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The Personal Experiences of Language Teachers Using Computers as an Instructional Tool

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THE PERSONAL EXPERIENCES OF LANGUAGE TEACHERS USING COMPUTERS AS AN INSTRUCTIONAL TOOL

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DEDICATION

This is dedicated to the ones I LOVE! It begins with that special woman, Dulce, my mother, who brought me into this world. Without her persistence, admiration, and never ending love, I probably would not be the person I am today. Living in a household of six was a definite blessing. My brother Victor, has been and continues to be an inspiration, not only with his keen insight into the real world, but with his HUGE heart -- loving and giving to those he cares for most. My twin brother, Rui, mirrors my stubborn appetite for accomplishment. I admire him for his gratitude and loving fatherly ways. My sister, Lisa, a proud mother of four with a heart of gold and never-ending patience, was in our younger years the best dancing partner a brother could ask for. My dad, Manuel, is the man in my life who taught me the meaning of hard work and sacrifice. Thanks for the memories and the wine! I look forward to making wine with you for many years to come. My best friend, Jack, who has been in my life since the 3rd grade. I am so fortunate that you "wrestled" your way into my life. My darling, Kelly, your patience, editing skills and above all your smile kept me going through many of those long days and nights.

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Finally, a special thanks to all the participants who eagerly participated in this study. Without their assistance and effort, this study would not be possible. Let me also thank Starbucks café, for being my personal study hall on the

Upper West Side. The venti coffee (with room for milk) allowed me to function past midnight!

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INTRODUCTION

Statement of the Problem

A large urban school district in Northern New Jersey has embarked on an ambitious 4-year plan promoting technology as a key tool in making students active participants in the learning process. The plan envisions a school system where

> all students will be able to use technology to develop the knowledge and skills necessary to be productive, informed citizens and lifelong learners… it will provide educators with the opportunity to teach students in new and exciting ways and to have students become active participants in the learning process… and extend the walls of the classroom to offer links to information and provide tools to explore, research, organize, and synthesize information (District Technology Plan, 2001, p.4).

The District firmly believes that the use of technology in the classroom will play an important role in how teachers teach and how students learn. All classroom teachers, including language teachers are expected to use computers as an instructional tool. This expectation ensures that all students, including English language learners will have the

opportunity to learn using computers.

However, in the area of World Language and English as a Second Language (ESL) less than 5 percent of language teachers in the District under study use computers as an instructional tool (see Appendix H). Consequently, since most language teachers are not using computers as an instructional tool, language students have limited opportunities in using computers as a learning tool.

New Jersey Core Curriculum Content Standards for Technology Literacy (NJDOE, 2004) mandate that students master technology skills. Students are expected to use computer applications to gather and organize information and solve problems. By the end of the 4th, 8th and 12th grades, students are expected to be proficient in basic computer skills and application of productivity tools. For example, by the end of the 4th grade, students are expected to produce a simple finished document using word processing software. By the end of the 8th grade students must be able to create documents with advanced text-formatting and graphics using word processing programs. By the end of the 12th grade, students are expected to create a multi-page document with citations using word processing software in conjunction with other tools that demonstrate the ability to format, edit and print.

In consequence, all classroom teachers and students are

expected to use computers as a learning tool, hopefully leading to greater student achievement (District Technology Plan, 2001). The use of technology in the classroom makes learning more student centered, encourages cooperative learning, and increases teacher/student interactions (District Technology Plan, 2001, p.8).

In addition to the technology standards, New Jersey Department of Education (2004) mandates World Language standards indicating that every child be able to communicate in a second language by the fourth grade. Students are expected to respond to simple commands, form simple sentences, describe people and events, provide information, and express personal needs in this language. By the eighth grade, students are expected to speak in and reply to simple sentences, respond appropriately in social settings, engage in spontaneous conversation, organize thoughts into coherent speech, explore employment opportunities and identify common and distinct grammatical features of the language.

Students are not only expected to communicate proficiently in a second language, but also to be able to understand how language and culture interact. They must demonstrate awareness of the culture, as well as knowledge of the speakers of that language; recognize the interrelationships between culture and language; make

comparisons of their culture to the one under study; and prove themselves cognizant of the contributions made by men and women of that culture.

According to Blake (1999) learning a second language can be a very intensive activity. Constant use of the target language is vital for successful language learning. "No one doubts that going to region(s) where the target language is spoken and immersing oneself in the society and culture remains the preferred (but expensive) method for acquiring linguistic competence in another language" (p.1).

Blake (1999) indicates that formal language instruction is often unsuccessful because learners are not exposed to the target language. The use of technology in the language classroom may offer opportunities for "virtual" contact with another culture and language. For example, students can take a virtual trip to another country using the Web.

If used appropriately, "technology can actually play a major role in enhancing learners' contact with the target language, providing an important avenue towards language acquisition" (Blake, 1999, p.1). CD-ROMS provide audio, graphic, and video files that expose students to the target language.

Blake (1999) points out that e-mail and chat rooms via the Internet, offer students the opportunity to interact one-

on-one. In addition, online discussions allow students to pay attention to linguistic form and provide for a stress free environment for language practice.

Significance of the Study

This study aims to provide educators in the District with a better understanding of how and why language teachers use computers as an instructional tool, thereby offering them guidance in further implementing policies and procedures that allow or encourage teachers to use computers. Central Office staff can better assist school personnel if they understand why and how teachers use technology in the classroom. With improved understanding of how teachers use computers in the classroom, school-based personnel, administrators, technology coordinators and resource teachers can provide the right type of support and professional development to language teachers. In turn, these language teachers might become better able help their students gain competencies in the languages they have chosen to learn.

This study attempts to describe experiences of language teachers using computers as an instructional tool in a northern New Jersey urban school district. The purpose of this study is to find out why some language teachers embrace the use of technology and others do not. The research attempts to

describe teachers' experience using technology as an instructional tool in the language classroom. Research was conducted in this large urban school district with a student population of about 42,000. It has approximately 3,600 bilingual students. There are a total of 76 schools, including 54 Elementary, 7 Middle, and 13 High Schools, as well as one Special Education and one Alternative school.

The study attempts to identify both commonalities and differences among participants' experiences. However, this study does not intend to prove that using computers in the language classroom necessarily results in effective language acquisition. It only intends to describe participants' experience using computers as an instructional tool and then interpret their experiences. By interpreting participants' experiences, the researcher is able to provide reasons for why some language teaches use computers and others do not. The recommendations put forth in this study may provide for a better understanding of how to assist language teachers in using computers as an instructional tool.

Definition of Terms

Chat - A function of the Internet allowing a user(s) to communicate in real time using text messages (Shelly, Cashman, & Gunter, 2002).

Coding - Analytic process through which data are fractured, conceptualized and integrated to form theory (Strauss & Corbin 1998).

Concepts - The building blocks of theory (Strauss & Corbin. 1998).

E-mail - An electronic method of sending and receiving messages on the Internet (Shelly et al., 2002).

Excel - Microsoft Office program used to create databases or mathematical operations (Shelly et al., 2002).

Hardware - The physical components of a computer; including screen, monitor, etc (Shelly et al., 2002).

Internet - A network of millions of computers around the world (Shelly et al., 2002).

Link - A piece of text or image that can take the user to another page or Web site (Shelly et al., 2002).

LISTSERV - An automated mailing list distribution system (Shelly et al., 2002).

Network-- Computers connected/joined together for the purpose of communicating each other (Shelly et al., 2002).

Phenomena - Central ideas in the data represented as concepts (Strauss & Corbin 1998).

PowerPoint - A Microsoft Office program used to create animated presentations (Shelly et al., 2002).

Site -- A place/location on the Internet, also called a Web page (Shelly et al., 2002).

Software - Programs installed and run on a computer (Shelly et al., 2002).

Theory - Concepts or themes related through statements of relationship, which together constitute an integrated framework that can be used to explain phenomena (Strauss & Corbin 1998).

Web page - One screen of information on the Internet (Shelly et al., 2002).

Web site - A collection of Web pages built around a common theme (Shelly et al., 2002).

Word - A Microsoft Office program used to write documents (i.e., memos, letters, faxes, essays etc.) (Shelly et al., 2002).

World Wide Web (WWW) -- A user friendly way of looking at words, pictures and sounds on the Internet (also referred to as the Web or the WWW) (Shelly et al., 2002).

Limitations of the Study

Although the study is limited to one urban school district, the results of the study are not limited in application to this district. Understanding the successes and challenges of language teachers in using computers an as instructional tool can be useful for many other school districts, as well.

This is a qualitative study, therefore, conclusions are drawn from two pertinent sources:(a)transcribed data gathered by the researcher from interviews of language teachers and other school personnel and (b)from analysis of the District's 2000-2003 and 2004-2007 Technology Plans. Interviews are open-ended, focusing on participants' experiences and thoughts.

The study is limited to a particular group of participants:(a) those who use computers as an instructional

tool in the language classroom; (b) those who assist language teachers with computer assisted instruction; or (c) those who supervise/monitor bilingual and technology programs.

Information regarding the use of technology is cited from the District's Technology Plan. However, to maintain anonymity, the District's name and other references to the aforementioned is kept confidential.

Finally, analysis of the data relies heavily on the conceptual framework of Diffusion of Innovations theory. Therefore, Chapter IV is designed according to the five sequential steps of this theory. Data collected in this study is analyzed according to concepts outlined in each of these steps.

Summary

This study attempts to describe personal experiences of language teachers who use computers as an instructional tool. The recent introduction of the computer as an instructional tool in the language classroom is considered an innovation worthy of study. Considering the potential of this tool to maximize student exposure and practice of authentic communication in the target language, a detailed analysis of the how this innovation gets diffused in language classrooms is a primary focus of this research. The research involves

qualitative research techniques, interviewing a number of language teachers and other staff working in a Northern New Jersey school district.

Open-ended interviews were conducted during the initial stages of data collection. However, as categories emerged from analyzing the data, interview questions became more focused. For example, participants in the initial interviews were asked to speak freely about their experience using computers in the classroom. As categories emerged, participants were asked to be more specific describing their experiences illustrating positive and negative results using computers as an instructional tool (Strauss & Corbin, 1998).

Borrowing from the work of grounded theory, this research uses an open coding process to analyze data. Strauss and Corbin (1998) define open coding as "the analytic process though which concepts are identified and their properties and dimensions discovered in the data" (p. 101). They point out that during open coding, data is broken down into discrete parts and examined for similarities and differences. As a result, it allows the researcher to make fuller sense of the data, in this case, language teachers' experiences in the classroom. As concepts develop from analyzing the data, categories also emerge. Categories are "concepts, derived from

data that stand for phenomena" (Strauss & Corbin, 1998, p. 114).

As categories emerged in this study, it became apparent that using the theory Rogers (2003) outlines in *Diffusion of Innovations* would have many practical applications for interpreting the data. Diffusion of Innovations theory lists five sequential stages, namely the knowledge, persuasion, decision, implementation, and confirmation stages. Findings of this study suggest that at the knowledge stage, teachers can point to factors that influenced them to begin using computers in the classroom. At the persuasion stage, teachers can describe the advantages and disadvantages of computer technology as a learning tool. At the decision stage, teachers can take note of what staff development opportunities exist allowing them to better integrate computers as an instructional tool. At the implementation stage, teachers can determine how computers should be used as a teaching tool. Finally, in the confirmation stage, teachers can discuss how computers have impacted or changed their method of instruction. Learning theories, behaviorism, constructivism, cognitive learning, and multiple intelligences are relevant to those discussions.

Chapter II

REVIEW OF THE LITERATURE

Computers in the Classroom

Thompson, Simonson, and Hargrave (1996) mention that the number of computers in the classroom has been increasing dramatically over the past several years. Oppenheimer (2003) points out that by the turn of the 20th century, approximately $70 billion had been spent on programs in schools revolving around computers. By the mid-1990s, the number of school computers increased nearly 50-fold from about 50,000 to 2,400,000. According to 1998 data from the Digest of Education Statistics overseen by the U.S. National Center for Education Statistics, the number of students who use computers in school increased from 27 percent in 1984 to 69 percent in 1997 (see Figure 1).

According to the U.S. Department of Education (2000), 78 percent of students use computers in the lab or media center compared to 69 percent of students using computers in a classroom (see Figure 2).

Consequently, about 60 percent of classrooms in public schools had at least five computers, and about 40 percent of those classrooms had internet access (see Figure 3).

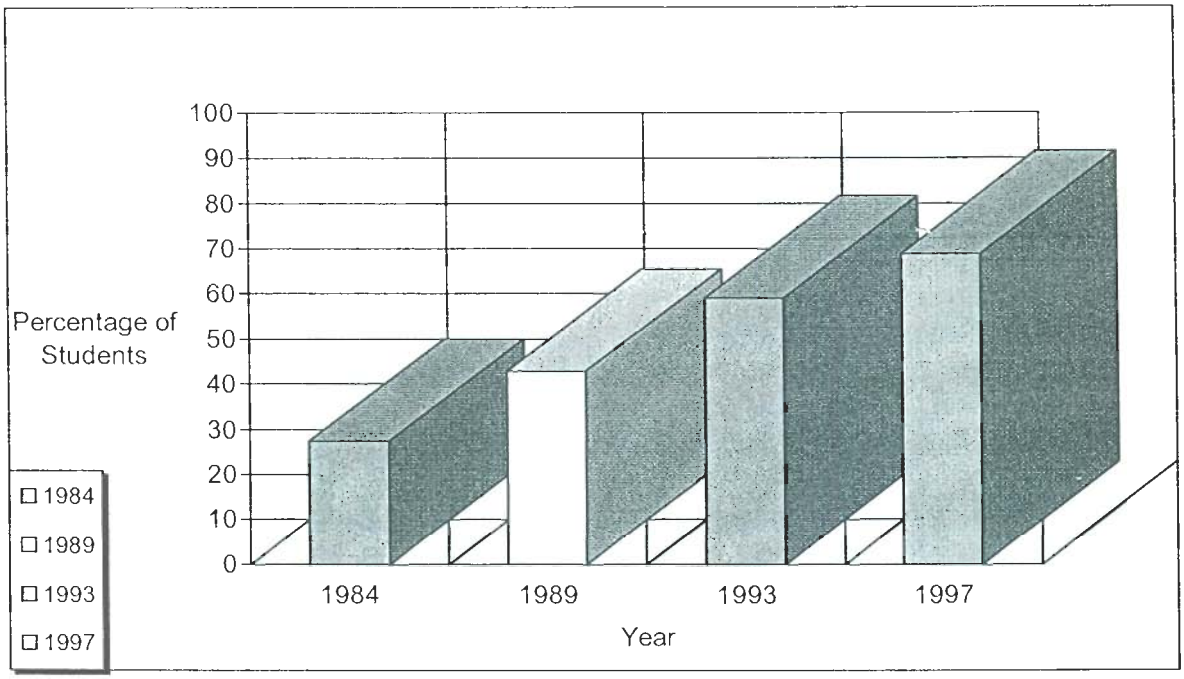

Figure 1. Student use of computers at school: 1984-1997.

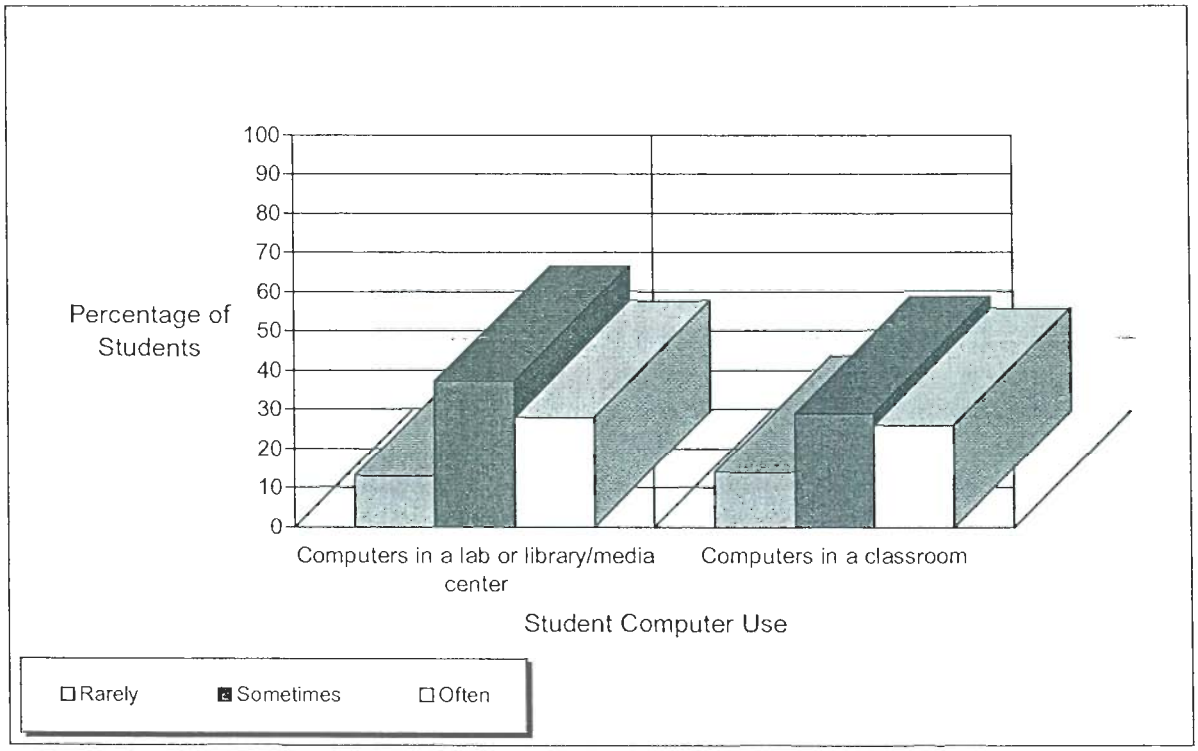

Figure 2. Student use of computers in the computer lab and classroom.

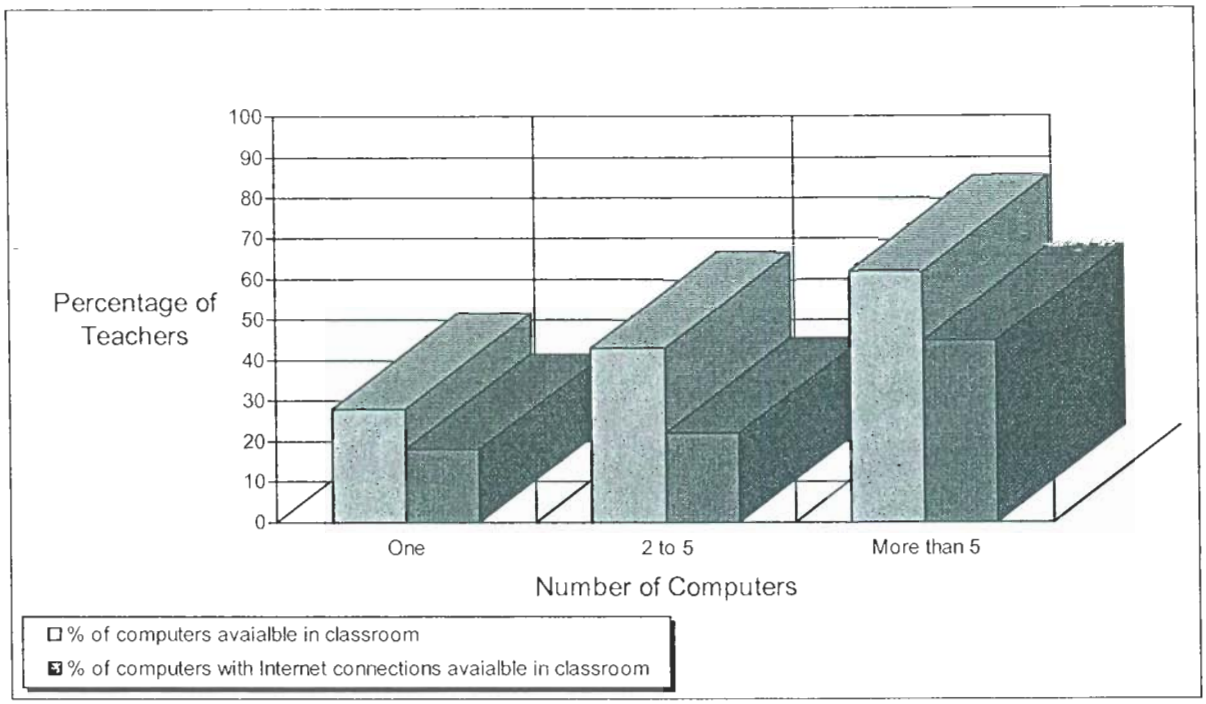

Figure 3. Public school teachers' use of computers and the Internet.

However, access to computers in school and at home differ along economic lines, according to the U.S. Census Bureau of Statistics (2001). In homes where family income exceeded $75,000, 94.2 percent of students had access to computers. On the other hand, in homes where family income was less then $25,000, 34.5 percent of students had access to computers (see Figure 4).

How are teachers using computers as an instructional tool? According to the U. S. Department of Education (2000), instructional uses include word processing, spreadsheets, Internet research, problem solving, analyzing data, computerized drills, research using CD-ROM, production of

multi-media reports, graphical presentation of materials, and correspondence with experts (see Figure 5).

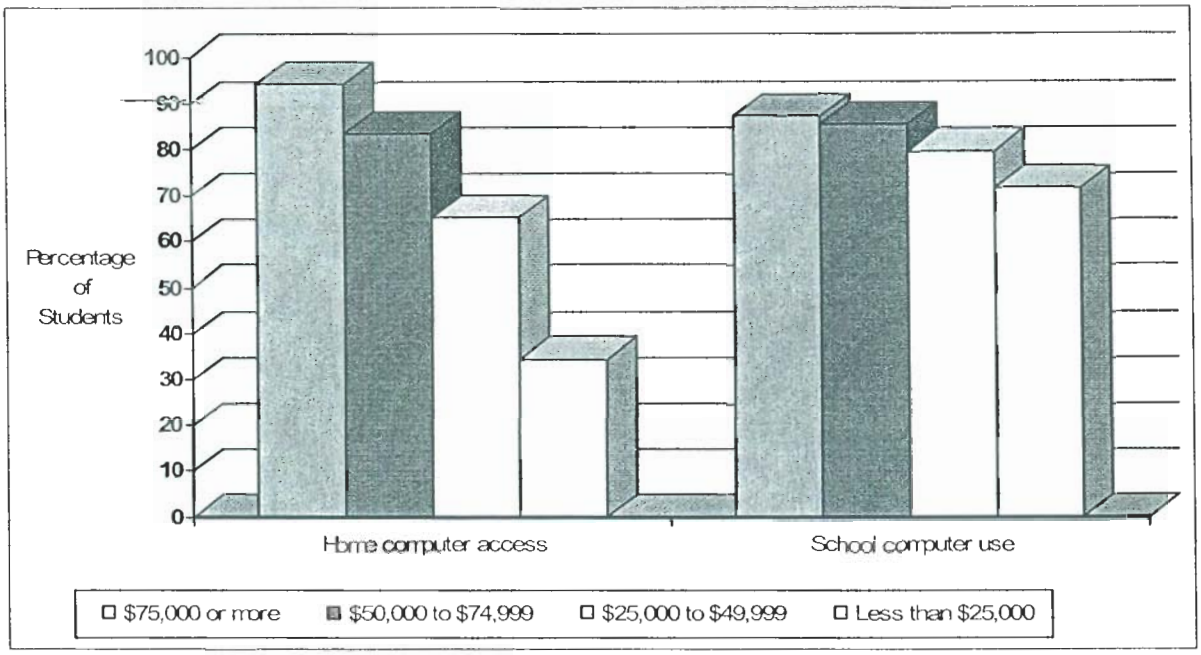

Figure 4. Computer access at home and school among children 6 to 17 years old by family income.

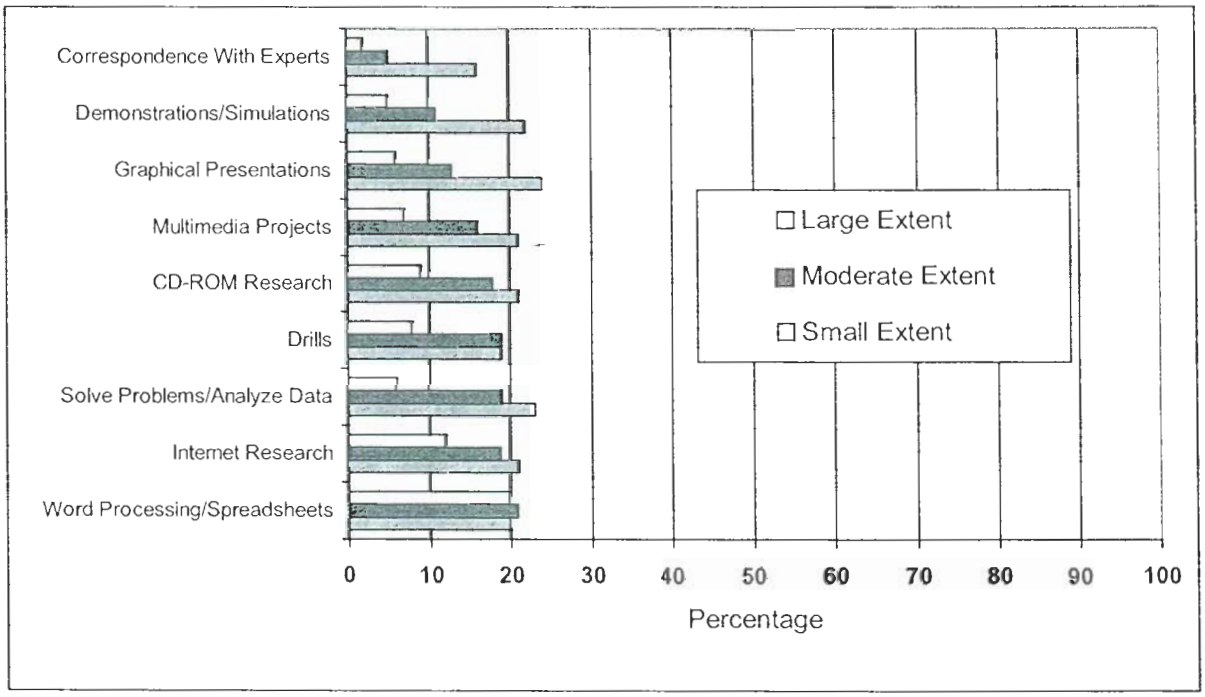

Figure 5. Teachers who have computers at school assigning student different types of tasks using computers.

Additionally, the U.S. Department of Education (2000) noted that 53 percent of public school teachers required students to use computers to complete projects during class and that 48 percent of public school teachers' assigned projects using the computer outside of the classroom (see Figure 6)

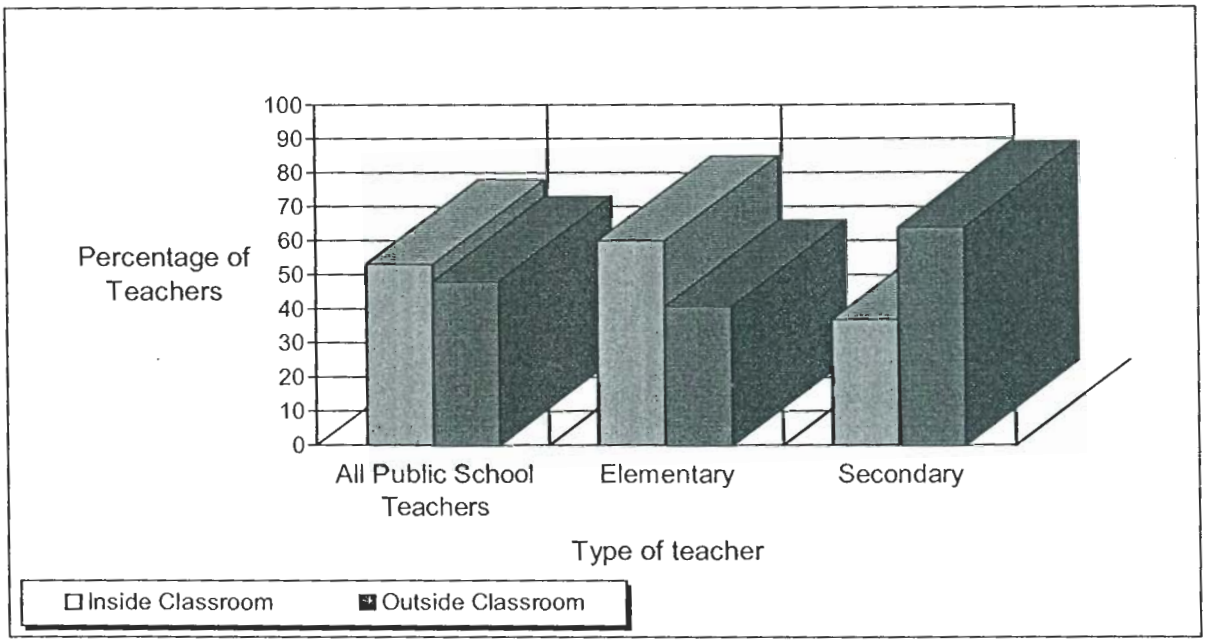

Figure 6. Teachers assigning projects using computers.

