If they feel that they are acquiring some mastery of the subject it will become attractive. If the language has to be Facebook, fine. But the language is only the support. The risk is to be up to dated and to be cool, and to be marketable if you will, and I am going to use whatever you guys have in your pocket, in your cell phone, to be closer.

No, no, no. Learning still requires an effort on the part of the learner. You do not want to give the message that knowledge is something that can be brought to you through the phone. No. You have to know that you have to make an effort. We should give that message. It is my job to make it easier for you in the sense that you have access to more sources; you have contrast of opinions, those kind of things. To make it easier does not mean to make it effortless. Let me give you an example: one of the problems we have with email is that any day of the week, any time of the day, the student feels that he or she is allowed to ask you any question. No. I am sorry. I do not reply emails after 6 PM and I do not reply to emails on Sunday. Why? Because I have done it before, and I was giving the wrong message. Many of the questions they may ask can be answered in the classroom or in the Web, independently, or in the library. Hey, libraries, books, pages, print, remember? So you do not want to risk technology making everything so available that it becomes effortless. It does not substitute work. What I want to say is that the danger of the Web is that people are living through the Web. They shop for clothing. They have the Gap catalog on the Web, and they have the university catalog on the web. The risk is that they confuse one with the other. You shop for clothing, you do not shop for subjects. The technology is becoming the experience, and that is what we should not allow to happen in teaching. Currently there are many professors in all the fields using technology in that way. It says a lot about our views of the profession. I think it really is a symptom of insecurity. You have to be there, or you are not the real thing, but that 'there' is the technology. No. It becomes a goal; that is my big caveat. You are replacing the means; you are taking the means as a goal, and it should not be that way. How do we avoid it? One way is good old style interaction, a good solid pedagogy. You are dealing with people. So, in the classroom the use of technology maybe to show something, to make a point, etc. but not to do the whole thing based on technology. If you cannot appeal to a student and ask what do you think, then you lost it, you lost it.

I am also concern about the moral part of it, where it is possible to steal other peoples' work. I am more concern in the sense that we are not promoting education.

Education is not data management, it is critical thinking. That does not have anything to do with technology; it is the sensible use of technology what we should pursue. Technology is fun, yes; it is cool, yes. I can have a colleague in Spain talk to my students and it is going to be so cool for them. But, the important thing is not the lecture that is giving by the colleague from Spain, it is the content of the lecture. That is the reason why I would like that person to enter my classroom and lecture. And then the many caveats you have to provide students with not everything that is

out there is good, is useful, is true, even because you can find anything on the Web, and you can put anything on the Web. And you think you are quoting something interesting and you are really quoting, I do not know, a bad high school paper. In fact, it can promote critical thinking, but you have to be there. Comparison is good too. If you provide them with sources they can compare with the bad ones.

My current technological context in which I do my work is hard, but I can say that one of the problems is expectations. People who have or think they have a conversation with their entire family, all their friends and all the people from their high school on one screen at the same time, are going to have expectations if they enter a classroom and you mention technology. Apart from not having all the resources to respond to all the expectations, which I do not, it is humanly impossible because there is only one me, you know. And, Facebook has great teams of people working on that. So, I am very realistic about that. The resources I have are not rich, are not the best, but they may be sufficient. Ok?

I am not continuously searching for software, because there are people that do that for a living. I do not. For instance, K-State on line is there. We have people in the institution who established that system, and if I have a problem -which has happened to me- they take care of it. I have to worry about the content, the means, etc. pedagogically speaking. So, if I have a need, and I don't know how to do it, I will ask the technocrats. Do I listen to people around me? Yes, and they say 'I am using this, I am using that.' And hopefully you learn something, right, from colleagues. But, do I make it a goal to be up to date? No. The last time I had a technology problem and I called the help desk, for instance, I was laughing with the person who answered and that was very helpful, but there was a programming issue. And they do not let you talk with the programmers. One of the reasons is that the programmers are not expected to have people skills. You know what I am saying? So, it is a matter of degrees. There are people who are more commercial, let's say, and I like to deal with them. I expect the programmer to do the programming, period. I do not want to have a dinner with Bill Gates to deal with Windows. I generally communicate fairly well with tech people because I am somehow savvy, savvy enough to communicate with them. So, it is a matter of cooperation, you know? It is bidirectional; they have to learn how to deal with people, but you also have to learn a little bit of their language. If you call and say I have this thing in my screen, obviously they can not help you.

Whatever I use, I try to master it as much as possible. I am not afraid of it at all. When I cannot master a specific tool, I look for people, I look for help. Even when asking for help, the more efficient you are, the more efficient the help is going be. It is a matter of communication. I am sure it is an advantage not to be afraid of technology. And it is a plus in my teaching. But again, not been afraid is the safest way not to make it bigger than it really is. It is a way to keep it balanced, you know. The main question is why you want to do that? Just to use this technology? Just because it is available, you see?

I think technology can have a big impact on culture, in the cultural areas, in the broader sense of the word, in literature, art, architecture, cinema, etc. I would say in the four skills and culture. Also, to provide context, yes.

If you do not have the facilities, obviously you are not going to think about it. If you had them before, then maybe the case is that you will consider, right? Training, again, is essential. It makes you more conscious of the reality of technology. But training can be overwhelming too. In communicating with the technicians, this is probably the weakest link, the training. Because if you have an hour workshop and you blink, and you miss something, everything is going to fall on top of you. The person who is giving the workshop takes things for granted. There is a condition that is endemic in our environment here in the Midwest. It happens with our students, but it happens with us too. This general attitude of saying I am not going to speak in class because if I say something stupid, people are going to think that I am stupid. And that happens to us when we go to training as well. And you see people looking like kind of afraid for 10 minutes, 20 minutes, and in the last five minutes a lot of raised hands. We go to workshops with the same attitude because we think that somehow it is shameful not to be on the top of all of it. The training is definitely essential and the trainers are good teachers, basically. For the trainees it is essential and it not always the case. The fact that you have the more knowledgeable person on campus talking about many things does not mean that he is the best person to make it understood. So, that's weak.