How effective are computers in the classroom as a learning tool? Shelly et al. (2002) indicate that computers do provide many opportunities for students to learn. For example, using computers in the classroom can motivate students to participate in their own learning. Meyer and Rose (1998) suggest that "multimedia capabilities have vastly increased computers' ability to entertain, inform and educate" (p. 7). Thornburg (2002) points out students need to know how

to effectively use computers for "life-long skills" (p. 62). Students should be able to "create documents, locate information, collaborate with remote groups, perform calculations and make dynamic presentations" (p. 63). Interactive technologies, such as multimedia, software programs, tutorials, animations, simulations and the Internet can hold students attention, providing for continuous practice/review of language skills.

Substantial research indicates that using computers effectively in the classroom results in positive student learning. Schacter (1999) cites numerous research studies outlining the positive and negative findings with technology on learning: Students learn more in less time and had higher achievement scores when using computers as a learning tool (Kulik, 1994). Students, regular and special needs, demonstrated academic achievement in major subject areas from preschool through higher education (Sivin-Kachala, 1998). Students developed positive attitudes towards learning and teachers changed their teaching practices towards more cooperative group work (Baker, Gearhart & Herman (1994). Students' test scores (Stanford 9) increased when participating in the Basic Skills/Computer Education program (Mann, Shakeshaft, Baker & Kottkamp, 1999). Students in the

fourth and eighth grades showed gains in academic achievement in mathematics with the use of computers(Wenglinsky, 1998).

The District's Technology Plan (NPS, 2001)cites the following research by the Society for Technology in Education - Vision Test (1990):

1. Children learn more and better when they have access to technology in an intelligently designed environment.
2. Students improve problem-solving skills, outscore classmates, and learn more rapidly in a variety of subject areas when using technology as compared to conventional methods.
3. Students' self-esteem is increased with the use of computers, especially in the case of at-risk students.
4. Using technology encourages cooperative learning and other valuable social skills.
5. Introducing technology into the learning environment has been shown to make learning more student-centered, to encourage cooperative learning and to stimulate increased teacher/student interaction. (p.10)

The District plan also cites studies by Interactive Systems Design (1990 & 1992) investigating the effectiveness of technology in schools, finds that "educational technology has positive effects on student attitudes and self-concept and has demonstrated a significant positive effect on student achievement" (p.10). Sotillo (1997) points out that numerous other research studies (Cummins & Sayers, 1995; Pennington, 1996; Sayers, 1993; Warschauer, 1996) suggest the presence of computers in the classroom will:

1. change our teaching philosophies and practices;
2. restructure the nature of social relations in the classroom;
3. expand access to information and knowledge;
4. allow the distribution of information across local, regional, and national boundaries;
5. encourage teacher/learners and student/learners to co-construct and share knowledge (p.1).

How are computers used in the language classroom? According to Warschauer (1996) computer-assisted language learning (CALL) developed over the last 30 years in three distinct phases: behaviorist, communicative and integrative.

The first phase, the behaviorist, spanned the 1960s and 1970s and involved language drills and practice. The computer was used to execute repeated drills that provided immediate feedback and students were able to proceed at their own pace.

In the second phase, the communicative, spanning the 1970s and 1980s, students relied less on drill and practice and instead focused on actual communication in the second language. Language form and grammar were taught implicitly. Students were encouraged to generate original speech rather than just cite examples from the text.

In the final stage, the integrative one, beginning in the 1990s, students began to use multimedia programs and the Internet. Multimedia technology allows students to use a variety of media, such as text, graphics, sound, animation and video. Hypermedia is the ability to link all of these resources together, allowing students to navigate their own path by pointing and clicking a mouse. Multimedia provides the following benefits to the language learner: listening and viewing skills, comprehension and motivation, higher-order thinking and independent learning. (Warschauer, 1996).

It is noted in the online article, "Using CALL as a catalyst for second language acquisition: Computer assisted language acquisition (CALA)" (as cited in Postovsky, 1981) that "emphasis on aural comprehension training and relaxation

of the requirement for oral production in the initial phase of instruction foster development of linguistic competence, therefore producing better results than those obtained through intensive oral-practice" (p. 173). Egbert and Jessup (1996) discuss a theory of language learning, called "natural approach," suggesting that listening is of primary importance in the language acquisition process and that verbal communication should be postponed during the initial phases of language acquisition.

Numerous language programs and computer hardware have been created specifically to improve a language learner's listening, speaking and writing skills. According to Jones and Fortescue (1987) numerous programs allow the language learner to hear a word or phrase and pick out a corresponding picture. Other programs prompt the language learner to ask questions about a picture on the computer screen. Compact disc recordings allow learners to listen while using the keyboard to respond. Oppenheimer (2003) suggests that with the use of word processing software and the keyboard, students who once had previously shown little or no interest in writing become more engaged.

Davey, Jones and Fox (1995) mention that language software programs provide motivation and comprehension. Numerous software programs have sound and vision that promote

comprehension and motivation, where the language learner is able to experience every aspect of daily life without leaving the classroom. Sheingold, Hawkins and Kurland (1984) indicate that tools like word processors, data base management, spreadsheets, telecommunications software, and graphic packages help the learner accomplish cognitive tasks because the computer can perform many tedious tasks that would otherwise prove to be distractions to students

Lee (2000) suggests that computers can enhance students' self esteem. In the traditional classroom, students can become fearful and embarrassed when speaking the target language with other students. However, with computers, students can practice oral skills in the target language without the anxiety of being embarrassed.

Warschauer (1996) suggests that the Internet can give language students control over their own learning; students can work at their own pace and decide what specific language skills to tackle. Students can access links on grammar explanations, vocabulary glosses, and pronunciation.

Despite the abundance of research pointing out numerous educational advantages of such technologies, computers still remain an untapped resource in the language classroom.

Research also points out that many language teachers rely on ineffective methods in teaching language acquisition. For

example, Lee (2000) points out that a large number of language teachers rely on traditional language teaching methods, including the ineffective grammar translation and audio-lingual approaches. This researcher indicates that there is a lack of effective classroom instruction addressing learners' communicative needs because language teachers rely heavily on textbooks, which do not address most learning styles. Domke (1991) points out that language teachers who talk from the front of the room, lecturing to students, create an environment that is not natural in linguistic interactions. Language learners have different personalities and learning styles. Teachers who use only one method of instruction fail to address most learners' needs. These needs may be better addressed with computers.

Internet in the Classroom

Shelly et al. (2002) point out that the Internet is a worldwide connection of networks linking together millions of businesses, governments, educational institutions, and individuals. Thornburg (2002) indicates that the Internet has doubled in size nearly every year since its inception and is expected to exceed one billion users by 2006. According to the U.S. Census Bureau of Statistics (2001), access to the internet is evident in the home and school(see Figure 7).

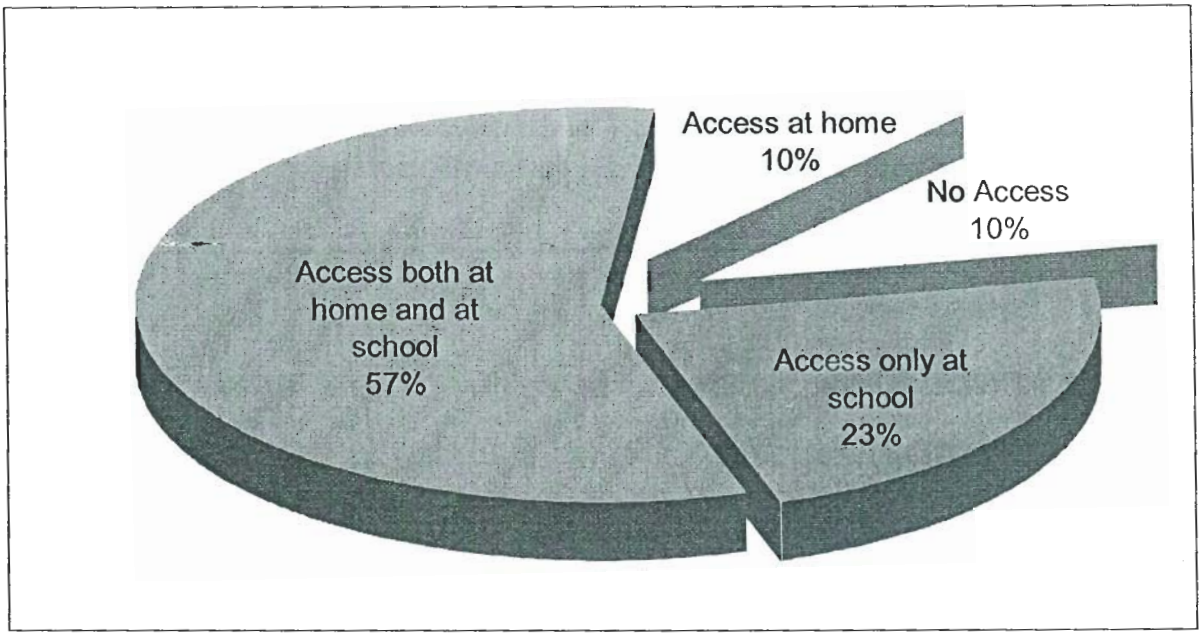

Figure 7. Access to computers among school-aged children: August 2000

According to the U.S. Department of Education (2000), by the year 2000, over 40 percent of households had internet access (see Figure 8).

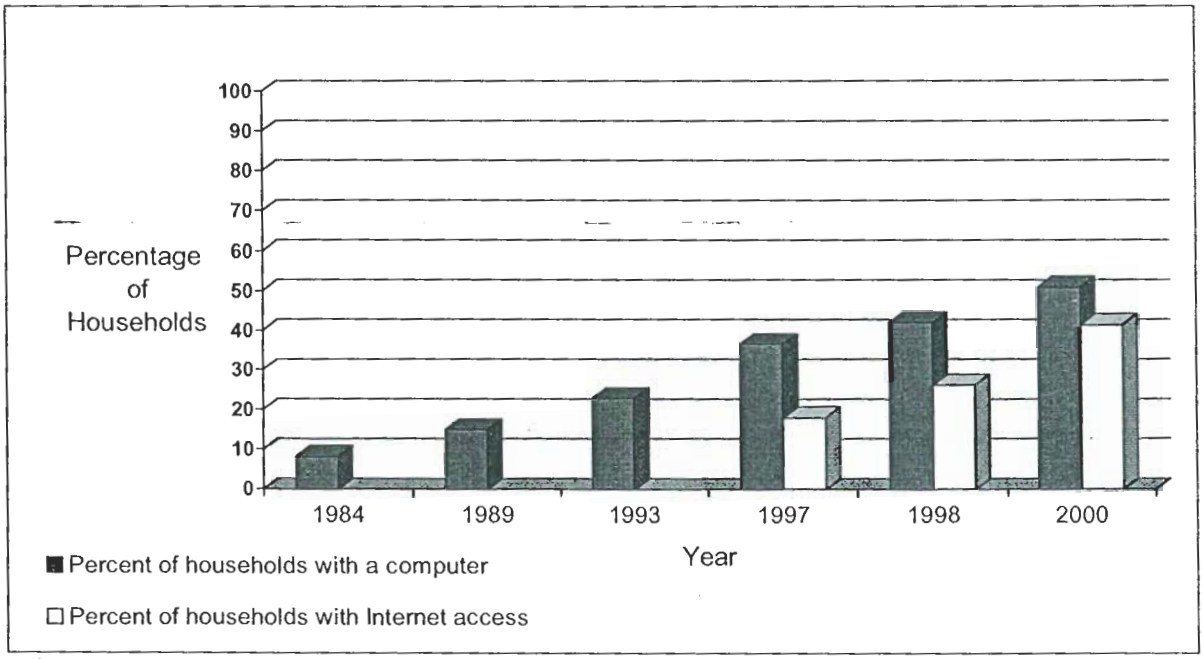

Figure 8. Computers and Internet access in the home: 1984 to 2000.

By 2002, 92 percent of all instructional rooms in public schools had internet access (see Figure 9).

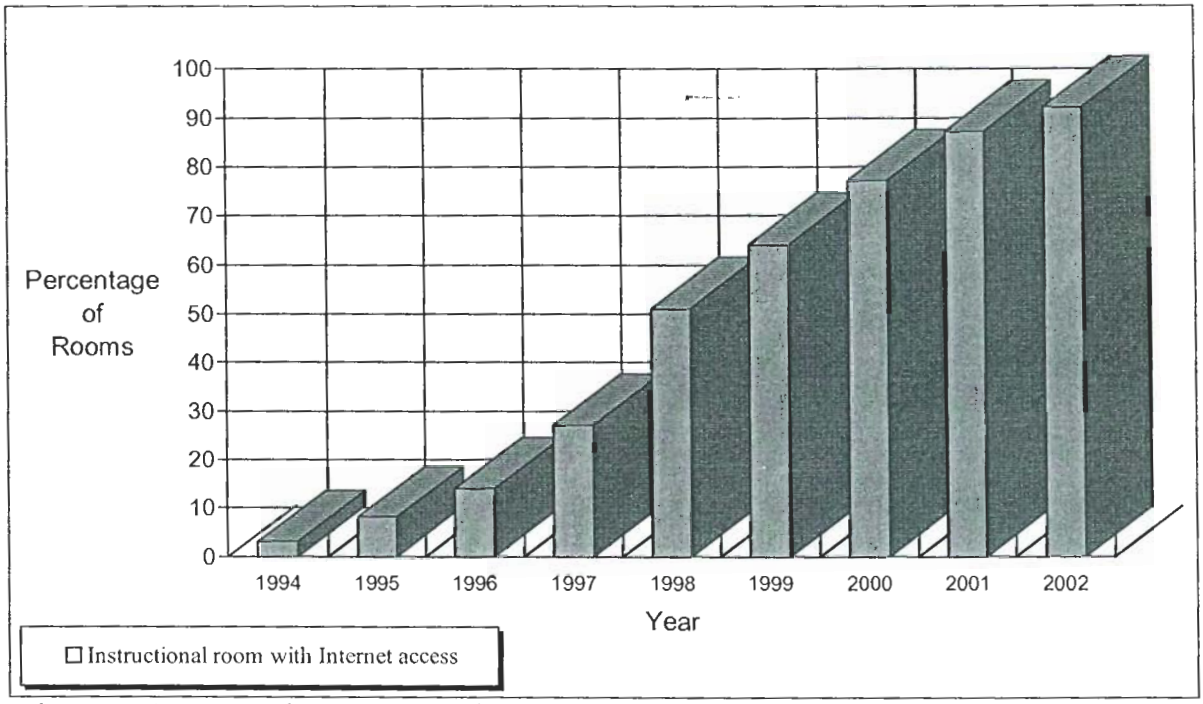

Figure 9. Public school instructional rooms with Internet access.

This is a substantial gain from 1994 since only three percent of public school classrooms had internet access. In short, the Internet now has a strong presence in the home and school.

Consequently, it is expected that the internet will play an important role in the classroom as an instructional tool. According to the U.S. Census Bureau of Statistics (2001), for children from three to 17 years of age, use of the Internet includes e-mail, school research and information searches (see Figure 10).

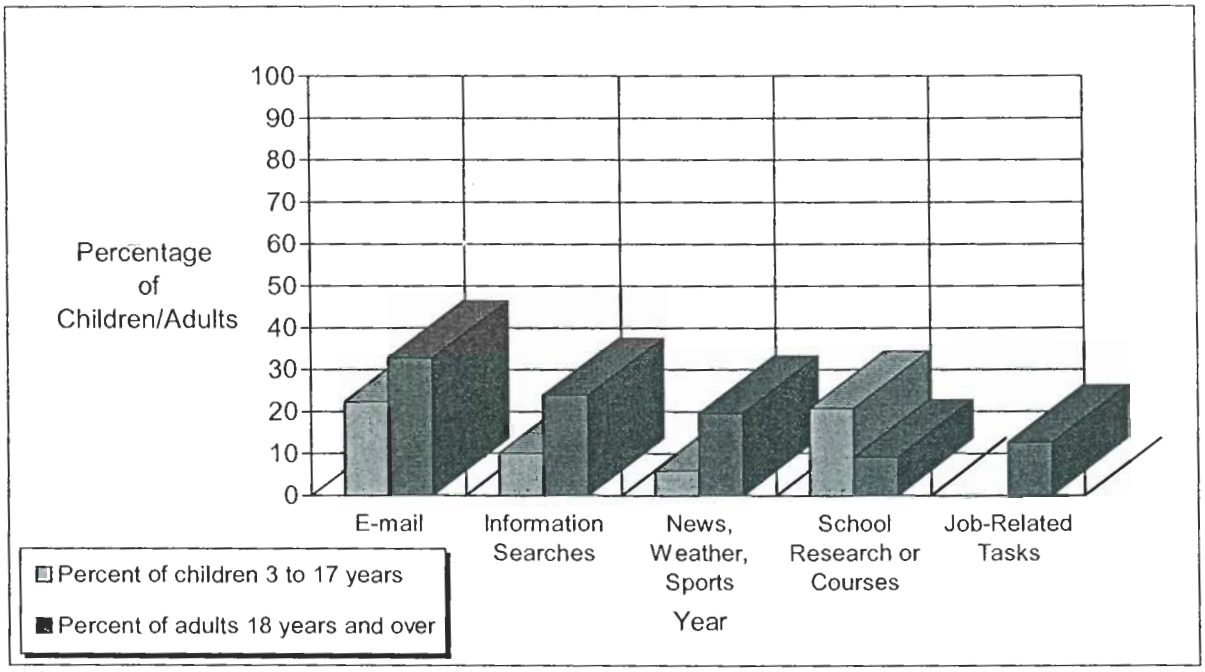

Figure 10. Adults and children using the Internet for a specific task: August, 2000.

Teachers use the Internet to communicate with colleagues, parents, students and to post homework or assignments (see Figure11).

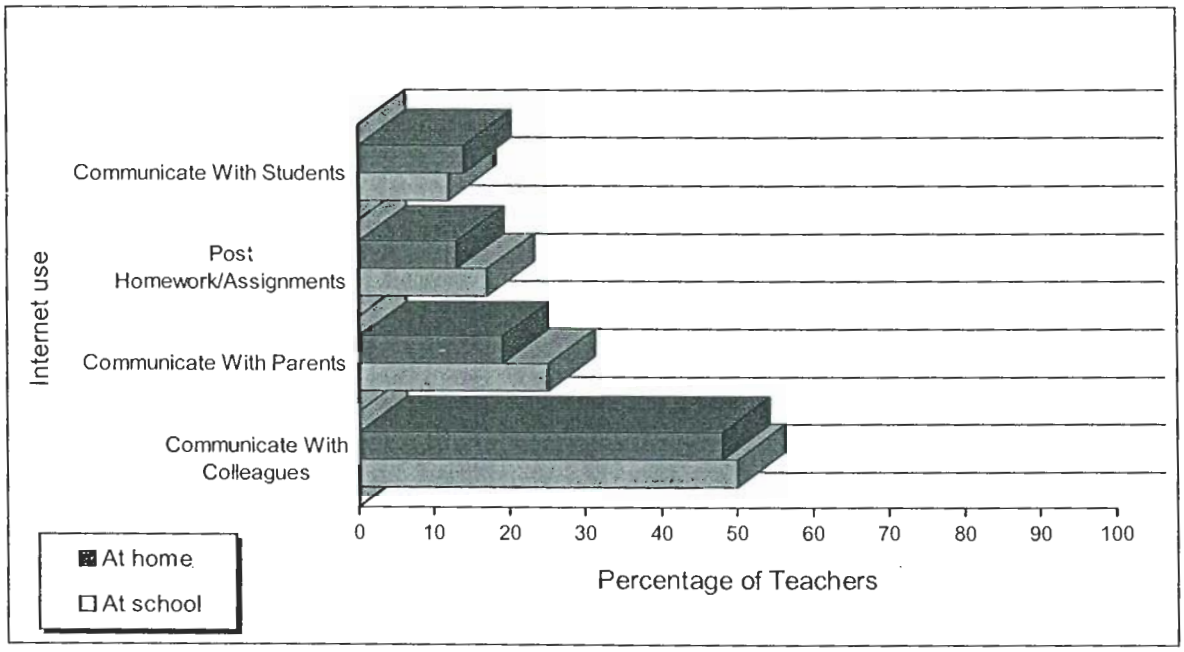

Figure 11. Teachers' use of computers for various tasks: 1999

Hamman (n.d.) points out that the Internet has interactive communication capabilities which are now used for entertainment and education applications. Dupuy (2002) lists numerous powerful features of the Internet: "information exchanges; instantaneous communication of information, no distance barrier, freedom to access and respond to ideas, information at any time and automatic storing of information"(p. 47).

Shelly et al. (2002) point out that there is a new Internet being developed called Internet2 (I2). It is an "extremely high speed network that will develop and test advanced Internet technologies for research, teaching, and learning" (p. 2.14). According to Shelly et al. (2002) undoubtedly, the Internet will continue to evolve as a primary global communication channel. The Internet is expected to impact the restructuring of K-12 education. According to Shelly et al. (2002) predict that:

1. The Internet will connect 80 percent of the worlds' computers, by 2005.
2. More than a billion wireless communication devices will be used worldwide with access to the Internet.
3. All K-12 teachers will have access to the Internet.
4. Wireless devices, such as computers and labs will become routine in the K-12 setting (p. 2.36)

According to Levy (1997) numerous computer assisted language learning projects have been designed with the use the Internet in mind - The International Email Tandem Network, The Computer-Aided Multimedia Interactive Language Learning (CAMILLE) Project and, The Oral Language Archive (OLA). The International Email Tandem Network is a network of universities linked together to provide students with language learning via email. The CAMILLE project involves a consortium of partners from the UK, France, Spain, and the Netherlands to provide language courses in Dutch, Spanish, French and English. The OLA is a collection of digitized sound recordings for foreign language learning accessible via the Internet.

Warschauer and Kern (2000) indicate that when language teachers use the Internet for language learning, activities should be learner centered, use authentic communication and provide opportunities for students to explore and express themselves.

World Wide Web (WWW).

Shelly et al. (2002) state that in 1990, the World Wide Web (or Web) was developed. The Web is a multimedia division of the Internet consisting of a collection of electronic documents with built-in hyperlinks. Thornburg (2002) states that the most popular use of the Internet is the Web. Dudeney (2000) states that the Web "is the medium choice for both new

and experienced users on the Net, and for good reasons: it's visually attractive, easy-to-use, easy to understand, and manages to combine may other Internet-based forms of communication into a single manageable package" (p.3).

Interactive. Shelly et al. (2002) point out that the Web could become a vital tool for language learning with its multimedia capabilities; graphics, animation, audio, video and virtual reality. Additionally, the Web serves as a two-way medium allowing the user to be a sender and receiver of information (Brown, (2000).

Peer to Peer (Chat Rooms). Using the Web, students can communicate directly, inexpensively, and conveniently with other students or speakers of the target language 24 hours a day, from school, work, or home; the net provides language students this type of interactivity by permitting one-on-one and personal exchanges. The use of electronic mail (or e-mail) and chat room sites allow students to communicate with anyone with access to the Internet (Warschauer, 1996).

Asynchronous communication is defined as communication not occurring simultaneously. Asynchronous communication is done through e-mail, allowing participants to compose messages at their time and pace (Warschauer, 1996). E-mail was one of the original features of the Internet, allowing scientists and researchers to communicate with each other throughout the

United States. Today, e-mail enables administrators, teachers, and students to communicate with millions of Internet users all over the world by allowing them to send, receive, forward, store, print and delete messages Shelly et al. (2002)

Warschauer, 1996) notes that chat rooms are designed for "real-time" conversation that occur simultaneously between two or more computer users. Therefore, chat rooms are considered synchronous communication, permitting students all over the world to have a simultaneous text conversation. Shelly et al. (2002) mention that chat rooms allow for the sharing of information by a small group, the whole class, or an international group composing of hundreds or thousands of people. To carry out a chat, the writer and receiver of the message must both be on-line at the same time.

Network exchanges. Blake (1999) points out that the Web can be a more engaging instructional tool when compared to classroom oral exchanges. Network exchanges allow students to engage more frequently and with greater confidence in the communicative process compared to oral classroom exchanges.

On-line discussions. Research suggests that increasing the amount of time a student is exposed to the target language is essential for acquisition. Online discussions have several advantages. According to Blake (1999) they allow students to become more attentive to linguistic form; have the potential

of motivating students to write in the second language; provide for a stress free and non-threatening environment when practicing a second language, and provide global access to a network of users of the target language.

Instructional tool. In summary, the Internet is affecting every aspect of education and changing the way we teach and learn. Kung and Chuo (2002) suggest that we must now begin to develop and guide students' ability to learn using electronic technologies. Kung and Chuo (2002) mention that the use of the Internet as a resource to facilitate language learning has been discussed in numerous publications (Felix, 1999; Osuna & Meskill, 1998; Singhal, 1997; Sperling, 1997; Warschauer, 1995; Warschauer, Schetzer & Meloni, 2000). The Internet provides an avenue for learning through the concept of multiple intelligences- its multimedia functions allows for abstract, textual, visual, social and kinesthetic learning (Brown, 2000).

Cultural Experiences.

Having contact with the target language appears to be one of the most critical factors influencing successful second language acquisition. According to Blake (1999), the Internet is the tool that is closest to providing the closest thing to a real life experience - for those who cannot live an environment where the target language is spoken. The Internet

offers a variety of authentic target-language resources such as virtual trips (e.g. a trip to Spain or a guided bicycle tour to the wine regions of Portugal). The Internet provides people from all around the world the opportunity to express themselves in their own voice and promote their cultural heritage.

Authentic Experience.

The Internet provides students with almost instantaneous access to a range of foreign experiences in their target language. Felix (2001) points out that the Internet provides opportunities for authentic experiences of the target culture and language by facilitating the communication between fellow-students and teacher via e-mail and chat rooms. Chapelle (2001) notes that numerous researchers (Cummins & Sayers, 1995; Debski, 1997) believe that technology will play a vital role in language learning "because of the cross-cultural experience it can provide learners through experiential learning" (p. 25).

According to Osuna and Meskill (1998) through the Internet, language teachers can incorporate cultural materials and customs into the classroom. The Internet provides materials from the target culture that support language in a natural setting (Alvarez & Gonzalez, 1993). The internet helps learners develop communicative and socio-linguistic

competencies, and provide relevant materials - both video and audio - that expose students to culture and language (Garcia, 1991).

Disadvantages.

Yet, despite its clear provision of educational advantages, Kung and Chuo (2002) note that there exist an abundance of research identifying challenges teachers face using the Internet in the classroom including: a) the reliability of the information; b) the cost of the equipment needed for connectivity; c) inequality of access between the haves and have-nots; and d) frustratingly slow connections

Pflaum (2004) points out that the internet distracts students from learning. Teachers are concerned with student access to pornographic sites because filtering programs are not 100 percent reliable. Instant messaging and the exorbitant number of web sites, such as CNN, ESPN, CBS and other pop culture sites distract students from paying attention in the classroom.

Learning Theories

Successful instructional use of computers means that teachers need to move away from relying on direct instruction and begin to focus on other teaching methods. Dickard (2003) points out that in school districts where teachers felt

comfortable to experiment, technology innovations that they developed put "students at the center of the teaching and learning process" (p.40). Shelly et al. (2002) argue that in many classrooms, teachers are still playing the role of "the sage of the stage" using the conventional teaching method of lecture-practice-recall (p. 6-09). Thornburg (2002) argues that "the recontextualization of learning needs to take place within a completely new framework for education; deep systemic changes are needed, both in subject matter and teaching methods" (p. 93).

Tapscott (1998) states that "schools need to become a place to learn rather than a place to teach" (p. 143). He lists eight changes that are taking place as a result of new and emerging technologies. Teachers move from relying on direct instruction to beginning to focus more on constructivist teaching. Instead of the classroom being teacher-centered, it becomes learner-centered. Students are no longer expected to only absorb information; instead, they learn to make meaningful connections to their personal lives and experiences. Students no longer see school as a place of "torture" (Pflaum, 2004, p. 143) and start to see it as a place for fun. Yet these changes do take time to adopt. Pflaum (2004) suggests that change is a slow process because it is "evolutionary not revolutionary" (p. 86).

In order to successfully integrate computers in the classroom, teachers need to become aware of the various learning theories and use them when appropriate. Shelly et al. (2002) define the various learning theories of behaviorism, constructivism, cognitive learning and multiple intelligences.

Behaviorism

Behaviorists emphasize learning as a product of behavior. Pavlov's concept of classical conditioning suggests that behavior is a product of natural reactions that occur in response to a stimulus. Skinner's concept of operant conditioning defines learning as a process that is controlled by positive or negative reinforcement.

Thompson et al. (1996) indicate that the use of behaviorism in education is "designed to produce observable and quantifiable actions by the learner" (p 10). In language learning, use of grammar drills and dialogue reinforces language acquisition. Numerous language software programs provide for reinforcement of the target language.

Constructivism

Tapscott (1998) suggests that with the constructivist approach in teaching, the student learns best by doing rather than being passive listeners. Shelly et al. (2002) explain the

views of constructivist theorists; Jerome Bruner, Jean Piaget, and Lev Vygotsky. Bruner defines learning as an active process in which the learner constructs new ideas or concepts based on their current or past knowledge. Piaget believed that children were active learners, constructing new knowledge as they progressed through different cognitive stages that he categorized as sensorimotor, preoperational, concrete operational and formal operational. And, Vygotsky believed that learning took place within the context of a child's social and cultural environment.

Thompson et al. (1996) point out that teachers who use constructivist teaching strategies provide lessons that are "flexible and rich in content so that the student can draw upon many stimuli in order to construct knowledge" (p. 15).

McKenzie (2000) notes that teachers who rely on traditional teaching approaches are less likely to "make meaningful and frequent use of information technologies" (p. 40). Consequently, students in these classrooms become restricted to "consumption of insight rather than construction of insight" (p.40).

Brooks & Brooks (1993)list common characteristics exhibited in the traditional classroom: a) Teachers are accustomed to being the dispensers of knowledge. b) Teachers rely heavily on textbooks (Ben-Peretz 1992). c) Most classroom

settings are not appropriately set up for cooperative learning. d) Student thinking is devalued in most classrooms. And, e) Construction of new knowledge by students is not valued.

Cognitive Learning

Shelly et al. (2002) explain the views of the cognitive theorist, Benjamin Bloom. Bloom defines learning as a classification of three domains: cognitive, affective, psychomotor. Cognitive domain includes a student's intellectual level. Affective domain includes a student's emotions, interests, attitude, attention, and awareness. Psychomotor domain includes a student's motor skills and physical abilities. These domains may overlap in the learning process.

Thompson, et al. (1996) suggest guidelines teachers should keep in mind when designing instructional activities: a) Predisposition to learning is important. b) The learner must be actively engaged in the learning process. c) The structure and form of knowledge must be considered. d) Sequencing of instructional materials is important. e) New information should be connected in a meaningful way to information previously learned. And, f) Discovery learning is one important technique that applies much of cognitive theory.

Multiple Intelligences

Howard Gardner (Shelly et al., 2002) developed the theory of multiple intelligences which identifies eight unique intelligences: linguistic, logical, spatial, body, musical, interpersonal, intrapersonal, and naturalist. Human beings have all eight intelligences, but only one or two are dominant in intellectual functioning. Gardner suggests that in order to reach all learners, teachers should use a variety of instructional strategies among them, hands on and role playing approaches, the arts, cooperative learning, reflections and creative play in the classroom.

Shelly et al. (2002) state that as teachers become facilitators of learning, the successful integration of computers as an instructional tool will happen. According to the researchers, teachers undergo five developmental stages of technology integration: familiarization, utilization, integration, reorientation and revolution. The Wellivers Instructional Transformation Model defines the five stages thus:

1) Familiarization is when a teacher becomes aware of technology and its potential.

2) Utilization is when a teacher uses technology, but minor problems will cause teachers to discontinue its use.

3) Integration is when technology becomes essential for the educational process and teachers are constantly thinking of ways to use technology in their classrooms.

4) Reorientation is when teachers begin to rethink the educational goals of the classroom with the use of technology.

5) Revolution is the evolving classroom that becomes completely integrated with technology in all subject areas. (Shelly et al. (2002) section 6-10)

Diffusion of Innovations

Why teachers decide to use or not to use computers for instructional purposes can be explained through the conceptual framework of the Diffusion of Innovations theory. Rogers (2003) defines the diffusion process by which an innovation (computers) is communicated through certain channels (technology standards) over time and among members (teachers) of a social system (school or district).

An Innovation

Rogers (2003) defines an innovation as "an idea, practice or object that is perceived as new by an individual or other unit of adoption" (p.12). The introduction of computers as an instructional tool in the classroom is considered an innovation. Rogers (2003) states that it does not matter if

the innovation has been in existence for a long time, what matters instead is the individual's experience of the novelty if the innovation. In other words, if an idea, practice or object is perceived as new to an individual, then it is an innovation.

Time (Diffusion Process)

According to Rogers (2003), the innovation process has five sequential components: knowledge, persuasion, decision, implementation, and confirmation. Knowledge is gained when an individual becomes aware of an innovation's existence and obtains some understanding of how it functions. Persuasion occurs when an individual forms a favorable or unfavorable attitude toward the innovation. Decision occurs when an individual engages in activities that lead to the adoption or rejection of the innovation. Implementation takes place when an individual puts the innovation to use. Confirmation occurs when an individual seeks reinforcement of a decision that has already been made. The individual may reverse a previous decision if exposed to conflicting messages about the innovation.

Rogers (2003) defines the decision period around an innovation as the variable length of time required to make a decision. He suggests that some people require many years to adopt an innovation, while others move rapidly to

implementation. Adopter categories, the arrangement of members of a social system on the basis of innovativeness, are innovators, early adopters, early majority, late majority and laggards. Individuals who readily seek information about new ideas are considered innovators. Usually, innovators are able to deal with high levels of uncertainty and risk.

Early Adopters

Early adopters usually serve as a role model for many other members of a social system. They are usually respected by their peers and are the ones that may "trigger" the critical mass to adopt an innovation (Rogers, 2003, p. 283).

Early Majority

Early majority are individuals who adopt a new idea just before the average member of a system. One third of all members of a system are considered to be in the early majority category.

Late Majority

Rogers (2003) mentions that individuals in the late majority are considered the skeptics. They adopt new ideas just after the average member of a system has adopted the innovation. Late majority also make up one third of the members of a system. The reason for adoption could be the result of financial or peer pressure.

Laggards

Laggards are those individuals who are the last to adopt an innovation. Rogers (2003) suggests that laggards' decision to implement an innovation usually is based on what has been done in the past and their general suspicion of change. According to the U.S. Department of Education (2000), more than 60 percent of teachers are using computers (see Figure 12).

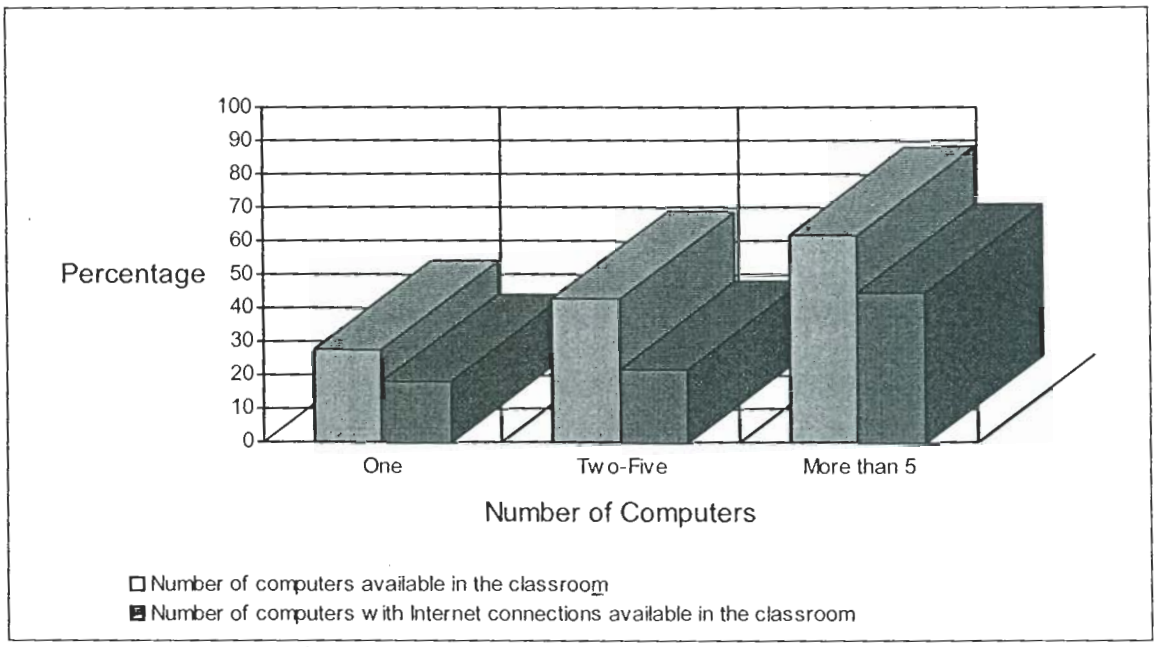

Figure 12. Public school teachers reporting number of computers in the classroom.

However, it remains questionable how effectively those teachers use computers as an instructional tool. Cuban (2002) cautions that the majority of teachers may not fully grasp the applications of technology.

> A few 'innovators' persuaded 'early adopters' to champion the new technology among their colleagues, followed by a very slow penetration into the majority of the teaching corps. Finally, even 'laggards' joined the majority of teachers in using films and television; but uses in classrooms were infrequent, limited to maintaining customary practices, and peripheral to the daily routines of teaching and learning (pp. 140-141).

Challenges of C.A.L.L.

In addition to questionable uses of computers in the classroom, classroom teachers face other challenges. Cuban (2002) points out teachers are similar to other professionals, such as physicians or engineers, when adopting computers in their practice. "Teachers are being very selective in their daily uses of technology, picking and choosing among those new ones that they can adapt most easily to traditional practices" (p.151). Their similarity to other professions weakens the argument that teachers are afraid of using computers or are resistant to change.

According to the U.S. Dept. of Education (2000), teachers pointed out two considerable barriers that prevent them from using computers: lack of technical expertise and limited instructional support (see Figure 13).

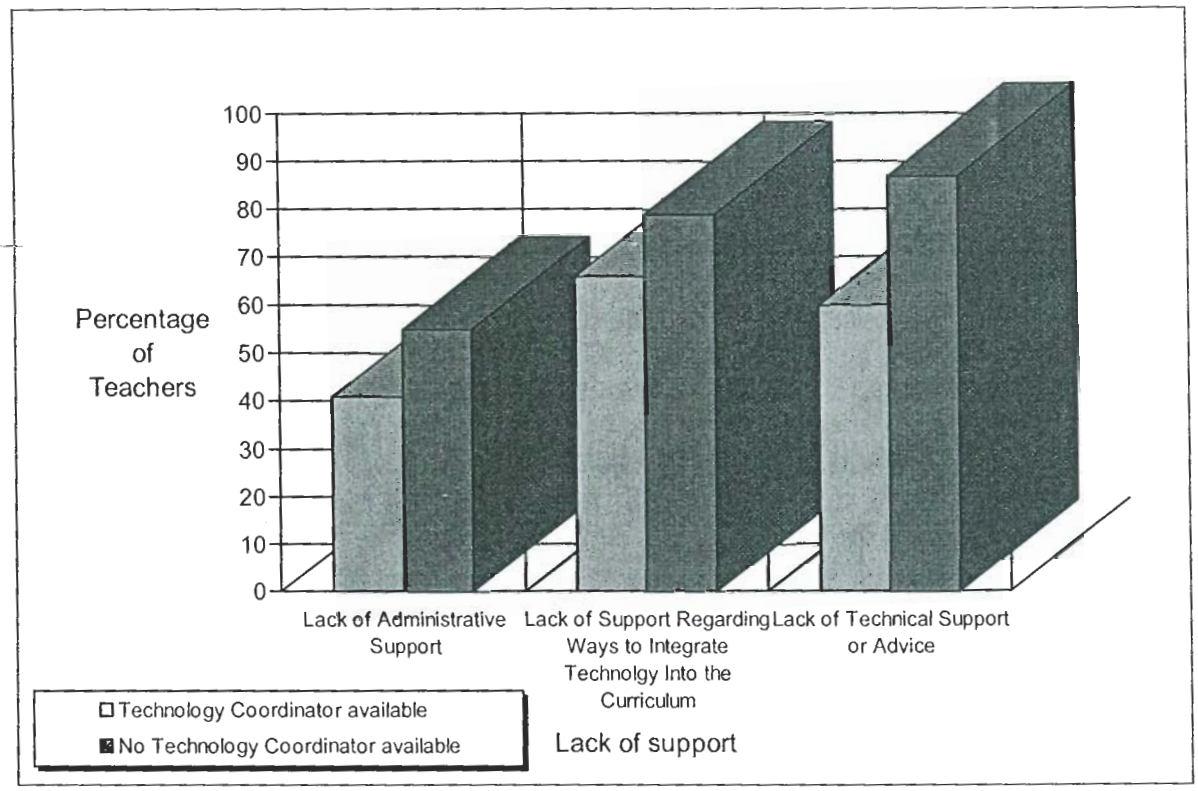

Figure 13. Public school teachers reporting lack of institutional and technical support using computers and the Internet for instruction.

Classroom teachers expressed additional concerns, including limited numbers of computers available, outdated, incompatible or unreliable computers, and limited Internet access. Secondary school teachers in particular indicated not having enough computers as a major barrier. *(see Figure 14).*

There is also concern regarding the lack of release time for professional development. Teachers with 10 or more years of experience report the greatest concern with lack of release time *(see Figure 15).*

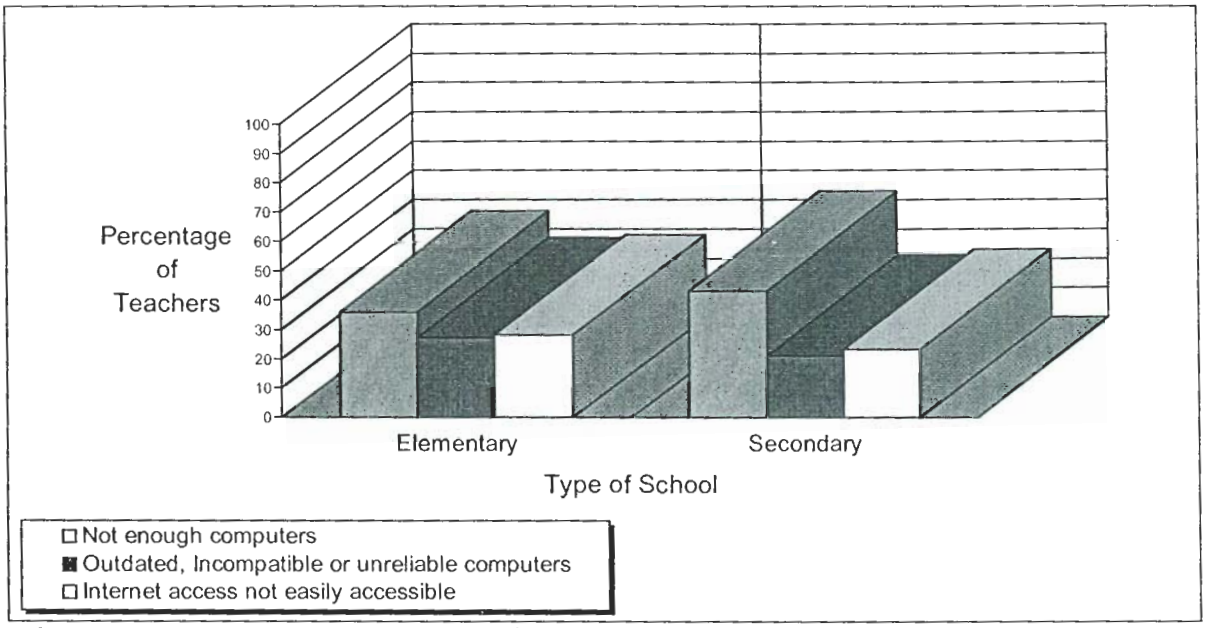

Figure 14. Teachers reporting various barriers to the use of computers and the Internet for Instruction: 1998.

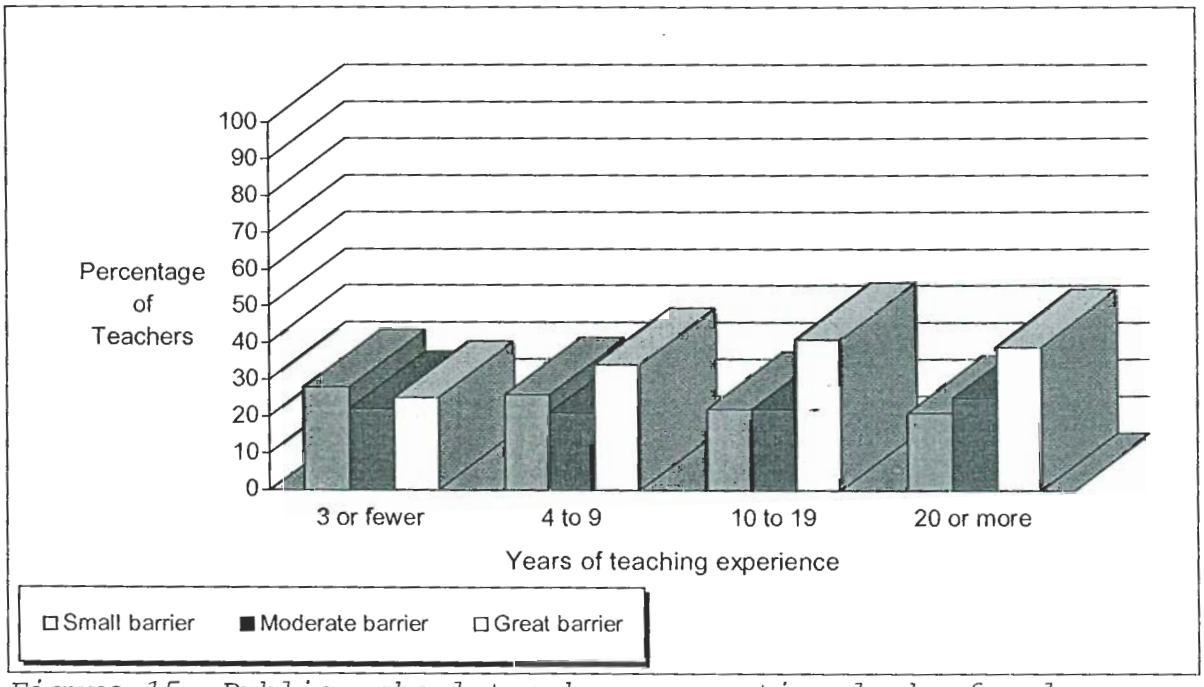

Figure 15. Public school teachers reporting lack of release time to learn, practice or plan ways to use technology: 1999.

Teachers also stated that there is a lack of high-quality instructional software. Other concerns included lack of support regarding ways to integrate telecommunications into the curriculum and student access to inappropriate materials. Lack of administrative support was least likely to be reported as a barrier (see Figure 16).

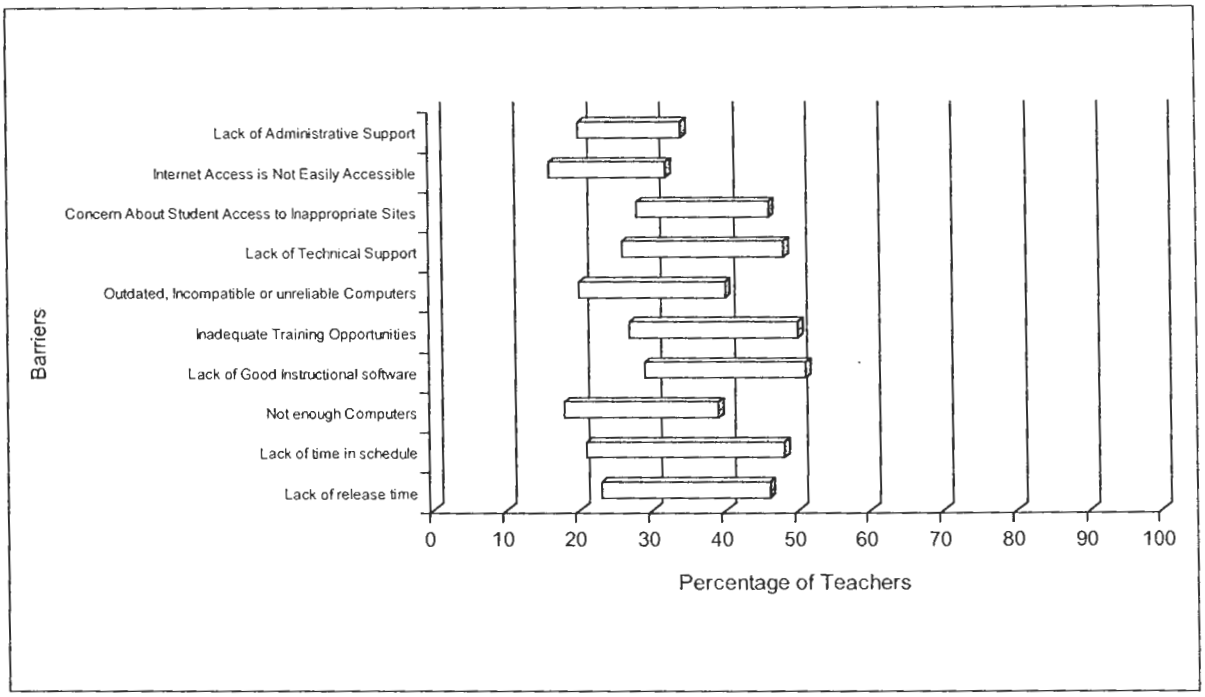

Figure 16. Public school teachers reporting barriers to their use of computers and the Internet for instruction: 1999.

Numerous educational researchers have written extensively on barriers that impede the use of computers in the classroom. Oppenheimer (2003) suggests that there exist a plethora of software programs that are not educationally sound. Too many software programs do not allow for teacher input, rely on repetition with minimum human interaction. Thus, knowledge

gains seem to be temporary, and student motivation questionable.

Additionally, many software products are too expensive costing between $20,000 to $100,000. Furthermore, computers in the classroom may encourage teachers to abandon their role as active supervisors.

Oppenheimer (2003) found that students were given a considerable amount of time to play games or surf the Internet instead of working on meaningful learning activities. Although computers boosted enthusiasm for writing, the writing quality did not necessarily result. "Students did clearly write more. But on the whole, they didn't put much work through the revision - a situation that has not much changed to this day. Instead, they generally limit themselves to perfunctory corrections - many of which are automatically performed by spell-check software" (p. 41). Oppenheimer (2003) also points out that many child psychologists see numerous disadvantages with using computers in an educational setting. They see computers in the classroom as "narrowing information rather than opening it up" (p. 202). Computers are linear machines catering to the left hemisphere of the brain where sequential thinking occurs. The right hemisphere of the brain works on different kinds of information simultaneously; Oppenheimer writes, "it's the domain that shapes our multifaceted

impressions, the engine of creativity" (p. 202). He suggests that computer programs that have attempted to replace book reading have actually lowered students' ability to think creatively. Students who are constantly exposed to "rapid-fire stimuli" may become more likely to suffer from hyperactive disorders, less able to handle frustration, and increasingly explosive (p. 204). Numerous educational software programs offer a system of rewards, awarding points and prizes, undermining students' intrinsic motivation to learn. Computers lack the "human touch" students need to get along with one another, talk to each other, work out their problems and resolve conflict together. Face to face interactions are not possible or easily accessible with computers (p. 373).

Pflaum (2004) points out that the technology promise of the 1990s has yet to materialize. He states that "the reality, so far has fallen short. Throughout the 1990s and the early years of this decade, test scores have barely moved. Textbooks are still far and away the major instructional medium" p. (4). He points to the fact that students do not spend enough time on the computer to make a significant impact on academic performance. According to Pflaum (2004), the average student spends about an hour a week on the computer at school.

Shelly et al. (2002) argue that there are numerous obstacles impeding the integration of technology in the

classroom among them: a lack of teacher training, lack of administration support, time constraints on teacher planning, limited access, budget constraints, and a basic resistance to change. However, in this study, participants have different view points of what impedes the integration of technology in the classroom. Technology Coordinators perceive the problem as insufficient hardware, software, and training. Teachers believe that they do not have enough time to develop technology-based lessons. Administrators point to teachers' lack of experience using technology in the classroom.

Cuban (2002) indicates that most teachers and students do not use computers for meaningful instruction. Teachers use computers predominantly to prepare for classes rather than for direct instruction. According to Cuban (2002), "student use of computers for learning was minimal, usage included typing up assignments, working on reports and searching the Internet" (p. 90-91)

Cuban (2002) points out that only a few teachers are able to persuade their colleagues to begin using computers and other technologies in the classroom. Direct instruction is the norm in most classrooms. Factors such as age, gender and computer expertise do not correlate with changes in instructional practices. "There were few fundamental changes

in the dominant mores of teacher centered instruction," Cuban (2002) contends (p.96).

Collins (2004) in his article, "Research into Practice" lists 10 critical issues identified by Dickard (2003) as crucial to "sustain school technology and bring it to the next level" (p.59). The issues are:

1. Accelerate teacher professional development.
2. "Professionalize" technical support.
3. Implement authentic Ed Tech assignments
4. Create a national digital trust for content development
5. Ensure that all Americans have 21st century skills.
6. Make it a National priority to bridge hoe and community digital divides.
7. Focus on the emerging broadband divide.
8. Increase funding for the federal Ed Tech block grant.
9. Share what works.
10. Continue funding for Ed Tech research.

Dickard (2003) explains each of these issues in detail: Some of these issues are prevalent to this study: First, school districts must consider appropriate professional development in technology for teachers, so that they could begin to use powerful new technologies in their classrooms.

Second, these researchers point out that technical support has not been given serious consideration in many school districts. However, technical support "should be given the professional status it deserves"(p.13). Third, student academic achievement should be dependent on specific goals and not on the sole use of technology. Fourth, create a federally funded Digital Opportunity Investment Trust (DO IT) for computer upgrades, software and professional development. Fifth, ensure that all students and parents have opportunity to become technologically literate. And, a concerted effort must be made by the federal government, state government and private industry to support and share effective educational technology solutions.