Time: I started using computers before Windows, professionally. You had to use MS-Dos in programming, etc. Things have become easier, but when the preparation of whatever materials using a technology becomes more time consuming, then the actual time used for the students, etc. this becomes ridiculous. What I want to say is that in training, familiarity… of course you develop a proficiency. People who are using two technologies are more likely to learn the third one faster; so, that would be one reason to be on top of it. It is a matter of economy. You want to invest time and effort that is going to be proportionally profitable. The responsibility of the boss is to provide the means, to provide the training, especially to provide with the quick response when you have a problem, when you have a question. And often times either you have a colleague that is willing to help you, or you are the colleague able to help somebody. It is a good investment for everybody, for the institution; to have trained people available saves time in other levels of education. You do not want a professor to waste a whole week getting familiar with a program. That is a waist of time for everybody, and money and everything, ok. It would be probably a good idea to value training; it is important to value the effort that faculty makes to take the steps to know, the workshops they go. It is important to value that, better than we do. Because you are doing it for yourself but the results will go to our teaching. What I am trying to say is not only to provide the physical means and the people to train and answer to questions, but to value the efforts taken in that direction on the part of the teachers. It is necessary to give it a specific value.

There is a lack of technology in the classroom. I am talking about the software, about hardware. And I am not even talking about instructional software. There is a lack of elemental software. I mean, I do not have in my office an Adobe Pro, so I cannot produce a decent PDF. How do I do it? Because I have my own copy; but I am not provided with one, you know. And that is an elemental tool. I do not have it. As far as hardware in the classroom, well we have some and not certainly in the best conditions. And we have conflicts like having laptops and chalk within a yard of distance, and things like that. One of my classes is designed to be used with technology; the whole thing. In the classroom and outside; in campus and off campus, I started thinking about producing a CD, but then, the more resources you have, the wider variety of materials you want to implement. It is too much stuff for a CD, but everything is there.

One of my goals is to fill the two hours that the students have and they are supposed to use for study at home; to provide them with activities for those two hours. Because if they did study six hours at home, a week, for my subject, they should be fine. But I cannot expect them to come up with activities for two hours. Technology gives me the chance to provide those activities and more that they can even choose from. Time; we do not have time dedicated, allowed, to do this kind of activity. So, to produce these materials have taken me ten years!

The lack of technology in the classrooms, time and consideration for the work are serious barriers. The work in preparation is not valued by the institution or your boss, but it is valued by the students. Talking about my department, in some cases there has been investment, but the technology is immediately over our heads in an effort to be state of the art. For instance, from the classic language lab it seems Jurassic, right. It seems like a different world. The investments to update it have not been accompanied by the change of state of mind. Some of my seniors have updated their approaches to technology, some of them have not. At the university level there is investment. Why? Because they have professionals dedicated to technology, handling those investments. We are not professionals of technology.

Let me tell you clearly what I think is the case. In our department we do not have the investment; we have had some investment, insufficient investment and late investment. We teachers are not professionals of technology. So, we do not necessarily know when to invest and in what kind of technology. So, there is a big gap in there; and of course the money. Some departments are by definition technological, we are not. And those departments have access to other sources of financing; we do not. The research they do produces the financing for, you know, their own technological resources, etc. That is not the case in the Humanities. We are not hired to research an active principle in a pharmaceutical product. We do not make money with our research; they do. In our department there is people, and there are as many opinions as people, so there is not a general attitude towards technology. Nobody, ever, is going to tell you today in a US campus that they are against technology. No body. Because nobody wants to look as a living fossil. That is attitude towards technology, but it is one level of it. To decide to make investments in technology requires a completely different state of mind. You are committing.

You invest in technology then you have to use it. So, I do not dare talk about general attitudes. No, because what you mean by attitude? Nobody is going to tell you that technology is bad; nobody is going to tell you that they do not use technology, nobody is going to tell you that they are not open to use technology, because it would look bad. Now, to actually take the steps to commit, because when you spend money, you commit to the use of that, otherwise you are wasting it. That is different. In my department, I have colleagues who are very committed to using whatever technology. I have colleagues avid for any sort of these sources, but we do not have the funding. We do not have a regular funding to support a technology plan, which does not mean that we should not have a plan. Ok? The attitude should not be 'now we got money, what should we do with it?' We should know what to do with it before we get it, ok? It still going to be a baby status, and we need to make the investments effective.

I have no idea about the incentives in my department for using technology in my teaching. The main incentive for me, ok? it is personal and professional. It is to make the effort and to see that it works, and to see that my students have advantages, and my teaching is more valuable, more effective and even more comfortable for me. That is certainly one of the goals of technology.

-Previous training -- very important
-Information -- very important
-Promotional motivation -- is not important
-Technical support -- a must
-Students' needs -- second or third consideration
-Supervisor request -- unavailable
-Economic cost -- unavailable
-Personal habits -- extremely important
-Amount of personal effort -- very important
-Fashion -- stings, is not important. I don't care
-Time -- very important
-Economic reward – none, not important
-Administrative difficulties -- not important
-Academic traditions -- not important
-Control of the class -- important, useful
-Previous negative or positive experiences -- No very important

Have you learn something from using technology. Yes, many things, like seeing things in a different way, in a different angle. I am relearning in another way.