Summary

The number of computers in classrooms has been increasing dramatically over the past several years. At the turn of the century, there were at least five computers in about 60 percent of classrooms in the United States. Therefore, many would agree that the number of computers in most classrooms is sufficient. However, access to using computers is another matter. According to the 1999 FSSR survey, access to computers is a serious problem, especially along racial lines. White non-Hispanic students had greater access to computers than

Hispanic students (see Figure 4).

Shelly et al (2002) point out that computers are a valuable learning tool. Interactive technologies, such as multimedia, software applications, tutorials, animations, simulations and the Internet captivate students' attention and motivate them to learn. According to Blake (1999) the Internet is becoming a vital instructional tool in the language classroom. On-line discussions allow students to become more attentive to linguistic form (Warschauer, 1997); have the potential of motivating students to write in the second language (Kern, 1995); provide for a stress free and non-threatening environment (Chun, 1998 & Warschauer, 1995 and 1997), and provide global access to a network of users of the target language (Cummins & Sayers 1995).

Successful instructional use of computers means that teachers need to move away from relying on direct instruction and begin to focus more on other methods of teaching, such as behaviorism, constructivism, cognitive learning and multiple intelligences Instruction is learner-centered, where students make meaningful connections of the curriculum to their personal lives and experiences. Teachers become facilitators of learning. Unfortunately, many classrooms, teachers are still playing the role of "the sage of the stage" using the conventional teaching method of lecture-practice-recall.

Diffusion of Innovations theory suggests a conceptual framework of how individuals adopt an innovation. In this study, this theory is used to examine why a few language teachers decide to use computers as an instructional tool, while many others do not.

According to the 1999 FRSS survey (U.S. Dept. of Education NCES, 2000), teachers indicate numerous challenges preventing them from using computers as an instructional tool: lack of technical expertise, limited instructional support, limited numbers of computers, outdated, incompatible or unreliable computers, limited Internet access, and ineffective software.

Chapter III

METHODOLOGY

Purpose of Study

The purpose of the study was to obtain data through interviews with school district participants involved in the teaching of languages to ascertain the reasons why they adopted technology in the instructional process or not. The interviews follow the guidelines of grounded theory. Participants were interviewed in an environment that was positive, professional and comfortable. They were contacted via the telephone for consent to participate. If a participant consents to the interview(s), then a time and place is determined. The interviews were conducted at a time and location convenient to both the researcher and participant. Preferably, interviews were held after-school, to avoid disrupting classroom instruction. Participants were given a letter of participation, explaining the purpose of the study. In this study, the purpose was to provide for an understanding of participants' experiences using computers in the classroom. Participants were encouraged to speak freely and in the same way they talk to others. Participants were notified that interviews may last up to an hour.

Research Design

This study follows some of the guidelines of grounded theory, a qualitative research method. Strauss and Corbin (1998) define qualitative research as research about persons' lives, lived experiences, behaviors, emotions, and feelings as well as about organizational functioning, social movements, cultural phenomena, and interactions between nations" p. (11). Dick (2002) defines grounded theory as a "theory that is derived from data, systematically gathered and analyzed through the research process" (p.1). He points out that grounded theory differs from other research methods because it is "explicitly emergent"; it does not test a hypothesis, instead "it sets out to find what theory accounts for the research situation as it is" (p.1.).

Strauss and Corbin, (1998) discuss in detail the phases of grounded theory, beginning with collection of the data and ending with writing about the data. Figure seventeen illustrates all the phases of the grounded theory research method.

Dick (2002) points out that the researcher's main purpose for collecting and interpreting data, such as interviews, is to understand what is happening in a situation and how individuals perceive their particular roles.

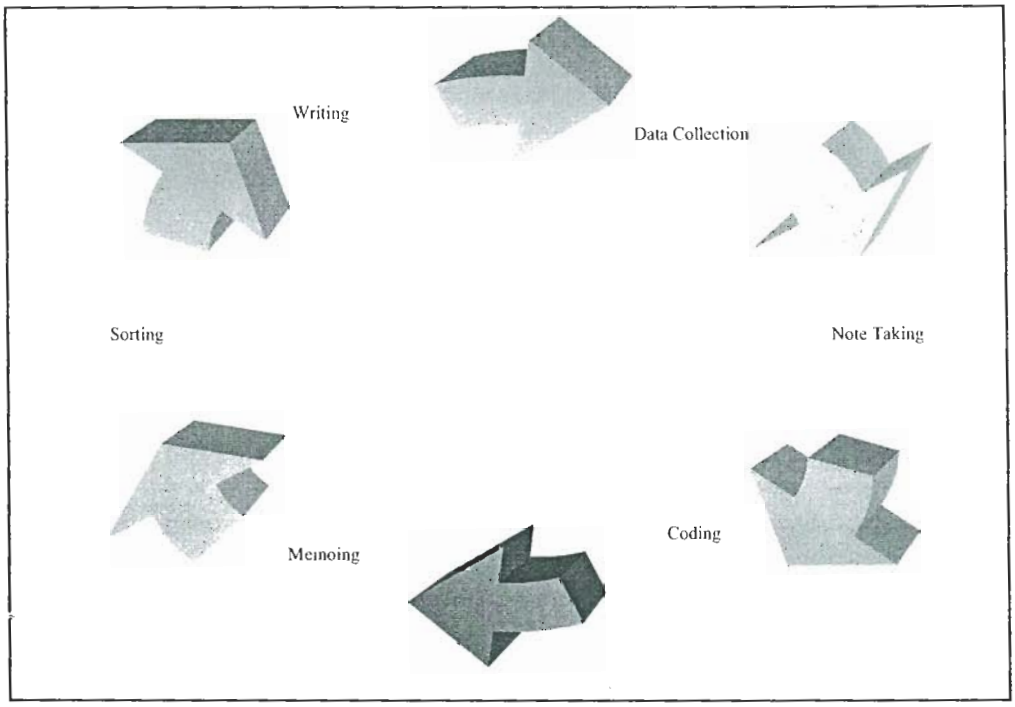

Figure 17. Phases of grounded theory research method.

Strauss and Corbin, (1998) list six characteristics of a grounded theorist: are critical thinkers and analyze data using a research sequence; have the ability to recognize tendency towards bias; think in abstract terms; are flexible and open to criticism; are sensitive to participant's responses and actions; and, are grounded in the work ethic and research process.

The task of the researcher is to understand what is happening in a situation and how participants perceive their particular roles. In this study, the open and axial coding techniques are used to interpret data.

Description of Participants

Michael Genzuk, (n.d.) points out that Spradley (1979) states that good participants are "enculturated," they know their culture and have spent a considerable amount of time in that cultural scene" (p. 48). Therefore, most participants selected for this study consist of language teachers (ESL or World Language) who use computers as an instructional tool. As the study evolved, and the data was analyzed, it became evident that there was a need to interview other staff members, including resource teachers and other support staff that work with language teachers. Participants selected met one or more of the following criteria: (a) use computers as an instructional tool in the language classroom; (b) assist language teachers with computer assisted instruction; or (c) supervise/monitor bilingual and technology programs.

Teaching with computers in the language classroom varies from beginner, with 1 or 2 years of teaching experience, to veteran teachers, with over 20 years of teaching experience. Language teachers with limited computer experience indicated that they have about 1 or 2 years of teaching experience using computers. Veteran teachers noted that they had at least 5 years using computers in the classroom. Therefore, knowledge and use of computers and the Internet varies.

Most study participants were selected because they use computers as a tool for language instruction. They include seven elementary language teachers (World Language & English as a Second Language teachers - ESL) and two high school World Language teachers. Other participants selected either assist language teachers with classroom instruction or help to establish policy and procedures that directly impact ESL, Bilingual or Technology programs. They include three resource teachers (Technology and World Language) and two program directors (Bilingual & Technology).

The researcher asked for consent from participants via a formal letter prior to the interview. Participants were asked to sign a formal consent letter explaining purpose of the study and that all personal information is kept confidential. The use of pseudonyms is used to guarantee anonymity. Participants were notified that all personal information, such as names, title and school location would be kept confidential. Participants were offered the opportunity to read transcribed interviews, as well as the results of the research.

Participation is completely voluntary and participants are informed that they may withdraw at any time. Each interview lasted up to one hour. Participants have been asked

to read the analysis of the research proposal to correct any errors that may have been made.

Instrumentation - The Interview Process

Interviews adhere to qualitative research guidelines enumerated by Genzuk (n.d.), who requires that data should be collected through informal conversations; that collection of data should move from the unstructured to the structured. Genzuk (n.d.)suggests that interviewing allows for a thorough collection of data about individuals' point of view and experiences.

This study focuses on the open-ended interview technique asking the same open-ended questions in the first few interviews and then moving to more probing questions as categories (themes) arise from the data. Open ended questions include:

1. What made you decide to begin using computers as an instructional tool?

2. How do you use computers as an instructional tool?

3. What support do you receive using computers for language instruction?.

Focused questions posed to participants in subsequent interviews included:

4. What challenges do you face in gaining access to computers?

5. How do you use computers as an instructional tool?

6. What positive or negative results have you seen using computers in your classroom?

7. What type of support do you receive from administrators and colleagues using computers as an instructional tool?

8. What professional development opportunities have you participated in using computers as an instructional tool?

The researcher also provided an explanation of why the interview is being tape recorded. Tapes are transcribed for analysis, saved on computer disk and stored in a secure place under lock and key. The researcher will have sole access to the tapes that have been transcribed. The transcriber will eventually return all tapes and word files of participant interviews. Tapes will be destroyed 5 years after the completion of the study.

Controlling for Bias and Error

The researcher has taken the following measures as a means to control for bias and error:

1. The researcher conducts all interviews, however, attempts to remain impartial during the interviews and during analysis of the data.

2. Interview questions are designed around the theoretical framework of qualitative research. Interviews begin with open ended questions.

3. Tape recording each interview allows the researcher to collect an accurate account of what the participant stated.

4. Development and interpretation of concepts follows the framework of grounded theory.

Strauss and Corbin (1998) suggest that the researcher "maintains a balance between objectivity and sensitivity by collecting and interpreting data in alternating sequences" (p. 43). As a result, there is a constant interchange between the researcher and the data. In qualitative research objectivity means that the researcher maintains an "openness, a willingness to listen and to 'give voice' to respondents, be they individuals or organizations" (p. 43).

Analysis of the Data

Analysis of the data follows some of the framework of grounded theory, which indicates that "theory is derived from data, systemically gathered and analyzed through the research process" (Strauss & Corbin, 1998, p.12). Grounded theorists

conduct a "micro-analysis" of the data. It requires the researcher to do a "careful scrutiny of the data, line by line, to uncover new concepts and novel relationships and to systemically develop categories in terms of their properties and dimensions" (Strauss & Corbin, 1998, p.71). Dimensions are "the range along which general properties of a category vary, giving specification to a category and variation to the theory; and, properties are characteristics of a category, the delineation of which defines and gives it meaning" (Strauss & Corbin, 1998, p. (101).

Strauss and Corbin, (1998) note that with grounded theory, asking questions and making comparisons are two essential operations needed to develop theory. They list four types of essential questions that every researcher should ask when analyzing data and developing theory; sensitizing questions, theoretical questions, structural questions and guiding questions: *Sensitizing questions* focus the researcher on what the data might be indicating. For example, how do participants define their situation in using computers in the language classroom? What are their issues, problems and concerns? *Theoretical* questions help the researcher make connections among concepts. In other words, what is the relationship, if any, between concepts? *Structural questions* focus the researcher on where to go and whom to gather data

from in developing evolving theory. Finally, *guiding* questions guide the interview and eventually the research. In the initial phase, guiding questions usually are open ended but become more specific and more refined as the research moves along.

Open, and axial coding techniques are used to analyze data. Strauss and Corbin, (1998) define *open coding* as "the analytic process through which concepts are identified and their properties and dimensions are discovered in the data" (p. 101). Data is broken down into discrete parts and is closely examined for similarities and differences. Data that is found to be conceptually similar or different is categorized. In open coding, the researcher is "concerned with generating categories and their properties and then seeks to determine how categories vary dimensionally" (p. 143).

In the first set of interviews this researcher uses the open coding process to answer the following questions: What is the situation of the participant? What is going on in the situation? How is the participant managing his/her situation? Analysis of this data provides for a more focused direction on which participants to interview next and what type of questions to ask. With open coding, the following process was used: a) Creating a color scheme of transcribed interviews to identify participant data; b) Highlighting key words, phrases

or paragraphs to find similarities an differences in what participants are saying; c) Developing categories as they emerge from similarities or differences found in the data (see Appendix H).

Strauss and Corbin, (1998) define *axial coding* as "the process of relating categories to their subcategories, termed 'axial' because coding occurs around the axis of a category, linking categories at the level of properties and dimensions" (p. 123). In other words, "categories are systematically linked with subcategories" (p. 143). Analysis of this research data suggest numerous subcategories in each of the categories created during the open coding process. An outline connecting categories to subcategories is created (see Appendix H).

Strauss and Corbin, (1998) define *selective coding* as "the process of integrating and refining the theory" or core categories (p. 143). As core categories emerge, comparing existing theory to emerging theory is essential. However, in this study, emphasis is placed on the existing theories of learning, but more importantly on the Diffusion of Innovations theory presented by Rogers (2003) because of its practical applications for interpreting the data. Learning theories discussed in this study are: behaviorism, constructivism, cognitive learning and multiple intelligences. Diffusion of Innovations theory proposes five sequential stages, namely the

knowledge, persuasion, decision, implementation and confirmation stages.

Figure eighteen illustrates the five sequential stages.

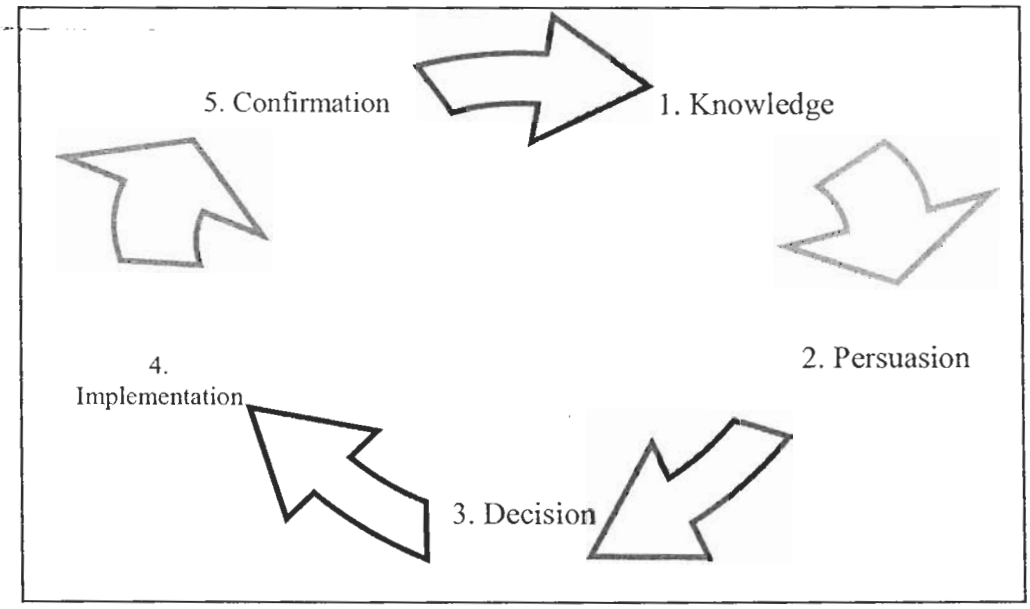

Figure 18. Stages of the Diffusion of Innovations.

Findings in this study suggest that at the knowledge stage, teachers can point to factors that influenced them to begin using computers in the classroom. At the persuasion stage, teachers describe the positive and negative results that they have seen when using computers as a learning tool. At the decision stage, technology becomes thoroughly integrated into traditional teaching practices. At the implementation stage, teachers change their personal attitude towards technology and use technology effortlessly as a teaching tool in the language classroom. Finally, in the

confirmation stage, teachers describe how computers have impacted or changed their methods of instruction.

Summary

Strauss and Corbin (1998) point out that before developing theory, a researcher must understand what theory means. It requires a researcher to know the difference between description, conceptual ordering and theorizing. It also requires the researcher to know that these concepts build on each other and that theory building includes all three.

Strauss and Corbin (1998) state that a researcher needs to be sensitive to the needs of participants when collecting data, objective when interpreting data and use relevant literature when making recommendations.

With Grounded theory, careful scrutiny of the data is carried out to uncover concepts and categories. Asking questions of who, when, why, where, what, and how helps the researcher make sense of the data. Open and axial coding provide for analysis of words, phrases, and sentences revealing similarities and differences. Axial coding helps the researcher link categories to their subcategories. The researcher must also be able to fully understand the phenomenon under investigation and its implications to existing theories.

Participants selected for this study included: language teachers, who are using computers as an instructional tool, resource teachers and technology coordinators that assist language teachers in implementing curriculum and technology in the classroom, and program directors that develop and institute policy and/of procedures pertaining to language and technology standards.

Initial interview questions were open ended. However, as categories emerged, the interview became more structured posing specific questions to participants.

The researcher attempts to control for bias and error by attempting to remain impartial, asking open ended questions, using a tape recorder to gather data and interpreting concepts through the framework of the Diffusion of innovations theory.

Analysis of the data applies part of the framework of grounded theory. Through open and axial coding techniques, data is analyzed uncovering concepts that have similar or different properties and dimensions. Categories developed from the coding process are then analyzed through the theory of Diffusion of Innovations.

Chapter IV

ANALYSIS OF THE DATA

Stages of Innovation

Computers and the Internet in the language classroom are considered an innovation. How computers are used as an instructional is discussed. According to Sandholtz, Ringstaff and Dwyer(1997)the process of adopting an innovation has five sequential stages: knowledge, persuasion, decision, implementation, and confirmation.

Knowledge (Entry)Phase

At the knowledge or entry phase, teachers begin to familiarize themselves with the innovation; the use of computers as an instructional tool. Sandholtz et al. (1997) note that "teachers find themselves facing problems of first-year teachers: discipline, resource management, and personal frustration stemming from 'time-consuming mistakes in already crowded days'" (p. 37). Analysis of the data reveals that language teachers do face numerous challenges in trying to get access to computers. Participants are frustrated by the limited availability of computers, scheduling conflicts, time constraints, and unsupportive staff. However, they believe that some of their colleagues do not use computers for other reasons: either they do not know how to use it, are worried

that colleagues or students may find out that they don't know how to use it, or are not comfortable changing their pedagogical practices.

Access to computers. Sandholtz et al. (1997) point out that teachers who have limited access to computers are unlikely to integrate technology in their instruction. "Teachers who had no time to explore, learn new skills, or plan new lessons tended to maintain the status quo," (p. 179) the researchers found.

It is no surprise that data from this research reveals that access to computers and the Internet has been and continues to be a barrier for most language teachers in the district. Currently, there are fourteen thousand computers in classrooms and in computer labs; however, less then two hundred -- less then one percent -- are used by language teachers as an instructional tools , according to one participant (see Appendix H, p. 835). Another participant indicated that access to computers in the classroom is limited to language teachers because of problems with the availability of computers, scheduling conflicts or resistance from colleagues to share. (see Appendix H, p. 621).

Availability of Computers. Language teachers fortunate to have their own classroom may also have access to computers and

the Internet. Participants noted that their situations varied however:

> Every classroom has three computers. We are fully, wired in the upper grades, and we are wired now the whole entire school, but they have not turned the program on already, but we are wired already completely now.(see Appendix H, p. 677)

> Right now my computers are not connected to the Internet, nor my computers are connected to the network. (see Appendix H, p. 287)

> The principal put the new one in another classroom, and gave me the old ones, you know what I mean... I don't have the Internet in my classroom, not enough computers, and not enough vocabulary, I'm able to work with them now, but I don't have enough computers in my class. (see Appendix H, p. 600)

> It varies greatly; some of the high school teachers have computers in the back of their classrooms, some don't, [and] some of the bilingual teachers have computers in the back of their classrooms, some don't. (see Appendix H, p. 391)

Scheduling Conflicts. Language teachers who have one or more computers in their classroom often use a rotation schedule as a way to get all students on the computers. Participants reported:

> I began to use those four computers, and I began to rotate people.(see Appendix H, p. 495)

> I have anywhere from twenty, twenty-five kids, right, and I only have two computers. Now it becomes a question of, 'Who's going to be on those computers?' You can't service everyone at the same time.(Appendix H, p. 610)

> If there's a snowstorm, forget about it. I won't see them [students] for a week, because some of them are serviced twice a week. Some of them are serviced three times a week... I don't have them everyday and if let's say there was an assembly..., I probably don't see them for a few days.(see Appendix H, p. 412)

A rotation schedule does have its problems; some students may not get to use the computers and may resent the teacher for not allowing them on the computer. By one teacher's account,

> The other problem is resentment on the part if you don't have enough computers… If I have a combined class, now I have a larger, larger number of kids. It doesn't satisfy them as far as them being able to get on, and being on, "Jump Start Espanol." Then you have other kids walking out of the class, looking at you, "I didn't get on today." If they're really young they'll throw temper tantrums. They'll get on the floor… Usually it's the same children. They got on last week, but they want to go on every day. They want to do it again, and again, or they have to tell you, "She hasn't been on it for two weeks." I guess some of the children don't have this at home. This is the only chance they'll have to be on it if they don't have it at home.(see Appendix H, p. 643)

Language teachers who do not have computers in their classrooms rely on the accessibility of the computer lab. One teacher said, "My class doesn't have one [computer]. In my floor we have the computer lab with all the equipment" (see Appendix H, p. 848). In another instance, a conflict in the schedule prevented students from using the lab. One language teacher complained that the technology coordinator was often not able to accommodate her class in the lab schedule:

> I ask her, 'Why don't we take them up, you know, why don't we try to plan have them go up into the lab, where they have access to the Internet?' She would love to do that but her periods don't match with what the technology lady has told her are the periods that she can take them up there, so she keeps asking the principal could we... get the Internet connection into this classroom, and until she gets into her classroom, she's not really going to be able to use that.(Appendix H, p. 818)

Language teachers who do not have their own classroom travel from classroom to classroom throughout the school day. So called "traveling teachers" find themselves even more restricted in trying to use computers, by one participant's report. Approval and flexibility of a classroom teacher is needed to get access, according to her:

> I don't have a classroom. So, I don't really have the ability to work with computers too much, but teachers at my school are very flexible. So if they're working on a report, let's say they're working on a report on... Honduras, or El Salvador, and there's a student that doesn't have a computer at home, he wants to finish. Teachers will allow me to use the computers in the classroom... (see Appendix H, p. 399)

Lack of Time. Teachers feel that they just don't have the time to do it all: devising lesson plans, submitting writing samples, attending student conferences, creating student folders, creating tests. They reported:

> The bilingual teachers sometimes don't feel they have time, you know, 'I'm so busy, I'm so busy, I got to do this and that, I got to get my writing samples into the Vice Principal, I got to get my lesson plans.(see Appendix H, p. 390)

> Well, let's be realistic. Who has time to go and spend time on the computer when you have to have writing samples every month, and you have to correct twenty-five writing samples, and they have to write the sample… Let's be realistic. How much time can you really do into your computer if you have to do all this necessary things that are being monitored, and asked [for] by the administration, and by the district? (see Appendix H, p. 686)

In some classrooms, computer time is treated as play time, a reward for students' good behavior. Students get the opportunity to play games or just surf the Internet, doing whatever interests them. According to one participant,

> Some teachers give free time. Okay, you can go to the computers and play games. There are games like Pac-Man and specific games. There are software games that they learn skills, but because ~~of this~~ teacher who uses technology to play games kind of thing, not linked to a main curriculum… That's what our teacher does with the technology. Technology is free time, because it's fun. So, they find free time to play games, game category. Why don't you put technology in learning category? (see Appendix H p. 536)

> …teachers see the software that is given to them as a official free time, they want to have some free time and they want to give them some free time, put them in the computers, then if the principals or supervisors comes around then, in which they are doing something, and I could do whatever I want, I could either, catch up with my lesson plans… (see Appendix H, p.566)

One participant indicated that certain staff members could be unsupportive or outright confrontational. This participant reported that in a certain instance, the technology coordinator

> She [almost] got violent. She didn't want me to touch any computers. There were two workshops during the year, [for] the staff development. I couldn't go to any workshops because they were for twenty-five teachers, and there were not funds for me and I was a Spanish teacher. So they didn't let me go into the workshops... I tried to sneak in... and she got very nervous, and defensive. 'No, you're not suppose to be here.' I had to get up. I had to go sit in the cafeteria for a whole day (see Appendix H, p. 529)

In another incident, a language teacher complained that the technology coordinator seemed evasive; he often avoided her calls, and when she finally encountered him, he was still non-responsive to her requests. She reported:

> When I just walked up the stairs to his room, and he was there the whole time, and he was by himself, and there was no reason at all not to use the computer. 'Would you like to do this map quest for me?' [I asked.] 'Or can I just sit at one of the computers?' And I sat down and did it, but I doubt that a teacher would be able to get that [access]. (see Appendix H, p. 820)

Lack of Respect. One participant noted that many World Language teachers have yet to be accepted and respected as peers by colleagues and supervisors:

> It takes them [World Language teachers] a lot to prove that what they are doing is a worthwhile thing, and that it gets results, they are teachers and they are doing a professional job... For example, this teacher was doing her mentoring program, and because there is a question about how she wrote something in English, the mentor, who was a non-speaker of Spanish, made the leap that, therefore, her Spanish must not be good, and must not be on a professional level. (see Appendix H, p. 810)

Lack of support (Administration). Sandholtz et al. (1997) suggest that "administrative support is crucial in determining whether or not teachers would implement what they had learned. Committed administrators find ways to reprioritize schools budget or other financial resources to support technological integration" (p. 180). However, one participant noted that not all teachers and administrators are supportive:

> Some of the teachers [and] principals are not comfortable in technology, they have ambivalent feelings about it, I think it' s hard to deal with an innovation that, it's not threatening, but I think that they are suspicious of

> it, 'does it really work?' you know, spending all this money? you know, some people would like to [buy] more [language] drill books and workbooks for the kids, rather than [use] computers in their class. (see Appendix H, p. 395)

Many educators believe that broad based support for a new program or initiative occurs only when individuals are held accountable. Unfortunately, to date, World Language is not tested as part of the examination process by the State of New Jersey. Some believe that because no state test exists for world languages, it is not a valuable subject or a priority in the curriculum. One participant reported:

> The State [New Jersey] is vacillating to a great degree, when the determination whether language really counts… First the State says two years, for every high school kid, then it says one year, then it gets pushed by the vocational schools in the State, then they say it is going to be tested and then they say maybe it's not going to be tested, then they say it is not going to be tested, and you know we get all these different messages…(see Appendix H, p. 395)

Consequently, some school principals will schedule world language teachers as preparatory ("prep") coverage teachers.

> The world languages [program] also became considered as an option to provide prep for teachers, so some of the support that we had built in for the program, we kind of lost, you know, like going from two periods down to one. And, also, when the world language classes were not considered preps the teachers had the support of the other teacher still remaining in the classroom, well not even to help out, just to give weight to the fact that this is an academic subject rather than just, you know, a free period. (see Appendix H, p. 797)

Currently, the State of New Jersey is beginning to implement technology standards requiring students to become proficient users of technology. School administrators will not only have to push for the use of technology in the classroom, they must also have a solid understanding of its practical uses and applications. Administrators who do not push the technology will find it difficult to understand its potential in the classroom, as well as, provide guidance and leadership. One participant speculated:

> Once the standards come into place, now that building principal, for example, will say, 'What is this Excel?

> Why is it so important in the math area?' Now the tech coordinator has to show how it can be used, your math resource teacher has to show how it can be used, because you—and I know what Excel can do, it's a tremendous tool for whatever, and once you do that, students will not only think logically but it will get the whole gamut of responses. In most schools where it is doing well is where a principal or vice principal support it, and push it, then those schools are doing well, but if there is no support at that level, kids don't feel a need to go into the lab, they don't feel a need to know all the different tools in technology. (see Appendix H, p. 780)

Administrators must be able to see the meaningfulness of technology to the all the classrooms and to teachers' instructional planning. All teachers must be able to express in writing and demonstrate in the classroom how they will be using computers as an instructional tool and what impact will it have on student learning. One participant said,

> The Vice Principal in charge of taking the lesson plans, he would have to see, you know, that the technology is there, but, you know meaningful, not, you know, like some teachers, because if you tell them that they have to use technology, overhead projector, something like that in

> their lesson plan, even though they don't use it, but it shows that, and then, they would check them off, if they used the technology. (see Appendix H, p. 564)

In addition, school administrators and staff should be cognizant and tolerant of the language idiosyncrasies of their recently hired World Language teaching staff. One participant reported:

> You see, you have to remember that a lot of my teachers, this is maybe their third year in the buildings, it takes a while for them to feel comfortable and who to talk to and how to approach them and how when is it appropriate to talk to these people, and when is it not, and what am I allowed to ask of them in the world languages program, so they've had, had to make themselves known, you know, get connected into the, you know, the school system, and, get some respect and recognition... .(see Appendix H, p. 804)

Despite these aforementioned challenges, participants noted that they still find ways of integrating computers in their instruction. However, they believe that older colleagues chose not to use computers as an instructional tool for numerous reasons. They pointed out that younger teachers are

more likely to use computers as an instructional tool, whereas, older teachers are less likely to connect the use of computers to learning. Younger teachers have been exposed to computers in their undergraduate studies, while older teachers have not. Younger teachers are willing to take risks in the classroom, trying different instructional approaches, whereas older teachers are more likely to stick to a traditional teaching approach.

Age Factor. Tapscott (1998) points out that adults view technology as a detractor instead of a contributor to the quality of life. The introduction of computers, cellular phones, e-mail, local and wide area networks and the Internet make life more hectic than before. Tapscott further suggests that adults' uneasiness about the introduction of new technologies is expected. The introduction of a new medium usually results in some type of public discomfort (Tapscott, 1998).

As previously mentioned, participants perceive older teachers as less likely to embrace the use computers in the classroom. Older teachers do not want to learn new things because they are afraid to do so or they are close to retirement; according to one participant, they "can't be ignited" (see Appendix H, p. 686). Participants reported:

People in their mid-forties... didn't know much about computers. They didn't want to learn. If a teacher has been in the system for ten, fifteen years, he's on the way to retirement and never used computers. [He's] had the same lesson plans for years, same books the teacher has a tendency to react against technology. Uh, now it's a new thing. It's a new trend, and the fear factor is there. You will be feeling inadequate. You don't know enough about computers. You just don't want to use it (see Appendix H, p. 513).

Usually it's the older group [resisting] that has done [other] things for decades at this point. Now, whenever you introduce anything... they're the ones that will be a little bit more resistant, because for them if it ain't broken don't fix it they're going to go with what they already know. (see Appendix H, p. 633)

Some people are really hard to teach. I know someone, Oh, no, no I don't want to do this, and so forth, because they were taught that way, and so forth. (see Appendix H, p. 910)

I find that there are a few teachers, the veteran teachers, teachers who have been teaching for over thirty years, they're so using to doing things a certain way. It's just that they've been doing it for that way for twenty to thirty years. They have a problem with change. You have a lot of veteran teachers that have been teaching for thirty years and they're like, 'I don't want to do it that way.'... They're not a little concerned. They don't feel that they know what they're actually doing. I think that they're so used to doing certain things a certain way for so many years that they just don't want to change their strategy as far as grading papers or anything. Very afraid. Like when we had the workshop on the template for the grading a lot of the teachers were like, 'I don't feel like doing this. I like averaging everything out. Am I doing this right?' They're just used to doing certain things a certain way. Teachers over twenty, thirty years. That's how they do it. (see Appendix H, p. 442)

[There are] other people, you know, I hate to say it because I'm not that young anymore, that they just don't, they are not using technology, they feel that they are

their end of their time and their not getting into it' (Appendix H, p. 761).

Most of all the teachers that are in the system, if a teacher has been in the system for a long time, let's say more then fifteen years, they don't come from a culture in which computers play a big role in education ...The veteran teachers don't even try to use it in anyway, because they are either like the lecturers or the dictators, they don't want anybody to move, they want to keep the classroom configuration the way it is, you are sitting down, pay attention and look at me, copying silently. (see Appendix H, p. 567)

There were some [teachers] that were happy with the way things were, they had a year to go and were retiring, but, at that point they had to come through me[Technology Coordinator], and we worked together and that's when they started to learn [how to use a computer], 'oh, this isn't so much of a burden, it's kind of, no, it can make learning more fun,' It took a while, but, they started to see it, and I think that once the senior staff started buying into it the word got around quickly, that we can do this, and then it changed, ah, it really changed, you

started people, seeing people use the computer lab more. (see Appendix H, p. 357)

On the other hand, teachers believe that their younger colleagues, who are just beginning their careers, are more likely to use computers in the classroom because they are much more open-minded and have a lot more energy. Some participants stated that younger teachers are more likely to take on new initiatives because they are familiar with the latest technologies.

> New teachers have energy. They're open-minded. When you're new, you're open-minded about anything. About learning. About doing this and doing that. When you have a system set, that's it. (see Appendix H, p. 514)

> Whereas the younger teachers are going to be more open, and this case more familiar with technology. So it's sad, though, because each classroom had like two, or three computers at least. Some of them would just sit there. (see Appendix H, p. 634)

> I think it's just a change, but a lot of the younger teachers are willing. (see Appendix H, p. 442)

> They have a requirement in college that they have to have so many technology credits. So, they understand, nowadays it is critical, and you are well aware of this, whenever you are doing anything in college now, you have to use technology.... I mean, you are doing all kinds of types of research of that using the computer, web based or whatever... .(see Appendix H, p. 760)

> It's changing, it's changing slowly but then it's the newer teachers coming in too, so the newer teachers don't have that same attitude, they see the impact right away, so, ah, and it all depends on who you talk to, which teachers you talk to....(see Appendix H, p. 471)

Comfort Level. Intertwined with the perception of age is the idea of complacent or fearful attitude. Teachers are reluctant to change if it is uncomfortable or unfamiliar to them. Many participants described teachers that resist change as teaching the way they have always taught, relying on lecturing and being fearful that their students, colleagues or supervisor will see that they do not know how to use computers. Respondents said:

> The teacher has to challenge himself to come up with new things. If you don't do that you get bored and you get

lazy… They don't know how to use them [computers]. They're getting all narrow minded. They have the traditional way of teaching. If you don't push them, if you don't show them, if you don't make them feel comfortable about technology; they don't want to use it…. Then when we grow up and we are teachers, or we are doctors and stuff like that, then we don't want to show our ignorance, and then therefore we don't want to ask that. We don't want to ask stupid questions. We don't want anybody to know that we don't know how to use the mouse. Therefore what is the best way to hide that is to reject it. Say you don't like that, you don't like technology, you don't believe in it. And that's the attitude of many teachers… .(see Appendix H, p. 520)

It requires them to get [teachers] out of their comfort zone… I tell them you don't have to really know computer that well to do that. Some teachers might say, 'Okay, I don't want to ask teachers.' If I don't know how to do something, I say, 'I don't know how to do that. (see Appendix H, p. 914)

Some of them [teachers] don't know how to turn a computer on…. They encircle themselves in just using old

methodology, and using what they know, and they're afraid to use something new. Some of them like others feel that the computers are going to interrupt their learning experience. How do I know this? Because I know the people that, you know, 'well how come this is not on? I have no time to turn it on.' Well, what are you doing? What are you doing? What are you teaching? The ones that cannot follow you in teaching, they could be there enhancing themselves. (see Appendix H, p. 681)

Well, these two teachers, in particular, would tremble when they came near a computer, they are just like with me, how did I feel when I didn't know, and I said it didn't really bother me, and the kids it doesn't bother, but these adults they're afraid that their peers are going to see that they don't know something and they get nervous. (see Appendix H, p. 748)

Teachers, they are fearful of the technology. I was thinking as the years go on, you would have less and less of that; I was thinking that there is already less of that, but people are telling me no, that still largely exists, that there are a large amount of teachers that feel threatened by technology….Their perception is 'I've

been doing it this way all the time… I'm not going to take a chance do it any differently, I'm just going to stay the course, that's the way I know it, that's the way I was taught… (see Appendix H, p. 472)

Persuasion (Adoption) Phase

Sandholtz et al. (1997) suggest that at the persuasion stage teachers begin to integrate technology into their lessons. According to the Wellivers Instructional Transformational Model, (Shelly et al., 2002) is it at this stage that teachers may decide to discontinue using technology in their classroom. If teachers decide to use computers, then they incorporate computer-based activities along with traditional teaching methods. Teachers evaluate software programs, adopting appropriate programs that address curriculum, according to their research (Sandholtz et al., 1997 p. 38).

When it comes to engaging students in the learning process, most participants stated that language computer programs have many advantages, including animation, basic components of language transmission among them pronunciation, sentence structure, and vocabulary, numerous types of assessments, improve students' comprehension skills, modify their disruptive behavior, and boost self esteem.

Animation. Students become captivated with the visual and sound capabilities of computers. Participants report:

> When you have technology - you know the colors, the graphics, the animation, the speakers - they're never tired. (see Appendix H, p. 511)

> When they [students] go to the computer lab they do have the opportunity to find pictures, and match the picture with the color. They found it was very interesting (see Appendix H, p. 280)

> Through the years we were just learning strictly photos, pictures I.D. There were no experiences. Now they can read books through the computer. They have accessibility to teach them word-by-word. They can hear the words so it's easier,. visual. It's visual. It's mechanical. It's hands-on more than just sitting. (see Appendix H, p. 666)

Pronunciation. As previously discussed, behaviorists believe learning takes place through repeated behavior or reinforcement Numerous language software programs do provide for repetitive learning drills and reinforcement of the target language. For example, connections can be made between

pronunciation of the word and its meaning. One participant noted:

> What I've seen in reinforcement skills, at this point, because...I mean the programs that we have for world languages are a lot of association, they hear a lot of things, so it is reinforcing, but, they hear the vocabulary, so you know, it's not just ah, it's not grammar, of what I see, but, it is some of the basic skills that their working on in the classroom, topics or vocabulary, you know, items using them in different games and getting them accustomed to the pronunciation, editing, recognizing, you know, applying. (see Appendix H, p. 826)

Students can also practice pronouncing vocabulary words as many times and as often as they would like when they use computers. As one teacher observed, "They [students] can repeat the same phrase a hundred times and they will always say it perfectly. The right intonation, the right pronunciation" (see Appendix H, p. 511).

Sentence structure. Language students struggle to make sense of sentence structure in a second language, and computers can help them to succeed in that. One participant noted, "You can give them [students] a scrambled sentence, and

they can unscramble [it]… They can put it together, but if you give them that same sentence, right here on a piece of paper, they will not do it, but on the screen they will do it" (see Appendix H, p. 901).

Vocabulary. Students can build their vocabulary in the target language when they use computers. Students learn new vocabulary by making connections between words and their meaning, being exposed to visual representations, and listening to their own pronunciation of the target language. Participants report:

> Well, when it comes to basic vocabulary they really try. 'Hola,' "Buenos dias,' 'Como estas?' They're really responding. You know, you may be surprised how kids could adjust to different languages at the same time, and they don't complain about it… Kids don't want to be limited… Match the time with the clock. Match the situation with a greeting, 'Buenos dias,' or "Buenas noche,' or 'Buenas tardes'. They do get an opportunity to say to me, 'Okay Mrs. _____, since I already know the numbers can I please go to a different game?' por ejemplo, las partes del cuerpo, o podemos decir los dias de la semana. So automatically that you know that your kids are learning the language. Maybe they're not really ready to start communicating, but they start recognizing the words, and

the pictures, and then by recognizing the words, and the pictures they start verbalizing the language. They have to have that connection with the words, and a picture, and a situation. Whether you're going to mimic the situation, or you're going to play the situation. They're very comfortable…. (see Appendix H, p. 283)

I just bought a new program … it's called, "Phonic Companion," and I saw that [it] probably was something I was looking for. In the Phonic Companion I was looking for them to see the pictures, and be able to see the words, and be able to form the words and the sounds and all that. To hear sounds, because I believe in learning through words. I believe in that. I think that themes are fantastic. (see Appendix H, p. 679)

For example, you would have to color in a picture using the mouse but each color, it would be said in Spanish so if they picked a color say in Spanish, if you picked a piece of clothing, it would tell you would have to dress up a little bear, it was, they showed you a picture of winter so you would have to find out the coat, you know, you would have to chose, you have to, you know, say it in Spanish and then you would move on whether or not that

was the right thing, so it was a lot of vocabulary building, … .(see Appendix H, p. 323)

Feedback. Warschauer (1996) suggests that computer language programs have the capability to evaluate students' grammar and appropriateness; language programs should be able to evaluate pronunciation and usage by providing some type of remediation, such as explanation, repetition, correction, or paraphrasing. However, some participants disagree. Although they do believe that certain language computer programs do offer record and response capabilities, meaningful, constructive feedback can only be done by the teacher, according to participants in this study. They said:

> With technology you can record. You can apply. Now to explain, or to tell somebody about what you have learned has to be done, so far, has to be done with a teacher through an extended activity (see Appendix H, p. 526)

> So, certain things that we do on the computer is like really neat. How you can do a code, and so forth. The only thing is as languages, there's nothing like reading, you know to speak [to] a human being. I don't think computers can't replace a human being… for really true

> communication you need to have people contact…. (see Appendix H, p. 897)

> What they're not getting is enough of responding back. That's what I'd like to look for. Something that gets them to respond, and to put messages back in where they have to type. They're not typing. It's all point, and click, but what I have is motivated enough for them to stay focused on me so they get a chance to get on (see Appendix H, p. 636)

Comprehension. Students are able to log on to the Internet and play games that test their comprehension of the target language, according to one participant, who recommended <Quia.com> as resource. "The activities are from hangman, to car racing -- all the games," she said, "in which it's not just games. You begin like the game. At some point of the game, you answer questions about the language or about whatever you're teaching" (see Appendix H, p. 852).

Discipline. Discipline problems and loss of instructional time rarely occur when students are working on the computers, according to teachers in this study. They said:

> They [students] would go to the computer. I would give them handouts, or read them a short novel, or short text.

Anything to go with what they were doing with the software. It worked beautifully. No discipline problems. No nothing. Everybody loves it. (see Appendix H, p. 499).

There's a discipline factor here. They will get on if they're behaving. If they're not behaving then they're going to have to wait longer. They may miss this week, and have to wait until next week. So, that helps to. It helps the discipline. (see Appendix H, p. 613).

I would say that, because the minute the students' would walk into your classroom they will go straight to the computers. They don't have to look for excuses. "Oh Mrs. ____, can I please go to my locker, I just forgot my pencil." "I just forgot my notebook." "I just forgot my dictionary." So this way all they have to do is walk in, log in and start off immediately. You don't really have to waste any time. (see Appendix H, p. 295)

...how useful it [technology] would be to those kids that are difficult to deal with, because you have children that you're having problems with, and they are disturbing [classroom instruction] (see Appendix H, p. 689)

Self-esteem. Cognitive theorists believe that addressing students' affective domain is vital if learning is to take place. The affective domain includes a student's emotions, interests, attitude, attention and awareness. According to most participants, language students do become motivated when working with computers. Students find computers a fascinating tool, which can stimulate their curiosity and love for learning. Participants reported:

> They look forward to it; I mean, the students are fascinated by computers. Students are fascinated by the different websites. Students are fascinated by all the information that there is out there (see Appendix H, p. 310)

> Students are motivated. They come to your class. They're happy. It is fun. They want to go and do more. They learn more (see Appendix H, p. 510)

> It feels good. They're very motivated. Those children were very interested in coming to class because they knew they're going to get on a computer (see Appendix H, p. 609)

It's very simple, they love the computer; they just love the computer. I mean you could have a student who is probably really tough, who probably doesn't want to do anything, who is probably very problematic. But if you - tell Bobby, 'Bobby get on the computer and find this information for me?' 'Sure, sure.' Because they really want to do it. They like it and when you do something that you enjoy doing I mean I think that's the number one reason. They're very curious about the computers. They're very curious. They're very into the computers, and you know that helps a lot. (see Appendix H, p. 419)

As soon as I put them on the computer they're engaged. They are alive. I'll give you an example of one of my special-ed. kids, I go and pick him up, and the days that I pick him up and he goes into a group, because we have to do the guided teaching that I have to do for my program, he's not with me. I have to call him many times, and I have to bring him back into the room. It's enriching with colors, sound, language, visual discrimination is there. It's tangible. It's visual. It's not only tangible through the computer, you feel it. It's like when you're playing a piano, you're in control. You can control your learning through this. You don't have

anybody to control your learning anymore. You control it yourself by using the keyboard. They're in the school everyday. The attendance rates have gone up. My students are not absent. They have very good attendance because they're engaging in every single minute of the day. I see some of my kids three times a day. The technology that they do in my class is like more like a learning tool is a rewarding thing. (see Appendix H, p. 671)

It's really, really good [computer use] because, you know, when you tell them, okay, we are using the computer lab, they are excited, because they like that… I introduce, or I explain before what I want them to do… in the computer lab, you know what I mean, and they go very excited, and all of a sudden they have more ability when they are working in the computer than when they were helping other students. (see Appendix H, p. 589)

Even though that they don't know Spanish, even though they are students who don't know Spanish, they love computers… That they know. They ask me, can you explain this to me again, I want to do this or I want to … If I have a dictionary, I can give it to them or any tool for

them to… Because all of them like to play in the computer (see Appendix H, p. 711)

They loved that infusion, because the kids love it, the kids are always the driving force I find; they are more than ready and willing to jump into it, and so if a teacher will relinquish some of the role of being in charge, that sort of opens the gateway. (see Appendix H, p. 453)

Students are not afraid to learn using computers because response or feedback is non-judgmental and "safe", according to participants, who noted that the computer does not yell, get angry or become sarcastic. Unfortunately, however, some teachers do. Participants reported:

They [students] are not afraid of asking questions. They're not afraid of asking the teacher to repeat. They're not afraid of getting reprimanded of asking too much…. they can repeat the same phrase a hundred times and they will always say it perfectly. The right intonation, the right pronunciation. You know, sometimes, "Teacher, how do you pronounce this?" and the teacher tells you. If you ask them three or four times he's going to get angry, because you're not getting it. He had a problem with his wife last night and he's tired, "Don't

> you get it?" You know, and the computers right there and you can click on that icon one hundred times, and listening as much as you want. You know it's a perfect tool. It's the same as using the tapes. You know you can speak the language perfectly. You can be native, but the tape is done by professionals. You play the tape, and the tape is always a perfect model. (see Appendix H, p. 511)

With computer instruction, students are provided with a learning environment that is neither stressful nor critical. For example, one participant mentioned that students "take corrections better from the computer than they do from us" (Appendix H, p. 902).

Human beings do not like to accept criticism, especially when it may involve an emotional outburst. "We take criticism harder from our peers and from teachers than we would take it from a machine," one teacher observed. "I guess the machine doesn't talk back to them and say 'Okay, can you do this again?' Maybe I'm having a bad day…. The machine will not do that. The machine would just say, 'Do it again'" (see Appendix H, p. 902).

Students are exposed to a learning environment that is safe and non-threatening when they use instructional

technology or the computer; this is especially true for introverted ones. Participants reported:

> They [students] feel like they're friendlier towards the computer, less shy. For example, if they're talking to me, and they say something it's always in the back of their minds, "Am I saying it right?" Where they're saying [something] to the computer they let themselves go. They're less apprehensive (see Appendix H, p. 895).

On the other hand, computers have numerous disadvantages: software limitations, technical problems, facilitate plagiarism and can provide countless non-educational distractions (Hird, 2000).

Software limitations. According to one participant, in the elementary school, the selection of language software programs for upper-grade students is limited.

> Most language programs available are for lower-grade students. What is animated in the upper grades? Sound Blast, Math Blasters, or Word Blasters? But, they [students] get tired of playing that. It's not a game. It's learning. 'I have to learn with this?' They [students] refuse to do 'Academy for Reading' in the upper grades. You have it in the classroom, they don't want to do [Academy of Reading]. We don't have the software in how to teach these kids to write a narrative.

> We have the software to teach these children the first steps to reading. The programs that are available is to teach the lower grades. Middle grades there's nothing (Appendix H, p. 693).

Cheating. Participants indicated that software programs such as Microsoft Word, make it easier for students to cheat or plagiarize with features such as copy and paste.

> It's so easy to cheat when you're working the computer because you have copy-paste. (see Appendix H, p. 856)

> What is this word? Do you know what it means? 'Uh!' This is not your work. Do you know what serendipity means? 'Uh!' You didn't do this. Take it back. 'I did it Ms. L..' No you didn't. They don't give me a hard time. They'll take it back. They'll re-do it… But some students' won't do that. They'll print it out. They'll read it, and then they'll write their own, but you always have a few that will try to get over. What are these words. They have no idea what they are. They just printing it out. (see Appendix H, p. 427)

Distractions. Students are easily distracted with the "bells and whistles" of many software programs or from information overload on the Internet. Participants reported:

The Internet is a hot spot, because you have to really go around and keep them on track. There are too many things on the Internet. You really have to work hard to keep a kid doing something constructive on the Internet. If you have 25, 30 kids in a classroom, 25 computers, you have to keep moving. Otherwise they began to chat. (see Appendix H, p. 507)

The point of using the technology for me in the classroom [is] I had to make sure that they keep it just centered to the French. If they have finished everything, I will only let them get into stuff that has a little bit of French. Otherwise it gets all over the place. (see Appendix H, p. 890)

You always need to be on top of them though. As soon as you turn around, they're checking their mailboxes. (see Appendix H, p. 853)

They have to be supervised. That would be a disadvantage to the kids. Not necessarily because they would go to a pornographic web site, but maybe they want to learn about Aliya, or one of their idols that they want to check some

information, but this is not the time to look for that type of information. (see Appendix H, p. 302)

Students may surf endlessly through the Internet, wasting time perusing sites that have little or no educational value. On occasion, students become spoiled expecting information instantaneously.

They put the kids on the computer, and they come around faking that you're doing something. (see Appendix H, p. 533)

It is distracting sometimes, for instance, even with the headphones. For instance, it has songs in there. Some of the kids like to sing. So you're in the middle of the class, and all of a sudden, they can't hear how loud they are. 'Buenos Dias.' They don't even know what they're doing. In any case, one of the reasons why the teacher would probably say is that they don't have headphones. They won't put headphones on. So of course it's going to distract. If you have three computers, and they're all blasting away at the same time, and you're trying to teach, and the kids are talking. (see Appendix H, p. 643)

> I think it keeps on spoiling them at the same time. It's helping them, but at the same time it's spoiling them, because they want everything instant, and not everything is instant. You have to wait. (see Appendix H, p. 904)

Complacency (teacher). Besides disadvantages to students, computers in the classroom may also pose disadvantages to teachers. One participant noted that teachers who do not use computers appropriately may become complacent.

> The down side of it is a teacher that is not creative, or a teacher that becomes lazy; the computer has a tendency to make teachers lazy. If you have a computer, you have the software and the kids like it and you know you do this, you do that. Everybody comes around. and they see they're having so much fun and all this. It comes to the point that you don't plan anything, or you don't create new things, or you don't try to challenge them anymore, and you go into a state of complacency in which you're happy with what you're doing, but they could do more. In other words, you can get a software and you can implement, and then lay back, and do nothing for years. That's the downside of it. (see Appendix H, p. 502)

Restrictions. There is an inordinate amount of inappropriate material on the Internet, therefore, restrictions (including fire walls) have been installed on the district's computer network. In the high schools, students must sign a contract agreeing not to surf inappropriate sites. One participant reported, "we let them go to anything that is for them, where they have to sign a contract with us to go on the Internet, and they only can go to research. It's a restricted site. We cannot allow them to go and just surf all the Internet" (see Appendix H, p. 665).

Technical problems. Some participants expressed feelings of frustration with computers, citing the fast rate of obsolescence, incorrect or unreadable passwords, unexpected shut-downs and technical hardware problems such as non-functioning printers. Teachers in this study said:

> I think it's a frustration thing... You have high hopes for something, and then you realize you keep hitting these obstacles...It's an expensive piece of equipment. It keeps getting improved, becomes obsolete within a short amount of time. By the time you figured it out, it's obsolete, and somebody else will tell you when now there's something better. That's one problem. You got to stay on top of it. It's not just a simple one two three and you

get it. You've got to keep involved. (see Appendix H, p. 633)

You put your password, and it doesn't work. You're in the middle of creating your own activity, and then the computer shuts down for whatever reasons. I would say that would be a disadvantage. (see Appendix H, p. 903)

Whether it is the printer is not working or they don't know how to approach the computer technology person, they [teachers] may not feel that they can get access to somebody who will help them or give them access to computers. (see Appendix H, p. 837)

Looking on the bright side, not all teachers feel frustrated. A participant in this study pointed out that the technology coordinator at her school fixes all the computer hardware problems. "We have a computer teacher, he fixes [computers] He's a good tech... Let's say you have three computers and one of them is not turning on he'll come in if he has time for us... like on his prep or something. He'll come in and look at it" (see Appendix H, p. 443).

Decision (Adaptation) Phase

Sandholtz et al. (1997) suggest that in the third stage of the diffusion process technology becomes thoroughly integrated into traditional teaching practices. At this stage, technology becomes essential because teachers are constantly thinking of ways to integrate technology into their instructional practices. Although lecturing, recitation and seat work are still prevalent in the classroom, students begin to use computer software programs (databases, word processing, and graphic programs) more in their learning. As one participant explains:

> We also used program like Microsoft word, for them to write very short, like poems in Spanish, little rhyme we would do two or three lines, you know, basic. We also did [in] the beginning stages of the world language [program], that was basically it… .(see Appendix H, p. 323)

At this stage, support from administrators, colleagues and parents is crucial, as teachers need encouragement to begin to take risks in adapting new pedagogical practices. Staff development encourages teachers to "explore, reflect, collaborate with peers, work on authentic tasks, and engage in hands on, active learning" (Sandholtz et al., 1997 p.142) As

a result, teachers build confidence and trust in their own learning by not being afraid to ask questions when confronted with a problem. Teachers establish so called "people networks" to provide each other with technical and moral support.

Support. Ongoing support from administrators, staff and parents is vital in helping language teachers integrate computers in the classroom. All classroom teachers must be allowed opportunity and time to integrate computers in their instruction. Data from the U.S. Dept. of Education (2000), indicates that teachers who have never attended a workshop on how to use computers feel unprepared to use computers in the classroom (see Figure 19).

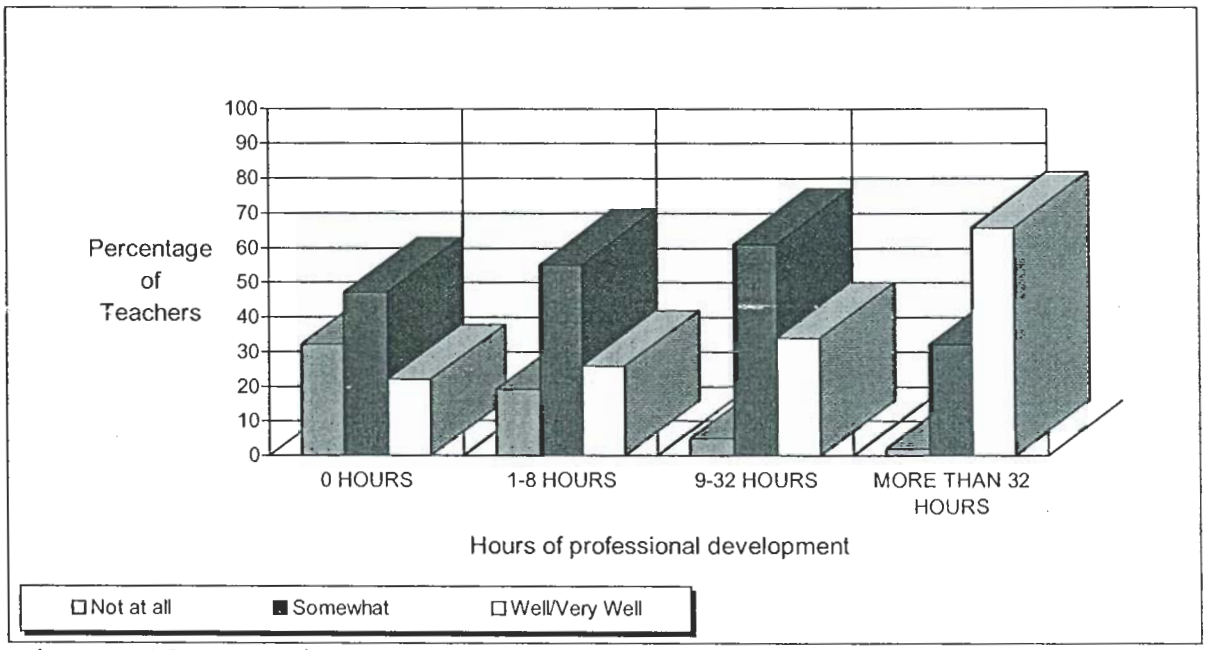

Figure 19. Public school teachers reporting feeling prepared to various extents to the use of computers and the Internet for instruction, by hours spent in professional development: 1999.

Staff. As teachers begin to use computers more and more in the classroom, the role of the technology coordinator becomes essential in providing training. Trust between the technology coordinator and teacher becomes key - teachers need to know that they will be allowed to make mistakes without being ridiculed or reprimanded. For example, a participant explains that in the beginning of the year, most technology coordinators were cautious, low on trust, resistant to change and not very keen on new ideas. However, within time they began to trust each other and share their learning experiences. By the end of the year, they were supportive of one another. One participant stated:

> When they [Technology Coordinators] first started they had their arms folded, their body language said, ah, I don't know what you are going to ask me to do, but I don't have any time to do it, you know, I'm already overworked… So I did a lot of ground work, that I thought that they needed to grow, because I knew where I wanted them to go, so, I had to look at them and say to myself. 'What am I going to have to do to get them there?' And so, we began as individuals, and we ended up as a group, as a supportive group, and I saw the change…. (see Appendix H, p. 489)

According to this participant, the effective technology coordinator knows how to work with people, helping them grow as professionals while building personal relationships of trust and support. Trust means that the learner must be allowed to take risks, knowing that making mistakes is part of the learning process and having someone on their side helping and supporting them every step of the way. One coordinator reported:

> There are certain things that you have to do, in terms of working with people, the people skills and in terms of making people think that it is okay to take a risk, it's okay to make mistakes... and because I've been at this so long, I've seen, like I fell in a lot of holes, and I learn through falling in those holes... You have to be a certain type of person to be able to help people grow... they just have to trust you, that you are... going to let them fall off, you want to help them shine, you want to help them through it, you want to understand how they feel about the technology. If somebody is going to work with something that to them feels new and that they don't quite understand, if they know that if they have a person by their side, they need to know that they can depend on that person to help them grow with it - it's almost like the first learning to walk... and they need to know that

they are not going to hurt themselves, they are not going to getting into such a situation where it is going to be a total disaster…(Appendix H, p. 491).

In building trust between teacher and learner also means that knowledge and understanding of technology by the learner is not assumed or ridiculed. A participant said:

I would watch the staff kind a react… why are you making us sound like we are stupid in the questions that were asked… so, I thought like, that's not an approach that I want to take, when doing this [staff development], and I did learn from a couple of mistakes, that, you know, maybe I would of said something like, oh so easy, you know, just click like, click away, and I watched some peoples' faces, it's not that easy for them, cause they don't know how to hold the mouse to click, to begin with, so, clicking twenty times in a row is not easy for them, ah, so actually what I started doing, one of the techniques, I started putting the mouse in my left hand, when I was doing classes with them, and I am a right handed person so, to me it was actually hard, and I was all over the page like them, and I would show them, look, so how I'm all over the page, it's okay to be all over the page, we just got to get to that link, so we can

click, we've got to get over here, you know,...[what I] had to do... getting on their level almost. (see Appendix H, p. 356)

Colleagues. A network of support for language teachers is also being realized through personal friendships and through Internet communication. Some language teachers have formed personal friendships to provide support and assistance for one another. Participants stated:

Well, actually a lot of us are very good friends like a personal level. We will get together, because there's not too many of us... So, we do rely on other World Language teachers from other schools, and we do call each other up and get together... .(see Appendix H, p. 408)

My role is truly support, and that's the way I envision it, so, anything anybody needs in relationship to technology, they can call me. If I don't have the answer, then I will find the answer for them, because I have a lot of networks in place, that help me find anything...people resources that are local and remote, because you have the power of the Internet... so it's truly an informational age, and anything you ever want to know, anything, you can find that out... The Internet is a

resource, they have so many listservs that are people like you. (see Appendix H, p. 457)

Parents. Knowing that the educational use of computers in the home is important to a child's academic achievement, one world language teacher has taken the initiative to help parents access or purchase educational software. This participant said:

> Right now I have downstairs a computer that a parent… brought to me on Monday, and she says, 'Will you please put some software here for my child?'…The parents have realized that this is a tool for these kids. It's a learning tool, and I have the software. (see Appendix H, p. 674).

Implementation (Appropriation) Phase

Sandholtz et al. (1997) suggest that at the implementation stage, teachers change their personal attitude towards technology. They reconsider the educational goals of their classroom with the use of technology. Teachers begin to use technology effortlessly as a tool to complete lesson plans, notes, correspondence, report card information, history information, current events reports are all on the computer.

Record Keeping. Data from this study suggests that a few language teachers are taught how to utilize computer programs such as Excel to facilitate record keeping of student grades and other pertinent information. In a few instances, teachers are creating their own personal websites and posting lesson plans, homework assignments, and other student data. In the near future, most teachers will be able to place student and curricula information on a secure website that students and parents may be able to access. Participants reported:

> I was doing everything on computers, even then - grades, assignments, a Web site. A personalized Web site for parents to check their kid's grades and everything [else]. I'm fully capable of planning personalized progress reports for every student with a grade, with a mean, with a final average and everything… I have all the grades, and everything, attendance and everything is computerized. I have a small laptop that I carry everywhere. (see Appendix H, p. 843)

> We have our computer teacher, Mr._____, he can show us how to do grades if we wanted to do our grades on Microsoft Excel… He has a template all laid out for us. We can enter the student name, and enter the scores. It averages everything up for us… I mean, it's easier that

way, but I really don't have a problem with just sitting there and averaging them out on my own. (see Appendix H, p. 441)

The other thing that we do with technology, is that, is that data base, you know, SASSI, you know, inputting the students and keeping records, you know, country, language spoken at home, stuff like that but we don't really use many technology… .(see Appendix H, p. 541)

Your grades are going to go for computers. You're not going to have to pass report cards or grades to your principal anymore. My principal believes in this. My principal thinks and wants every single person in that building to use the computer, to teach and to do the paperwork. (see Appendix H, p. 688)

At this stage teachers are permitted to create flexible schedules so that they can do peer to peer observations and team teaching. Alternative pedagogical strategies are reviewed and implemented. Staff development includes the use of software such as spreadsheets, graphics, hypermedia and communications. Teachers are introduced to emerging

technologies such as video discs, scanners, digital cameras, and so forth.

Language Programs. Analysis of the data reveal that language teachers use software programs and the Internet to improve student acquisition of the target language. Software utilized includes specific language programs as well as Microsoft Word, Excel and Power-Point. Language software programs and the Internet assist students with basic sentence structure of the target language. Software programs include vocabulary and basic greeting exercises. One participant said:

> They [students] are getting all the basics as far as certain vocabulary, and certain basic dialogue phrases, like greetings. 'How's the weather?' 'What time is it?' those little basic dialogue things. They're getting that... The 'One Thousand One' [language software program] extends the vocabulary. (see Appendix H, p. 636)

A participant reported that she created her own dialogue program for students to practice.

> I have created some dialogues that the students' will complete [via a software program]. Por ejemplo, 'Buenos dias!' Maria will respond, 'Buenos dias!' I have created some dialogues, and some words for my students. (see Appendix H, p. 291)

Currently, the district is considering purchasing a comprehensive language program that will be able to target instruction according to the learner's language ability and is interactive with visual and auditory stimuli. Additionally, these language programs will be used as a management tool for teachers to evaluate students' language proficiency.

> We [in the District] are examining software, we are looking at a piece of software, called ELLIS, which is a pretty comprehensive ESL program, that can be used on different platforms, put on a laptop, or a stand alone PC in a teachers room, put on a server, so that a number of bilingual and ESL teachers can use it, that is a comprehensive program that is intro level to intermediate, with all the bells and whistles; it's interactive...it has a lot of visuals, very sophisticated management programs that teachers can keep track of how the kids do as they proceed to learn English, and it also has the added advantage... The software will actually give him [student] introductory level assessments, and ...[place the student] at his level of instruction, ...The kid will be kind of probed [with] a handful of batteries, and then some problems and some more questions, until it assigns a level and begins instruction at that level... So, that's an

advantage that we haven't had before. (see Appendix H, p. 371)

Internet. Respondents noted that the Internet is still not commonly available. Yet according to the 1999 FRSS survey, the number of students with access to the Internet has been steadily rising in the past few years (see Figure 20).

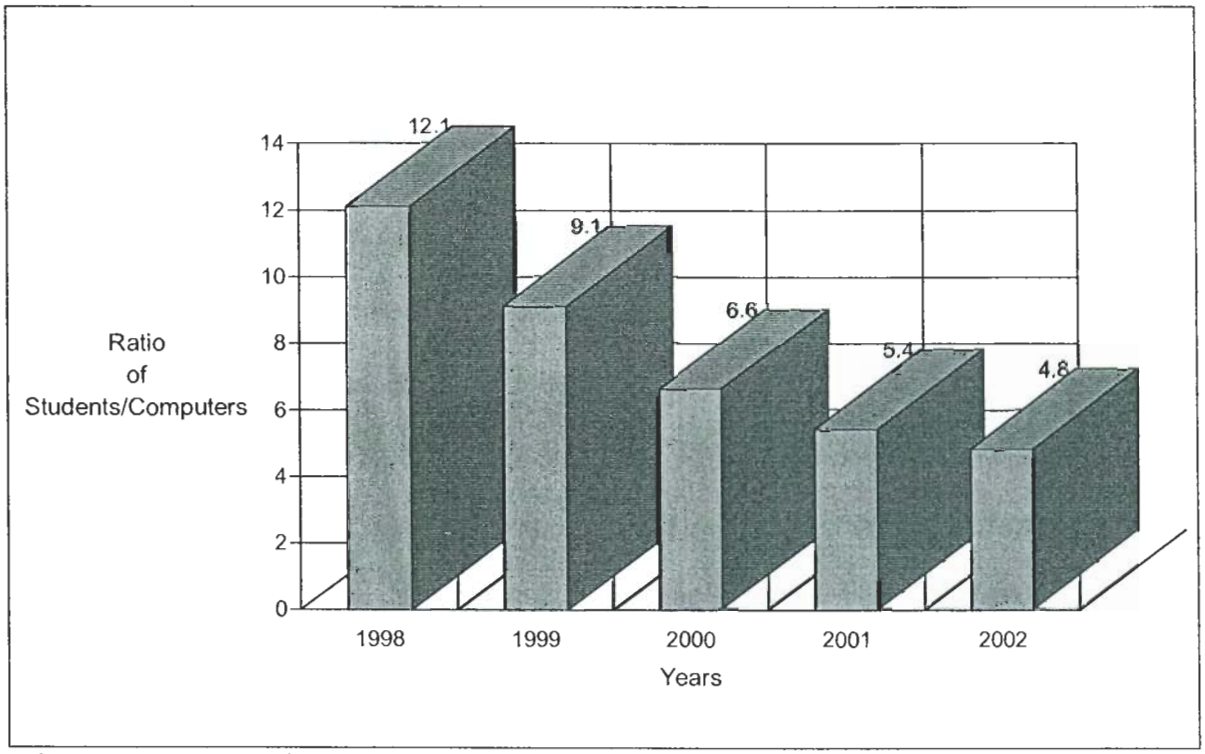

Figure 20. Ratio of public school students to instructional computers with Internet access: 1998-2002

Language teachers, who are fortunate to have access to the Internet, use it to communicate in the target language and expose students to different cultures. Students communicate with other students through chat rooms, e-mail and e-pals. Participant reported:

Chat Rooms. Chat rooms offer students exposure in the target language, according to participants one said: "While you're in a chat room you can change. Interact [with] everything, pictures, files, experiences, everything. It's like being there. It's like being in Spain, Mexico, whatever" (see Appendix H, p. 874).

E-mail. We're just getting started with it [e-mail]. They [students] will have, once they get into it, they would assign a school overseas that we would be able to work with, and you can do special program with, and so forth. (see Appendix H, p. 883)

E-pals. Teachers can use software programs such as Kidspiration, Inspiration, Print Shop and E-pals to help students write or translate in the target language. With the E-pals program, students can communicate with other students across the globe using their own primary language without waiting to be fluent in the target language of the other country. Participants explained the benefits of these programs:

> What we did in the District is E-pals program, which we can actually can communicate with other schools and other classes, so you can write to a class of kids in Bolivia, now the software is getting to the point, with the kids can write in English, they are learning Spanish and they

don't feel comfortable writing in Spanish, they can write an English and the software will translate, more or less, the letter and the kids in Bolivia will read it in Spanish, and they send letters back to the classroom here, to the United States and it translates it in English, so that e-pals kind of opens up another line of communication and understanding. (see Appendix H, p. 390)

The program that you can use in assisting those [language] teachers are really the same ones that you can help with the classroom teacher, and the reason why I'm going to say it, because those children that are in those programs [ESL & World Language], they can work with them but maybe on a different level, you may have to assist them with the language, but they can do that, ah, for example, you want to use print shop, you want to use inspiration, kidspiration, they can, all the child learn how to write, in English or in another language, and you could actually use things like that's not a program but E-pals, it can translate back and forth, so let's say that you want to write my favorite sweater is red in English, but you want to show the child how it looks like in Spanish, you can go to E-pals and do a translation right there, and it will how you right on the bottom,

this is how it is said in Spanish and they can learn it, just have to remember that it is a translation tool so it is not one hundred percent accurate. (see Appendix H, p. 342)

We are... incorporating technology through E-pals, and we are going to be doing a District wide project world language, where we will be communicating with different countries, that are Spanish speaking, actually I believe. we are even going to take it further, not just going to do Spanish.. we are going to do other languages, such as Portuguese and French... It's a global project, it's going to be based on E-pals, and we'll take it to the District level by having different schools that have world language programs here that speak like Spanish, French and so forth, getting involved by communicating to each other... .(see Appendix H, p. 324)

The District intends for teachers to use the Internet as an educational instructional tool. In the very near future, all teachers will be able to access curriculum guides, student data and much more. Language teachers, in particular, will be able to access newspapers and magazines from other countries

of interest. Additionally, they will have access to technical information that can help them build their language programs.

> In all our curriculum guides there would be sections with links, for example, in our Portuguese guide, we are doing the entire page of links, to newspapers, to magazines to journals, in Portugal and Brazil, we have links to websites in Angola and Mozambique, Cabo Verde, Portugal, Brazil, were kids who want to find out about their country, or want [to] get a perspective of what they are thinking about in those countries, or if they're new arrivals, they need to find that out using their native language, they have access to that too… We also have put on the web sites a number of technical links to ESL websites, to websites in Brazil there is an association of English teachers in Brazil, for example, that just like we have TESOL in the United States of teachers of English, there is a site for teachers of English in Brazil.…We also have links to sites that provide information regarding the teaching of Portuguese for world language teachers… Teachers at the high school can go in there and find even lesson plans that were developed for college classes they could adapt. (see Appendix H, p. 377)

Staff Development. Finally, at the implementation stage staff development becomes a vital component of the integration of computers in the classroom. According to the 1999 FRSS survey, teachers participate in various types of computer training - computer basic training, software applications, use of the Internet and integration of technology into the curriculum or classroom instruction (see Figure 21).

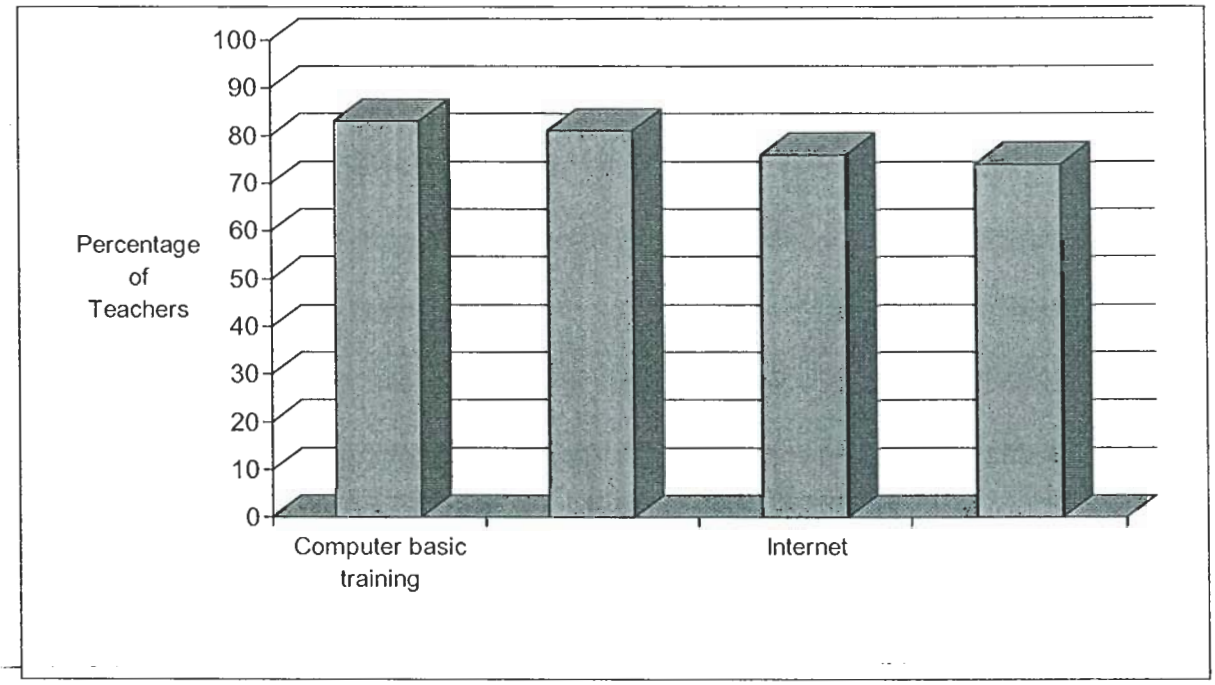

Figure 21. Public school teachers reporting participating in various types of training.

Staff development for teachers includes workshops, online classes and institutes. Technology coordinators assist classroom teachers with designing lesson plans that infuse technology and the use of digital photography.

The District provides technology coordinators with staff development and teaching tools (both via manuals and Web sites) to assist teachers integrate technology in the classroom. One respondent said:

> The key component an any area is staff development, so we have to provide tremendous staff developments to our tech coordinators, to bring them up to snuff, so when they have stand alone issues, they know how to address them. If they don't, then, you know, we have to pull them back in do more staff development, we've put together manuals so that they can just refer to those type of manuals, along with the websites, and that's really how you survive in as district this big. And without tech. coordinators, I don't know how you would have technology being utilized the way it is. (see Appendix H, p. 759)

Technology coordinators are critical in providing staff development. According to one participant, "they're critical, because not only are they maintaining what is in the school, but they are critical for the staff development of the school. Without them, how do you staff develop your staff?" (see Appendix H, p. 759). Thus, the Technology Coordinator plays a crucial role in guiding teachers on how to use technology. Technology Coordinators must be able to assist teachers on the

following: how to use computers, how to design lessons integrating computers in the learning process, how to show models of effective use of computers in the classroom. Participants stated:

> If they [teachers] say, ah, ok, I need to know how to use those computers that are in the corner as centers, so, I may give them models, ok, this is what a schedule looks like, you're taking a timer, this is how you set it up, and so we [Resource Technology Coordinators] model it, so we put a little activity there… we look for models to in the District in that SLT [School Leadership Team], we look for models that other people will see, what it's supposed to look like, and I ask for technology coordinators to identify people who are already doing it, because those are the resources that somebody else can benefit from seeing. (see Appendix H, p. 461)

> Well, I [as Technology Coordinator] try to give them [classroom teachers] ideas that really just fit in with what we are doing. So, I will ahead of time, I say to them, you know, what are you doing in literature? And, so I will design a lesson that will fit in, you know, to what they are doing….(Appendix H, p. 746)

Staff development takes place at all times of the day: during school hours, after school and on the weekends. During the school day the technology coordinator assists the classroom teacher by planning activities integrating the use of computers. After school and on the weekends, staff development occurs via workshops, online classes and institutes. One participant said:

> Twenty five percent of that has to be spent on staff development, so what I've done is we are running twenty after-school sessions, on different areas that have been advertised through our tech coordinators, that are advertising in the schools, and they are being held throughout the District and also in the ETT… We've had excellent attendance there (Appendix H, p. 763).

Online classes. A participant reported:

> When you take an online class you're in the classroom with other learners, but you want to build the community because the community becomes the community of support where you help each other, and it acts the same way… Beyond the workshop session that I use with the technology coordinators, these students would be doing the same thing; it's really the same type of model, that technology allows you to reach out and touch people, in

that classroom, in all those different ways, to help each other. This may be a big goal but my ultimate goal is to get to develop. Web pages without being in your school, I want to do that virtually… .(see Appendix H, p. 466)

Institutes. Another participant noted:

A lot of the technology coordinators do institutes right within their own school building and so they have the classroom teachers come to those. The staff development office has winter institutes and spring institutes where they run courses like 5 weeks or 10 weeks after school in the building, two hours. The teachers get credit and the technology coordinator gets paid for running the session, but some technology coordinators chose to those sessions in their building… (Appendix H, p. 485).

Lesson plans. The technology coordinator can assist the classroom teacher in developing lesson plans that incorporate technology. According to one participant, lesson planning includes pacing of the lesson and designing appropriate activities that allow for authentic learning experience in the classroom. Various participants in this study said:

I mean my main focus [as Technology Coordinator] for the last 3 years has been very basic components like lesson

planning and classroom management techniques… how to get kids engaged [in] oral language activities and… to keep it real for the kids… .(see Appendix H, p. 828)

Through the lesson plan, you sit down with classroom teacher, you work out was is going on in your room, and you are working on specific things in your room. How can I find something that works? It can range from so many different things: it might be a lesson plan; it may be a Web site that that teacher wants students to visit; it might be to develop a whole lesson plan with the teacher that is at the beginning stage. She doesn't know which way to go, but she may be very strong as far as technology goes. But, they might not just have the skills, how to take the technology or the knowledge that they have, and using it in the classroom or in the lab….(see Appendix H, p. 340)

As a matter of fact, our prescription and our lesson plans are done through computers. They're done through computers. My plans are done through computers. I present my plans through computers.(see Appendix H, p. 680)

Digital photography. One World Language teacher collaborated with the technology coordinator in developing an exemplary project using digital photography, video, and a translation program. The participant stated:

> The World Language teacher first approached me [the Technology Coordinator] to do a video, because we also have a photography club here, digital photography… She was taking students to our living lab, our garden and she wanted the children to express the colors and the names of the flowers and the names of insects, that she had been teaching… We took digital pictures and we video taped… After that… she asked me if we could, set up a template with some of these pictures, so the children could write descriptions of some of these things they saw in the garden. So, we did that, so we set up the template … Then, as we really got into it, I told Ms.____ that story book weaver has a Spanish mode. So, we set story book weaver, to be *espanol*, … the children read and typed and made their pictures and wrote a story in Spanish, … [In] Story Book Weaver there is a mode for text to speech, and if they click that, the computer will read their story to them in Spanish, they get a chance to listen to the correct pronunciation. Now, we are even taking it a step further. Ms.____. has a student teacher

> and we also do e-mail now, we have e-pals, and e-pals trains us, so the better students are e-mailing the student teacher in Spanish, writing it in Spanish. (see Appendix H, p. 743)

Confirmation (Invention) Phase

At the confirmation stage, teachers begin to integrate technology in all subject areas. Sandholtz et al. (1997) state that teachers experiment with new instructional strategies, such as constructivist teaching. Constructivism encourages teachers to engage in interdisciplinary project base instruction, team teaching, differentiated instruction and individually paced instruction. Evaluation of student learning emphasizes in-depth understanding of concepts and problem-solving skills. At this stage, teachers are encouraged to collaborate with colleagues, write and publish their experiences and serve as mentors.

Analysis of the data suggests some language teachers use computers to enhance teaching; they see themselves as facilitators in the classroom that provide activities that address the different learning styles and use software programs that address all levels of language competency. Furthermore, they use the Internet to provide language students access to a vast amount of information about other

cultures. Accountability and evaluation systems of language competency are still being devised.

Constructivist Approach. Frosnot (1989) suggests technology is a powerful instructional tool in the constructivist classroom. Constructivist teachers have the opportunity to construct their own meaning with the use of technology empowering students to become independent learners. The constructivist classroom is unstructured and learner-centered, allowing students to experiment, explore and discover (Sandholtz et al. (1997). In one language classroom students are provided with appropriate software programs to learner needs. As one participant pointed out:

> Computer software has different levels, and different expectancies. You can have a class with one kid here, and one kid here, and they are both challenged. You know with a very structured lesson, a teacher can face a situation in which a kid is too smart, you know, get bored in his class… A student that is too slow, or has a learning disability, or something like that, is going to go over his head. However, with appropriate software, we can aim at every possible intellectual level in a class. You know it's arranged. You can have specific activities for each kid. Also you can have cooperative learning in which you

program. You can do multiple tasks. (see Appendix H, p. 500)

According to another participant, language instruction was once dominated by language labs, where students were placed in cubicles in isolation to listen to tapes in the target language. This method of teaching would soon become synonymous with student boredom and failure. Interaction between teacher and student or student and student was practically non existent. This participant alleged:

> Back in the sixties and seventies there was this great push at the university levels to set up language labs, where they would have these little cubicles, where you would listen to these earphones, actually heard the things and did that, and they had broken the language down into little bits and pieces, and they felt by giving this to the student, having them listen to these tapes and repeat it, and give them model and repeat it, they get conditioned. It was ah, behaviorist, based on the audio-lingual methodology, that came out of Skinnerian psychology, that those constant repetition models, would help the kids learn the language, and then the reasons they didn't was... the fact that it was boring as hell... it was the fact that there wasn't any interaction with the

> teacher, there was no classroom, communication, interaction with other students. (see Appendix H, p. 384)

Today, in the District, pedagogical methods for language instruction have made a 'quantum leap'. Most language teachers interviewed stated that they use some methods of constructivism, where teaching is differentiated and learning is student centered: students participate in various hands on activities, classroom procedures do not necessarily follow a rigid structure, and the teacher is open minded in trying new ideas and taking instructional risks. However, there are teachers in the District that have yet to incorporate constructivist teaching. Participants stated that these type of teachers do not welcome new teaching methods in their classroom, use the directed teaching method in the delivery of instruction, and rely heavily on the use of textbooks and workbooks and are less likely to integrate computers as an instructional tool. Participants explain, "you still have teachers who want to do it, the old fashioned way, which is unacceptable, those teachers could never use technology" (see Appendix H, p. 777).

> When you walk into a classroom and you know the teacher is not integrating [technology]…it's more one sided, basically [on] the teacher side, it's direct instruction

> only…staying in that same routine, day after day… they have a more structured classroom…you have different learners and they [teachers] always teach to one type[student], and it especially limits, I believe ESL and bilingual[students]. (see Appendix H, p. 360)

Hird (2000) suggests that textbooks will become obsolete once computer programs "bring to life concepts that are not easily learned from text descriptions" (p.16).

Teachers who do integrate computers as an instructional tool tend to encourage students to become independent learners. One participant noted "the new teachers are more flexible about, ah, letting the students use the computers, or doing this or doing that…" (see Appendix H, p. 567).

Other participants suggest that teachers, who have a good understanding of computers, tend to be more flexible in their delivery of instruction; allowing students time to explore numerous software programs. They reported:

> In terms of the interactive nature of the software, it moves a kid at their own pace, there is a lot of visuals, and video clips, that is way beyond what that language lab used to thirty years ago. (see Appendix H, p. 384)

> They [students] are going to the e-board, and we have an

interactive e-board, where the children, the teacher can post a message. Maybe the children are reading a book, and the teacher poses a question, and the children write an answer to the question. So one child writes it, they say submit, when the next child goes on, they see the question with the first child's answer and then they put an answer, so what ends up to be kind of like IM-ing [instant messaging]. (see Appendix H, p. 743)

Facilitator. In the constructivist classroom, the teacher serves as a facilitator of learning. Students are given choices in how they will engage in their learning. Students are given freedom to explore learning activities. According to one respondent in this study: The best lessons that there is, are those in [which] the teacher participates very little, and, is a facilitator in terms of what to do, because [in] that way the students think, they have ownership of the lesson, they have choices, and these two elements are very important motivators, like ownership of the class… and they get motivated with that. If the teacher is lecturing, first of all the students have to be quiet, they could not move, then you know, they can get bored, discipline problems… If the teacher is a facilitator, and we rotate

around and check that everybody is on task then, at the same time they have more freedom, the teacher has more control of the class… he sees more of what's going on. (see Appendix H, p. 551)

Differentiated Instruction. Tomlinson (2001) points out that in the differentiated classroom students are provided with "multiple options for taking information, making sense of ideas, and expressing what they learn" p. (1). In the differentiate classroom it is assumed that different learners have different needs. Teachers move away from "seeing themselves as the dispensers of knowledge and move toward seeing themselves as organizers of learning opportunities" (p. 16). Teachers use "varied levels of activities to ensure that students explore ideas at a level that builds on their prior knowledge and prompts continued growth" (p. 101).

Computers as a learning tool can address the different needs of language learners at all competency levels and learning styles (visual, kinesthetic and auditory). Numerous language software programs challenge students at their appropriate level of instruction. According to some participants, students are more likely to engage in their own learning when they are able to avoid feelings of humiliation

and failure when presented with material that is not at their competency level. Participants suggest that computers allow students to learn more natural and at their own pace. They reported:

> Some people are more visual… and so forth… We have a lot of hands on students, and the artists, they're hands on. So they have to really do things, so they get it… Some students were more… you would say more logical…. Some students they learn by listening to it, hearing it, and so forth, and by doing conversation. (see Appendix H, p. 907)

> They [students] learn a second language more or less the way the learned the first language. When you were a child you didn't go around writing a list of things and translating. Computers take advantage of that. They make it more natural. (see Appendix H, p. 620)

> Basically [use of the Internet is] to find information and write projects for the higher levels of ESL. Lower levels they change e-mails with people more or less with the same level. Basic English, "Hi, what is your name?", "Where are you from?", "Tell me something about your family?, things like that. (see Appendix H, p. 509)

> The advantage that I do have with the computers is that I could have three different programs at the same time, and the students' are working at their own pace... They feel that they can work more independently both in the classroom setting, and in the computer setting, because the computer gives them the opportunity to be more independent when they're learning the second language. They don't really feel that restricted. (see Appendix H, p. 286)

> Well, my classroom is an informal classroom. My students' pick and empower themselves around the classroom to different centers. One of them is technology, and we have a reading center, the math center, the writing center, and the listening center... I'm into technology plus I am into multi things in my classroom. There's a VCR. There's everything in my classroom, even a copier and my students' have access to all that (see Appendix H, p. 659).

Levels of Instruction. One participant indicated that in her ESL program there are three tiers of language learners. With the use of the computer, Tier-I students use basic

computer games to learn visual discrimination, name recognition, sound recognition and writing recognition. Students are expected to be able to write simple sentences in English. Tier II students usually have been in the program at least one year and focus on the grammatical components of the language; those students are provided with computer educational games that improve language fluency and grammar skills. They are expected write poems and narratives. Tier III students have typically been in the program for at least 2 years and begin to use the Internet as a research tool to complete term papers. Students are expected to have mastered the necessary English language skills by the end of the third year so that they can be mainstreamed to the regular program. The participant explains:

> We have three tiers in the English language… Tier-I, in which the child is a newcomer and has never been exposed to the language… the computer [is used] to teach them visual discrimination with name recognition, sound recognition and then writing recognition… Using Word… they'll write the sentences using a little bit of English that we're teaching them. The pronouns and the verbs and the adjectives to form the sentence… Then my tier two, they are two years in the program… [They] are more advanced and they go into more grammar… [They are taught]

> grammar, reading and answering and playing with all educational games to develop their language and their skills. Then they start doing their writing assignments like poems, and they use story readers to do the poems, and the stories they're writing they do narratives… After they do the narratives… they write their first draft. After they write their first draft they type their first draft. After we type the first draft we print that. They do corrections [and] then they go back and finish their components, print the component and present it to me… Third tier do term papers, and they are full-grown. Those kids are going to be mainstreamed. They're going to be mainstreamed probably at the end of the year and they know more about computers. They alphabetize. They do research. They're researching. We have access to the Internet already in our classrooms, and when we don't have access my kids go into the computer lab….(see Appendix H, p. 664)

Cultural Awareness. Computers, especially the Internet, can also be used as tools for students to learn about the culture of the target language. Students can hear songs, write holiday cards and e-mails or visit a virtual city. Participants noted that students are provided with lyrics of

songs in the target language exposing them to language and cultural values. One participant reported:

> We have the opportunity to listen to different songs because we went to another Web site that they do play different music from Latin America. I said, 'Okay, guys, we're going to listen to this song from Puerto Rico. This is el compositor,' and so on and so on. Some students say, Oh Mrs. _____ we don't understand the words, but it's beautiful. I said, that's all is takes. I said, It's fine with me you don't understand what's going on right now... but some day you will. (see Appendix H, p. 306)

Activities include celebrating special occasions or holidays of the target language and host cultures.

> For example, for Mother's Day, we do special things. For Valentines Day, we do cards, and so forth. If we have a project that we have to do in different interests in French culture it's important. (see Appendix H, p. 886)

> In November, we celebrated Puerto Rico discovery day. We went to the computer lab, and I said to my students, of course I prepare the kids with the vocabulary. We visited Puerto Rico through the Internet. I said kids, next week we're going to Puerto Rico. Oh Mrs. ____, are we going to

> Puerto Rico? Are you going to pay for the tickets? I say, no, I don't have that kind of money, but we're going to Mrs. ____ classroom. I guarantee you I'm going to take you to Puerto Rico. You don't have to leave the school. You don't have to leave the state. We went to the different sites of Puerto Rico, and the kids were fascinated. They had the opportunity to look at the pictures, compare the climate. Although the kids were not there in Puerto Rico, but just by looking at the pictures... they felt that they visited the island... They were asking me questions about, 'El Coqui.' How come we don't have 'El Coqui' in the USA... So let's say that one or two or a couple of students' maybe in the future will decide to go to Puerto Rico, they already have a picture of what Puerto Rico looks like from looking at the pictures….(see Appendix H, p. 305)

Visiting a city where the target language is spoken may be the best way to learn the language; however, the Internet can provide a valuable alternative, making the virtual trip of visiting a foreign place a very interesting and educational experience. Through the use of virtual programs, students can navigate through numerous sites that support language acquisition. Respondents reported:

They had like a virtual city and then the city; supermarket, fast food restaurant, bus station, train station, police station, hospital and airport. Then you can click on the place, and they give you a couple of sentences about the place… and then you… go deeper and deeper inside…. (see Appendix H, p. 408)

Something that we did… he was teaching French at the time, and I was teaching Spanish… we wanted to kind show the children that there were other languages out there… So he did a French café and [we] went over and visited his school, and got to see what a café is all about and the different types of foods and the culture behind that… Then the children got to come to our school and experienced Mexico, and the Mexican culture. And this was during Hispanic month, they came to us. It was fun; it was cute; and… it was interesting. It was different way of doing the world language …. (see Appendix H, p. 328)

If you have the ability to go into a Web site, go to globe in Sao Paolo or Diario Noticias in Portugal, … these are things that, you know, would spark interest in the culture of the country, a familiarity with the culture of the country, and in turn, think it would have

> positive benefits in the area of language learning, because we feel a greater affinity. Online access could open up doors into the other culture... could give us greater cultural understanding. ... It opens up a whole new world. That will help your language learning down the road... I think that is an important technological benefit, in the communication and cultural part of the language, that you never had before...it really opens the cultural component in a much more dynamic way then we ever had access to before. So in that aspect it is really marvelous. (see Appendix H, p. 389)

Accountability and Evaluation. Sandholtz et al. (1997) indicate that for teaching practices to change, accountability and teacher evaluations need to be considered as important elements of systemic reform. Unfortunately, current accountability systems encourage teachers to teach toward improving test scores instead of developing meaningful learning skills. Most tests measure simple recall of factual knowledge or computational skills. However, measuring students' in depth understanding of concepts and problem solving skills is much more difficult.

The State of New Jersey has implemented standards in technology literacy in grades 4 and 8. These standards outline

what students have to know to be proficient in using technology. However, the standards do not address teachers' proficiency using or teaching technology.

Assessment of students' language proficiency needs to be considered. Currently, one participant noted, the District does not have an assessment tool that allows for the correct placement of students in their appropriate language proficiency level: This participant reported:

> Well, until we get… standards that people have to obtain, it is pretty nebulous… My point is that, you know,… the kids get to the high school and they automatically think that if you are in the high school you automatically get stuck in level one [language level], which is absolutely ridiculous… If we could institute and eighth grade exam across the city for world languages in Spanish that we could give maybe in March or something, it could serve two purposes: it could be used by the counselors in the high schools, to place these people [students] appropriately… and it would also hold people [teachers & administrators] accountable that there is an eighth grade exam (see Appendix H, p. 389)

Summary

In the following paragraphs, a final interpretation of the data examines participants' experiences in the classroom. It begins with a discussion regarding the availability of computers in the language classroom or lab, followed by a description of the positive and negative results that teachers experienced using computers in the classroom. Finally, how participants use computers as an instructional tool and the type of support or professional development available to language teachers is explored.

Analysis of the data reveals that language teachers do face numerous challenges in trying to use computers as an instructional tool. Participants are frustrated by the limited availability of computers, scheduling conflicts, time constraints, and unsupportive staff. Yet, despite these challenges, participants were determined to find the time or resources needed to use computers. They pointed out that their colleagues who do not use computers, don't know how to use it, or may not comfortable using other teaching methods.

Computers in the language classroom offer many advantages to engage students in learning. Most participants allege that language computer programs are: animated, have basic components of language transmission such as pronunciation, sentence structure, and vocabulary, have numerous types of

assessments, improve students' comprehension skills, modify their disruptive behavior, and boost self esteem.

Then again, computers do have numerous disadvantages: they may facilitate plagiarism, may act as distractions from meaningful learning, as well as frustrating teacher and students with software limitations and technical problems.

Analysis of the data reveals that language teachers use software programs and the Internet to improve student acquisition of the target language. Software programs include basic vocabulary, as well as Microsoft Office. Numerous Internet sites are used by teachers to assist students with basic sentence structure in the target language.

Analysis of the data suggests that a handful of language teachers have learned how to use computer programs such as Excel to facilitate record keeping of student grades and other pertinent information. In a few instances, teachers are creating their own personal websites and posting lesson plans, homework assignments, and other student data. In the near future, a good number of teachers will be able to place student and curricula information on a secure website that students and parents may be able to view.

Language teachers can use software programs such as Kidspiration, Inspiration, Print Shop, and E-pals to help students write or translate in the target language. With the

E-pals program, students can communicate with other students across the globe using their own primary language without waiting to be fluent in the target language of the other country.

Analysis of the data suggests some language teachers use computers to enhance teaching - they see themselves as facilitators in the classroom whose purpose is to provide activities that address the different learning styles and use software programs that address all levels of language competency. The Internet provides language students a window to a vast amount of information about other cultures.

Most language teachers interviewed state that they use some methods of instruction, where teaching is differentiated and learning is student centered: students participate in various hands on activities, classroom procedures do not necessarily follow a rigid structure, and the teacher is open minded in trying new ideas and taking instructional risks.

Ongoing support from administrators, staff and parents is vital in helping language teachers use computers in the classroom. All classroom teachers need access to computers and time to explore new instructional strategies.

Staff development for teachers includes workshops, online classes, and institutes. Additionally, technology coordinators assist classroom teachers in designing lesson plans that

infuse technology. However, staff development addressing the infusion of technology in the language classroom has been very limited, in some schools practically non-existent.

Chapter V

DISCUSSION AND RECOMMENDATIONS

Introduction

The experiences of language teachers using computers in their classroom could have special relevance to the future formation of District policies and procedures, so this chapter discusses the findings and offers recommendations for further research. Here the diffusion of innovations theory is emphasized in its relation to the use of computers as an instructional tool in the language classroom. Both the aforementioned theory and the role of leadership and staff development are key elements in successfully integrating computers in the classroom. Effective leaders provide all teachers with access to using computers. Effective staff development results in the successful integration of computers as an instructional tool in the classroom.

In the interest of integrating computers in the classroom, the District made a number of recommendations in its 2004-2007 Technology Plan. These recommendations consider the integration of computers in the classroom, access to computers for all teachers (including language teachers), the type of support needed from school and central office personnel, and meaningful staff development opportunities.

Areas of further study should include additional research into the aforementioned theory, as well as into different students' learning styles, the successful integration of computers in the language classroom and professional development strategies integrating computers as an instructional tool.

Diffusion of Innovations

As previously noted, the recent introduction of the computers as an instructional tool in the language classroom has challenged teachers in the way they teach language.

Knowledge

Analysis of the how this innovation gets diffused suggest that at the knowledge stage, teachers can point to factors that influenced them to begin using computers in the classroom. Limited access impedes the use of computers for language instruction. Access is limited by the unavailability of computers, scheduling conflicts and resistance from colleagues to share finite resources.

Persuasion

At the persuasion stage, teachers describe the positive and negative results that they have seen when using computers as a learning tool. Computers in the language classroom have many advantages to engage students in learning. Most

participants allege that language computer programs are: animated; have basic components of language transmission, including pronunciation, sentence structure, and vocabulary; have numerous types of assessments, improve students' comprehension skills, modify their disruptive behavior, and boost self esteem.

Then again, computers also have numerous disadvantages: software limitations, technical problems, and they have facilitated plagiarism, all of which may prove distractions from meaningful learning.

Decision

At the decision stage, technology becomes thoroughly integrated into traditional teaching practices. Teachers are constantly thinking of ways to integrate technology into their instructional practices. Students begin to use computer software programs (databases, word processing, and graphic programs) more in their learning. Teachers take note of the staff development opportunities that allow them to better integrate computers as an instructional tool. Staff development encourages teachers to "explore, reflect, collaborate with peers, work on authentic tasks, and engage in hands on, active learning" (Sandholtz et al., 1997, p.142). Consequently, at this stage, support from administrators, colleagues, and parents is crucial, as teachers need

encouragement to begin to take risks adapting new instructional tools. Technology Coordinators play a crucial role in assisting language teachers use computers as a teaching tool.

Implementation

At the implementation stage, teachers change their personal attitude towards technology and use technology effortlessly as a teaching tool in the language classroom. The use software programs and the Internet are used to improve student acquisition of the target language. Software used includes language programs with vocabulary and greeting exercises, as well as, Microsoft Word, Excel and Power-Point. Numerous Internet sites assist students with basic sentence structure in the target language.

A handful of language teachers are taught how to use computer programs such as Excel to facilitate record keeping of student grades and other pertinent information. In a few instances, teachers are creating their own personal websites and posting lesson plans, homework assignments, and other student data. In the near future, a good number of teachers will be able to place student and curricula information on a secure website that students and parents may be able to view.

The use software programs such as Kidspiration, Inspiration, Print Shop, and E-pals to help students write or

translate in the target language. With the E-pals program, students can communicate with other students across the globe using their own primary language without waiting to be fluent in the target language of the other country.

Confirmation

Finally, in the confirmation stage, teachers describe how computers have impacted or changed their methods of instruction. Learning theories, behaviorism, constructivism, cognitive learning and multiple intelligences are relevant to those discussions. A few language teachers use computers to enhance teaching - they see themselves as facilitators in the classroom, provide activities that address the different learning styles, and use software programs that address all levels of language competency.

Conclusions

Stages of Innovation

Existing research in diffusion of innovations suggests that some people require many years to adopt an innovation, while others move rapidly to implementation. Individuals quick to adopt an innovation are dubbed innovators. Most participants interviewed here might be considered innovators in using computers as an instructional tool. As the data indicates, participants realized fairly quickly that the

computer was an effective tool to teach language. One participant illustrates this realization in her recollections of why she herself started to use computers: "I realized that when the children have a tool like this, their desire to learn is tremendous, because they want to use the computer, and they want to be able to perform, and they know that that is a way of learning, and this is how my classroom and my children are engaged" (see Appendix H, p. 659).

Rogers (2003) mentions that individuals who have yet to adopt a given innovation will probably become early or late majority adopters. These individuals usually make up about 75 percent of a system, which in this case would mean most of the language teachers in the District. According to language teachers sampled in this survey, less then 5 percent of language teachers in the District use computers as an instructional tool. Consequently, in this study, most language teachers have yet to integrate computers as an instructional, reaffirming the concept of what Rogers (2003) writes about the "critical mass."

Shelly et al. (2002) suggest several reasons why teachers may not integrate computers as an instructional tool: a lack of teacher training, lack of administrative support, limited time for teacher planning, limited access and availability of computers, budget constraints, and a basic resistance to

change by many educators. Participants expressed some of these concerns; however, they also noted that most veteran teachers are not using computers because they are not familiar with the technology or are not comfortable using computers.

Shelly et al. (2002) also suggest that administrators usually point to the teachers' lack of experience with use of computers in the classroom. Participants in this study did not see lack of experience as the problem. They expressed frustrations about the limited availability of functional computers, ongoing scheduling conflicts, severe time constraints, and unsupportive staff. For example, one participant stated that she felt frustrated by how difficult it is to get access to the computer lab (see Appendix H, p.309).

Most participants believe that teachers who do not use computers in the classroom find technology frustrating because they do not know how to use it, are worried that colleagues or students will see that they do not know how to use it, or are not comfortable changing their pedagogical approach. Participants' views are consistent with data from existing research.

Cuban (2002) points to teachers' reluctance to change from teacher-centered instruction as the basis for not integrating computers. In his observations of classroom

instruction, teacher-centered instruction was the norm. He noted that a few teachers were able to persuade their colleagues to begin using computers and other technologies in the classroom. Consequently, most teachers continued to teach in the same manner as before, resulting in very limited use of computers in the classroom. One participant succinctly expressed Cuban's point of view by saying, "You still have teachers who want to do it the old fashioned way, which is unacceptable; those teachers could never use technology" (see Appendix H, p. 777).

Additionally, in classrooms where computers are being used, most teachers do not use computers for meaningful instruction. The use of computers usually includes students' typing up assignments, working on reports, and searching the Internet. These findings tend to support the conclusions Cuban (2002) drew from his research. For example, participants pointed out that the Internet was a "hotspot" for distractions because of the instant access to personal chat rooms and other non-educational sites.

Cuban (2002) concludes that factors such as age, gender, and computer expertise do not impact instruction in the classroom. "There were few fundamental changes in the dominant more of teacher centered instruction," Cuban (2002) writes (p.96). However, most participants in this study disagree with

those particular conclusions. They indicated that age does play a very important role in determining if a teacher remains open to using computers in the classroom. Most participants indicated that the older veteran teachers are less likely to use computers in the classroom. One participant stated that "teachers who have been teaching for over 30 years, they're so used to doing things a certain way… they have a problem with change" (see Appendix H, p. 441). Another participant stated that "it's the older group that has done things for decades… now whenever you introduce anything… a new way of teaching...they're the ones that will be a little bit more resistant because for them 'if it ain't broken don't fix it'…" (see Appendix H, p. 633). These veteran teachers would qualify as laggards in Rogers' (2003) schema, remaining suspicious of change.

Leadership and Support

Ongoing support from administrators and other staff members is vital in assisting language teachers to use computers as an instructional tool. Administrators must be able to provide the necessary leadership so that language teachers may have access to computers and time to explore new instructional strategies using computers. In other words, administrators must be able to empower teachers to use technology. The 2003 report "The Sustainability Challenge:

Taking EdTech to the Next Level" edited by Dickard (2003) highlights a former Superintendent's experience on how he empowered his staff to use technology:

> I was not the prime mover in the sense that my technology skills, even now, are fairly limited. My form of leadership is to give power to others and to encourage them and empower them to be as strong as possible, so [much of the leadership for technology integration] came from the teachers and from others in the district…. (p.31)

In addition to support from school and district administrators, staff development opportunities must be offered; these allow educators to integrate computers as an instructional tool across the disciplines.

Staff Development

In the district, staff development for teachers includes workshops, online classes and institutes. Technology coordinators assist classroom teachers design lesson plans that infuse technology into the learning experience. Staff development takes place at all times of the day: during school hours, after school and on the weekends. During the school day, the technology coordinator assists the classroom teacher by planning activities integrating the use of

computers. After school and on the weekends, staff development occurs via workshops, online classes and institutes. However, staff development specific to language teacher needs has been very limited, and in some schools non-existent. As one participant explains, "There were two workshops during the year, the staff development. I couldn't go to any workshops because they were for 25 teachers, and there were not funds for me and I was a Spanish teacher. So, they didn't let me go into the workshops" (see Appendix H, p. 529).

Recommendations

Shelly et al. (2002) contend that the successful integration of technology in the classroom requires the following: hands-on training for teachers; accessibility to the hardware and software, and freedom for teachers to decide how best to implement computer technology in the lesson. Likewise, Dickard (2003) notes the effective integration of technology requires the "development of a culture of innovation, institutionalization of EdTech, and gathering and communicating evidence of effective use of technology" (p.40).

Consequently, planning the uses of technology in the classroom seems to be one critical element for effective use. Teachers must consider what is most appropriate in using technology to achieve desired learning objectives. Teachers

need to observe other teachers who effectively integrate computers in the classroom. Teachers must rethink and redesign learning activities and methods of instruction to allow for the advantages of computer technology. Lastly, teachers must be given opportunities to attend professional staff development that will enhance their knowledge of technology.

Unfortunately, as has been previously noted, most study participants stated that there has been very limited professional development to guide them on how to integrate technology in the language classroom. This data is not consistent with data from the U.S. Department of Education (2000), which points out that a substantial number of classroom teachers have participated in professional development seminars on using computers or the Internet in the classroom (see Figure 22).

Researchers (Sivin-Kachala & Bialo, 2000) mention that teacher training was the most significant factor influencing the extent to which technology was used in the classroom.

Policy

Access. According to the District's 2004-2007 Technology Plan, "students who have consistent access to technology in the classroom and throughout the school demonstrate higher at

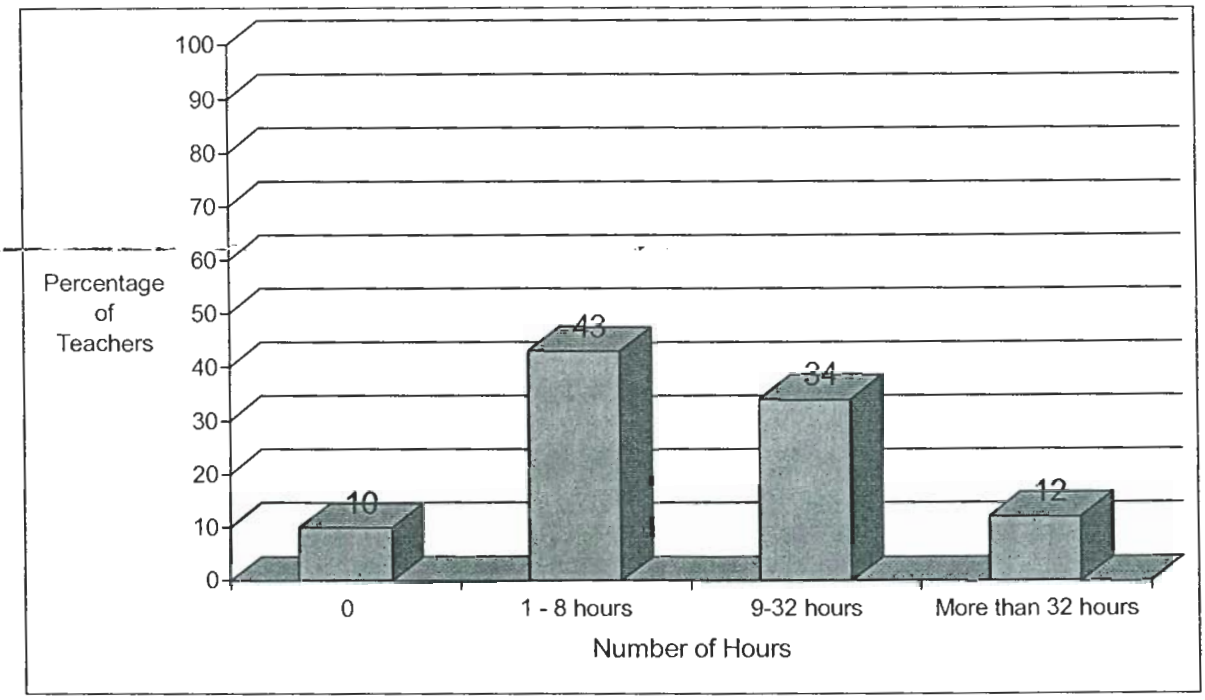

Figure 22. Public school teachers reporting number of hours spent in professional development activities using computers or the Internet.

performance and increased productivity than their peers in classroom and schools without technology" (p.17). However, present most language teachers and students have limited access to computers; therefore, every effort should be made to make computers widely available to all students and teachers. District policies need to ensure their availability.

The 2004-2007 Technology Plan attempts to address the issue of access. It lists objectives that provide technology resources to all students and teachers. One objective describes the District's intent to:

> Provide access to technology resources (eg., Internet, digital content) that enrich the learning experience and

address the needs of all students and their families. (District's Technology Plan 2004-2007, p.13)

This objective stresses collaboration between the departments of technology and teaching and learning in infusing instructional technology resources across the curriculum. This collaborative process presents a perfect opportunity for the Bilingual Department, a division of the Department of Teaching and Learning, to get involved and provide the necessary input so that language teachers are provide with the access that they so desperately need.

Another objective indicates that technology will be infused throughout the curriculum. It states:

> By the year 2007, technology will be integrated into 90% of all school curricular areas to support the Core Curriculum Content Standards and to lead to greater student achievement. (District's Technology Plan 2004-2007, p.14)

Again, this objective provides opportunity for the Department of Teaching and Learning to have vital input. The Bilingual department recommend strategies on how technology can be infused in the ESL and World Language programs.

The District's plan outlines one strategy for meeting the goal of promoting the integration of appropriate digital networked applications that support the Core Curriculum

Content Standards. Accordingly, the Bilingual department should have significant input in how digital networks could enhance language instruction.

Staff Development. Support from District administrators and other colleagues is critical if change is to occur in a timely fashion. Administrators must be tolerant and open-minded as language teachers take risks in teaching with technology. While language teachers need opportunities to observe colleagues who are effectively using computers in the classroom, most study participants report that few teachers in the District have yet to observe any colleagues even using computers in the classroom. Language teacher may have to be innovative and regard the classroom as an experimental laboratory.

If language teachers are expected to effectively integrate computers in the classroom, then staff development must do more than simply introduce new computer technologies, it must also focus on constructivist teaching methods that honor students' various learning styles and educational ambitions. Language teachers need to understand both how and why they should use computers in the classroom. Moreover, language teachers need to be exposed to exemplary models of language teaching with the use of computers, not merely satisfactory ones. Research suggests that language teachers

who are currently using computers could be considered for this task.

The District's 2004-2007 Technology Plan outlines objectives addressing the need for teachers to implement teaching strategies that enhance teaching and learning with technology. "By 2007, all schools will identify and replicate 'best practices' that have enhances teaching and learning" (District's Technology Plan 2004-2007, p.14).

The District intends to appoint a Technology Best Practices Review Panel to develop a portfolio of "best practices" lesson plans. It is imperative that this panel include staff from the Bilingual department and classroom teachers considered "innovators" in using technology as a teaching tool. Furthermore, the District plan also calls for "best practices" to be disseminated and replicated in the schools. The District should identify individuals who are technological innovators implementing "best practices" within the classroom. These individuals are most likely to be the ones to share and model strategies on how to teach effectively using technology in the classroom.

The District also plans to improve the quantity and quality of professional development activities that will result in an increase in student achievement. Its ambition is to "improve the quantity and quality of professional

development activities to assist educators in increasing student achievement through the Core Curriculum Content Standards" (District's Technology Plan 2004-2007, p.13).

This objective requires that all educators, including administrators, assume responsibility for their professional competence in using technology and taking advantage of professional development opportunities. These should include opportunities for teachers and administrators to observe model classrooms and schools that effectively use technology for teaching and learning.

Practice

Effective use of technology in the classroom can only be accomplished when district personnel and school administrators become aware that a problem or need actually exists. A good staring point is to analyze annual data from the Whole School Reform technology survey, administered by the State. This survey should provide pertinent information about the use or non use of computers in the classrooms.

Instructional tool. According to a few researchers using technology in the classroom motivates students to learn, encourages them to become problem solvers, and creates new avenues to explore information (Shelly et al., 2002).

Participants in this study provided responses that support the research findings. They indicated that language students do become engaged when using computers. As one participant states:

> [Students] love the computer. They just love the computer. I mean you could have a student who is probably really tough, who probably doesn't want to do anything, who is probably very problematic. But if you tell Bobby, 'Bobby, get on the computer and find this information for me.' 'Sure, sure.' Because they really want to do it. (see Appendix H, p. 420)

Students seem to look forward to getting assigned to the computer in District classrooms. They are fascinated by the wealth of information that is available on the Internet. One participant mentioned that having computers in the classroom even improves overall student attendance (see Appendix H, p. 671).

Besides being engaged, language students are provided with an environment that is relatively stress-free. In the acquisition of a second language, this type of environment is vital. Students need an avenue where they can practice the language without fear of ridicule. Computers offer such an avenue, according to participants in this study. Students are

able to practice language skills for as long as they wish and without fear of harsh criticism or sarcasm, which improves the likelihood of their successfully acquiring the second language.

In the very near future, all teachers will be able to access curriculum guides, student data, and much more via the Internet. Language teachers, in particular, will be able to access newspapers and magazines from other countries of interest. Additionally, they will have access to technical information that can help them build their language programs.

Support. As previously noted, support from District administrators and other colleagues is critical for language teachers to successfully integrate computers as an instructional tool.

The District provides support to teachers and students by implementing numerous technology initiatives: installation of computers networks throughout the District, Technology Training Institutes, annual computer fair, eBoard, ePals, Stevens k-12 partnership, interactive television labs, media retrieval network, and higher education partnerships. Consequently, Language teachers need to be informed and encouraged to take advantage of these numerous technology initiatives.

According to the District (2001-2004) over 79 percent of schools are networked. A "network consists of a fully equipped computer lab, media center, science lab (select schools) and 10 to 15 networked classrooms containing three computer workstations and one laser printer, access to the Internet and grade appropriate software applications" (p.1). Technology Training Institutes provide teachers with professional development on how to integrate the use of technology in instruction. The annual computer fair is designed to get students to complete a problem-based task using technology. E-board is used by students and teachers to share information about the District's novel initiative. E-pals allows students and teachers to have access to safe and secure electronic mail in the classroom. A higher education institution and K-12 partnership provides teachers and technology coordinators with training and onsite instructional support. According to the District's Technology Plan (2004-2007), "The project promotes improved teaching and learning of science curriculum through the integration of technology into instruction" (p. 6). Interactive Television Labs (ITV) provide students and teachers face to face communication with other people around the globe without ever leaving the school. The media retrieval network gives multiple users access video or audio resources from a central location. Currently, three elementary schools

in the District have this system in place. Finally, higher education partnerships provide teachers with technical support and training on how to use technology in their respective disciplines. In addition, each summer selected students participate in a Space Technology Summer Camp. Students engage in an "experiential learning process and gain technological skills needed to solve real life problems" (District Technology Plan 2004-2007, p.7).

At the school level, administrators and resource staff need to support language teachers when they experience instructional challenges while using technology. For example, language teachers' schedules should allow for the use of computers in the classroom or in the computer lab. Language teachers need to have time to plan for instruction that incorporates more than one teaching method. Staff development should include all staff, not just classroom teachers. Moreover, staff development particular to the needs of language teachers and how they can use computers as a teaching tool should be offered.

Staff Development. It must become the responsibility of the educational technology coordinator to provide meaningful staff development, thereby encouraging teachers to explore, collaborate and reflect on current pedagogical practices.

According to professional development data gathered by the District during the 2003-2004 school year, approximately 40 percent of teaching staff are at the novice level, 40 percent are at the intermediate level, and 20 percent are at the master level in using technology in the classroom (District Technology Plan 2004-2007, p.69). The District's 2004-2007 Technology Plan points out that teachers who are not effectively integrating technology in the classroom need greater exposure to technology and time to explore technologies that move beyond "traditional word processing and PowerPoint presentations" (p.69).

Ideally, future staff development in the District should include teachers' observing and learning from each other. Language teachers need to be encouraged to use alternative pedagogical strategies in the classroom. With the introduction of emerging technologies such as video discs, scanners, digital cameras, all teachers must learn their various applications in the classroom setting. Currently, the District does offer some workshops, online classes and institutes. Unfortunately, most language teachers have not taken advantage of these opportunities, according to responses of study participants.

Sandholtz et al. (1997) indicate that change is a slow process, "requiring teachers to constantly experiment with new

ideas and strategies and at times experience moments of temporary regression" (p. 181). Parham (2001) suggests numerous strategies for technology coordinators to use when providing staff development to teachers. Some of these strategies are mapped in figure 23.

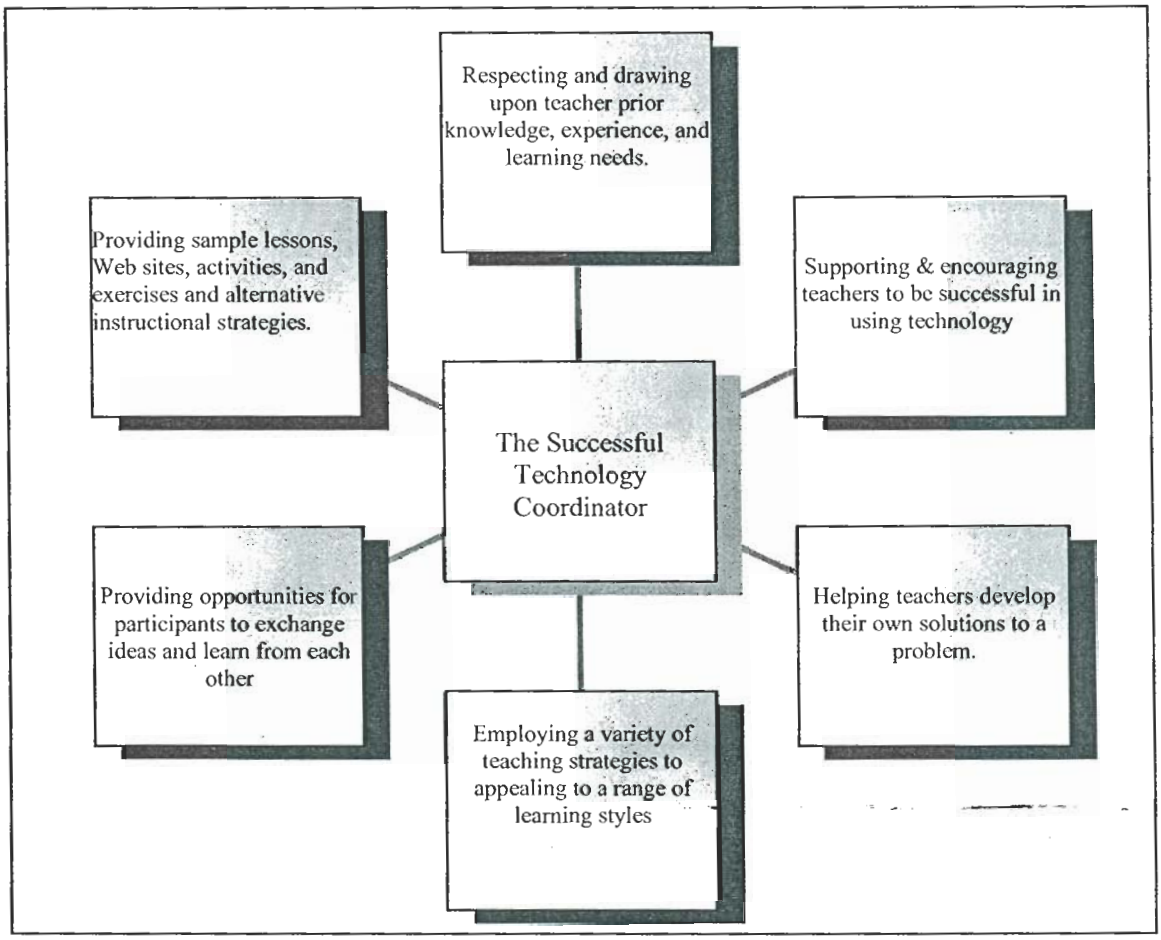

Figure 23. Characteristics of the successful Technology Coordinator.

Sandholtz et al. (1997) suggest that when teachers effectively integrate technology in the classroom they come to understand how to use it effortlessly as a tool. Teachers will not commit to using computers in their classrooms until they

see positive benefits for themselves and their students, according to Sandholtz et al. (1997). Language teachers will begin to use such software programs as Word, Jostens, or English Discoveries to teach basic vocabulary and the grammar of the target language only if they perceive the program offering distinct benefits, as many of the participants in this study seem to do.

Using the Internet, language students can communicate with other students anywhere in the world via chat rooms, e-mail or E-pals. According to one participant, the District is beginning to use the E-pals programs to communicate with other students across the globe (see Appendix H, p. 744). Thus, the District intends to use the E-pals program as an effective instructional tool in the language classroom.

Language teachers must be made aware of these opportunities and strongly encouraged to participate. As language teachers move away from traditional teacher-directed teaching and begin to experiment with constructivist teaching that respects the differing learning styles and educational ambitions of their students, the infusion of computers will likely become more prevalent in the classroom. Constructivist teaching methods support the use of computers as an instructional tool. In the constructivist classroom, students

are empowered to take responsibility for their own learning and at their own pace. One participant explains:

> The advantage that I do have with the computers is that I could have three different programs at the same time, and the students' are working at their own pace... They feel that they can work more independently both in the classroom setting, and in the computer setting, because the computer gives them the opportunity to be more independent when they're learning the second language. (see Appendix H, p. 286)

Moreover, computer lessons tend to be unstructured and offer activities that are more learner-centered, allowing for student experimentation, exploration and discovery (Sandholtz et al., 1997). One participant reported: "Computer software has different levels, and different expectancies. You can have a class with one kid here, and one kid here, and they are both challenged. You can have specific activities for each kid. Also, you can have cooperative learning in which you program... you can do multiple tasks" (see Appendix H, p. 499).

If administrators are to expect such technological competencies from their faculty, the administrators themselves should also be able to use technology effortlessly. In the District's plan,

> By the year 2007, 75% of school staff and administration will be technology literate, and will share information, collaborate on projects and utilize networks and digital content in support of the Core Curriculum. (District Technology Plan 2004-2007, p.17)

In schools with a large bilingual student population, the administrator, as well as the technology coordinator, should be very familiar with the learning needs of language students. Furthermore, teacher training and curriculum development should be based on effective research-based methods of language acquisition using technology.

Future Research

Access. Future research should address the issue of access in providing technology resources to all students and teachers. What successful strategies can a school district implement to provide equal access of technology resources for ALL teachers and students?

Future research is needed on how and at what stage - knowledge, persuasion, decision, implementation, or confirmation - teachers are integrating technology in their respective school district. Knowing the stages at which teachers are integrating technology can help a district set achievable goals when writing a technology plan.

Instructional Strategies. What does the successful integration of technology across the disciplines look like? Is there a school district that has successfully integrated technology across the disciplines?

It is recommended that future research be conducted on how e-mail, chat rooms and the E-pals program support language instruction. Moreover, how will the Internet ultimately impact language acquisition? What are its advantages and disadvantages in language acquisition? What instructional strategies can language teachers use in the language classroom? These questions need to be addressed.

Staff Development. As was previously noted, the technology coordinator is vital to the success of the integration of technology in a school. It is the technology coordinator who is in the best position to identify the innovators of technology and "best practices" in a given school. Researchers point out that "the shift in district culture may begin with a single innovator -- and a single innovation -- but it spreads throughout the district so that the innovation occurs at all levels of the system" (Dickard, 2003, p.40).

Teachers who are seriously considering using technology in the classroom -- whether they be early or late adopters --

can observe their "innovator" colleagues use technology in the classroom. Accordingly, it is recommended that future research focus on the role of the technology coordinator in schools filled predominantly with limited English-proficient students. What effective strategies can technology coordinators use to assist bilingual or language teachers in using technology as a teaching tool?

Thus, further research on the infusion of technology in the language classroom is recommended. Why have most language teachers not taken advantage of staff development opportunities? Do language teachers see a clear connection between computers and instruction? What emerging technologies improve language acquisition? Such questions should guide future research.

Summary

Ideally, District policies and procedures will reflect the needs of all classroom teachers, language teachers among them. Important factors to consider are access to computers, support from administrators and colleagues, meaningful staff development. With support from administrators and colleagues, language teachers could have access to the fourteen thousand computers. All language students would then have the opportunity to become captivated with the visual and sound

capabilities of computers. The Technology Coordinator guides teachers and students on the uses of technology - on how to use computers, how to design lessons integrating computers in the learning process, and how to effectively model using computers in the classroom. Ideally, all language teachers will use computers to enhance teaching, because they will see themselves as facilitators in the classroom providing activities that address the different learning styles and levels of language competency of their students.

References

Blake, R. (1999). *Technology, multimedia, and second language learning*. University of California, Davis,. Retrieved February 19, 2005 from the McGraw-Hill World Languages Web site: http://www.mhhe.com/socscience/Passport/spotlight.html

Brooks, G. B., & Brooks, M. G. (1993). *In search of understanding: The case for constructivist classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development.

Brown, J. S. (2000, March/April). *Growing up digital - How the Web changes work, education, and the ways people learn. American Association for Higher Education - Change* Retrieved February 19, 2005, from http://www.aahe.org/change/digital.pdf

Chapelle, C.A. (2001). *Computer applications in second language acquisition; Foundations for teaching, testing and research*. Cambridge: Cambridge, UK: University Press.

Collins, J., (2004) *Research into practice. Learning & leading with technology, 32 (4).Retrieved from* http://www.iste.org.

Cuban, L. (2002). *Oversold and underused - Computers in the classroom*. Boston, MA: Harvard University Press.

Dick, B. (2002) *Grounded theory: A thumbnail sketch.* Retrieved January 17, 2005, from University of Santa Clara, Action Research Resources Web site: http://www.scu.edu.au/schools/gcm/ar/arp/grounded.html

Dickard, N. (2003). *EdTech 2002: Budget challenges, policy shifts and digital opportunities*. In N. Dickard (Ed), *The sustainability challenge: Taking EdTech to the next level* Center for Children and Technology, Education Development Center, Inc. Retrieved from http://www.benton.org/publibrary/sustainability/sus_challenge.pdf.

District Technology Plan (2001-2004). *Instructional technology long range technology plan 2001-2004*, Retrieved January, 2003, from http://www.nps.k12.nj.us/techplan.html

District Technology Plan (2004-2007). *Instructional technology long range technology plan 2004-2007*. Retreived February, 2004 from http://www.nps.k12.nj.us/techplan.html

Domke, D. (1991). Creative *Activities for teaching English as a Foreign Language*. ERIC Clearinghouse on Languages and Linguistics, Washington DC.(ERIC Document Reproduction Service No. ED 333 713). Retrieved February 19, 2005, from http://www.ericdigests.org/pre-9220/english.htm

Dudeney, G. (2000). *The Internet and the language classroom. A practical guide for teachers*. Cambridge, UK: Cambridge University Press.

Dupuy, B. (2002). *Foreign languages and technology: Easy, successful and cost effective ways of connecting curricular content and technology to optimize instruction and learning*. Glendale, CA: L2Educator.com, LLC. Available:http://www.L2Educator.com

Egbert J. L. & Jessup L. M. (1996). Analytic and systemic analyses of computer-supported language learning environments. *Teaching English as a Second Language or Foreign Language (TESL-EJ)*. 2(2A-1) Retrieved February 19, 2005 from http://www-writing.berkeley.edu/TESL-EJ/ej06/a1.html

Felix, U. (2001). *Beyond Babel: Language learning online.* Melbourne: Language Australia Ltd.

Fosnot, C. T. (1989). *Enquiring teachers, enquiring learners: A constructivist approach to teaching.* New York: Teachers College Press.

Genzuk, M. (n.d.) *A synthesis of ethnographic research. Retrieved* February 19, 2005 *from* University of Southern California, Center for Multilingual, Multicultural Research web site: http://www-rcf.usc.edu/~genzuk/Ethnographic_Research.html

Hamman, R. (n.d.). *History of the Internet, WWW, IRC, and MUDs. Retrieved* February 19, 2005, from University of Liverpool, England, Dept. of Communication Studies Web site: http://www.socio.demon.co.uk/history.html

Hird, A. (2000). *Learning from cyber-savvy students: How internet-age kids impact classroom teaching.* Sterling, VA: Stylus Publishing, LLC.

Kung, S. & Chuo, T. (2002, June) Students' perceptions of English learning through ESL/EFL websites [Electronic

version]. *Teaching English as a Second or Foreign Language*, 6(1). Retrieved February 19, 2005, from http://www-writing.berkeley.edu/TESL-EJ/ej21/a2.html

Lee, E. A. (2000). *A study of the effectiveness of interactive multimedia in adult ESL education* (Report No. AAT 9970976. New Brunswick, NJ: Rutgers, The State University of NJ. Eric Document Reproduction Service No. 0-599-76029-x.

Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization.* Oxford, UK: Oxford University Press.

McKenzie, J. ((2000). *Beyond technology: Questioning, research and the information literate school.* Bellingham, WA: FNO Press.

Meyer, A. & Rose, D. H. (1998). *Learning to read in the computer age.* Cambridge, MA: Brookline Books.

New Jersey Department of Education (2004). *New Jersey core curriculum content standards for technological literacy.* http://www.state.nj.us/njded/cccs/s8_tech.htm

Oppenheimer, T. (2003). *The flickering mind. New York:* Random House Publishing Group.

Osuna, M. M. & Meskill, C. (1998). Using the World Wide Web to integrate Spanish language and culture: A pilot study *Language Learning & Technology,* 1(2), 71-92.

Parham, J. (2001). The *successful technology coordinator.* TechLEARNING. Retrieved December 20, 2004, from http://www.TechLEARNING.com/db_are/archives/WCE/archives/parham.html

Pflaum, W. D. (2004). *The technology fix - The promise and reality of computers in our schools.* Alexandria, VA: ASCD Publications.

Rogers, E. M. (2003). *Diffusion of innovations (5th ed).* New York: Free Press, Simon & Schuster, Inc.

Sandholtz, J., Ringstaff C. & Dwyer, D. (1997). *Teaching with technology, creating students centered classrooms. New York:* Teachers College Press.

Schacter, J. (1999). The impact of educational technology on student achievement: What the most current research has to say. Retrieved April 2, 2005, from http://www.mff.org/pubterms.taf?file=http://www.mff.org/pubs/ME161.pdf

Sheingold K., Hawkins, J. & Kurland, D.M. (1984). *Classroom software for the information age* (Report No. 22). New York: Center for Children and Technology.

Shelly, G. B., Cashman, T. J., Gunter, R. E. & Gunter, G. A. (2002). *Integrating technology in the classroom, 2nd Edition, Course Technology*. Boston: Thomson Learning.

Sotillo, S. M. (1997, December). English-as-a-second-language learning and collaboration in cyberspace. *The Technology Source*. Retrieved February 19, 2004 from http://ts.mivu.org/default.asp?show=article&id=497.

Sperling, D. (1997). *The Internet guide for English language teachers*. Upper Saddle River, NJ: Prentice Hall Regents.

Spradley, J. (1979). *The ethnographic interview.* New York: Holt, Rinehart and Winston.

Strauss A. & Corbin J. (1998). *Basics of Qualitative Research: Techniques and procedures for developing Grounded Theory. (2nd ed.)*. Thousand Oaks, CA, Sage Publications, Inc.

Tapscott, D. (1998). *Growing up digital - The rise of the net generation*. New York: McGraw-Hill.

Thompson, A., Simonson, M., & Hargrave, C. (1996). *Educational technology: A review of the research. (2nd ed)*. Washington, D.C.: Association for Educational Communications and Technology.

Thornburg, D. (2002). *The new basics: Education and the future of work in the telematic age*. Alexandria, VA. Association for Supervision and Curriculum Development.

Tomlinson, C.A., (2001). *How to differentiate instruction in mixed-ability classrooms (2nd edition)*. Alexandria, VA. Association for Supervision and Curriculum Development.

U.S. Census Bureau, Statistical Abstract of the United States: (2001). *Education*. Retrieved from http://www.census.gov/prod/www/statistical-abstract-04.html

U.S. Department of Education National Center for Education Statistics. (2000). *Teachers' tools for the 21st century – A report on teachers' use of technology*, National Center for Education Statistics.
Retrieved from http://nces.ed.gov/surveys/frss/

Warschauer, M. (1996). *Computer-assisted language learning: An introduction*. In S. Fotos (Ed.), Multimedia language teaching (pp. 3-20). Tokyo: Logos International. Retrieved February 19, 2005, from University of California, Irvine, Department of Education Website: http://www.gse.uci.edu/markw/papers.html

Appendix A
Informed Consent Form

SETON HALL UNIVERSITY
1 8 5 6

INFORMED CONSENT FORM FOR PARTICIPANTS

January, 2004

Dear Teacher,

As a Doctoral student at Seton Hall University, I am requesting your permission to participate in a research study examining the perceptions of World Language and ESL teachers who use computers, and in particular, the World Wide Web, for instruction.

EXPLANATION OF THE RESEARCH

The use of Computer Assisted Language Learning (CALL) has played and continues to play a significant instructional role in the language classroom. Thus, this research attempts to analyze how computers benefit and/or facilitate students' language learning. Which patterns, trends or factors encourage or convince Language teachers to utilize computers as an instructional tool? Ethnographic research methods will be applied exploring perceptions of language teachers utilizing computers as an instructional tool.

DESCRIPTION OF THE PROCEDURE

If you agree to participate in this study, a series of interviews will be conducted, each lasting up to an hour. You have the right to review all or any portion of the tape at any time. Tapes will be kept by the researcher in a secure place for a period of five years. After the three-year period, tapes will be destroyed and discarded.

College of Education and Human Services
Department of Education Leadership, Management and Policy
Tel. 973.761.9397
400 South Orange Avenue • South Orange, New Jersey 07079-2685

PARTICIPATION IS VOLUNTARY

Participation in this research is completely voluntary. If at anytime you want to stop the interview or no longer wish to participate, you are free to do so. You will not be penalized for deciding not to participate once the interview has started.

CONFIDENTIALITY

Information that is obtained in connection with this research study that can be identified with you will remain confidential and will only be disclosed with your permission. Tapes will be kept in a locked cabinet and only the researcher will have access to the tapes.

THERE ARE NO RISKS TO PARTICIPANTS

I assure you that there will be no negative consequences in choosing to participate.

BENEFITS OF THE RESEARCH

Your participation in this research will enrich our understanding of how computers are used as an instructional tool in the language classroom

AUDIO –TAPED INTERVIEWS

Your permission is required before the interviews can be audio-taped. You have the right to review all or any portion of the tapes and request that they be destroyed. All tapes will be stored in a locked cabinet for a period of five years and will then be destroyed.

CONTACT INFORMATION

If you have any questions regarding this study, you can contact me at by calling the Seton Hall University Department of Education at (973) 761-9394. I will gladly answer your questions.

College of Education and Human Services
Department of Education Leadership, Management and Policy
Tel. 973.761.9397
400 South Orange Avenue • South Orange, New Jersey 07079-2685

ENRICHING THE MIND, THE HEART AND THE SPIRIT

APPROVAL OF THE INSTITUTIONAL REVIEW BOARD

My research proposal has been reviewed and approved by Seton Hall University Institutional Review Board for Human Subjects Research (IRB). The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached at (973) 275-2977 or 313-6314.

Respectfully yours ,

Mario Santos
Researcher
Seton Hall University

I have read the material above, and any questions I asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I may withdraw without prejudice at any time.

Please sign (optional) and return the consent form to my attention. Consent to participate is indicated by returning this form to the researcher. You are welcomed to keep a copy for your records.

_____ _____

Signature or Authorized Representative Date

College of Education and Human Services
Department of Education Leadership, Management and Policy
Tel. 973.761.9397
400 South Orange Avenue • South Orange, New Jersey 07079-2685

Appendix B
District's Technology Plan - 2001-2004

Summary of District Goals and Objectives 2001-2004

GOAL 1: Provide support to build upon existing technology base and expand its range to implement new and future information and communication technologies to effectively meet the needs of all learners in their classrooms, schools, communities and homes.

Objective 1.1: Existing schools and new construction will be wired and equipped for distance learning with broadband capability enabling teachers and students to access rich on-line content and share information across the Internet.

Objective 1.2: Provide a process to identify sustained and predictable funding sources to support the growth and expansion of technology resources.

Objective 1.3: Provide a process to maintain and upgrade existing technology and replace obsolete equipment within the school District.

Objective 1.4: Collaborate with District offices and community stakeholders in developing plans to identify resources and opportunities that provide access to the Internet and digital content across the curriculum in schools, communities and at home to address the needs of diverse student populations.

Objective 1.5: Explore opportunities to pioneer and infuse emerging technologies and concepts in instructional programs to keep students and teachers at the forefront of the technology frontier.

Goal 2: Provide educators with consistent ongoing professional development opportunities to prepare them to use technology effectively to improve teaching and learning.

Objective 2.1: Improve the quantity and quality of professional development activities to assist teachers in increasing student achievement of the Core Curriculum Content Standards.

Objective 2.2: Provide professional development activities that focus on instructional strategies designed to improve student achievement.

Objective 2.3: Use themes and a variety of professional development strategies to improve instructional support to teachers, focusing on using technology effectively to help students learn.

Objective 2.4: Improve the preparation of teachers in using technology effectively to support student academic achievement.

Goal 3: Provide students with technology and information literacy skills.

Objective 3.1: Students will use technology appropriately and responsibly as guided by our Acceptable Use Policy and filtering system.

Objective 3.2: Students will demonstrate proficiency in the use of technology skills to locate, evaluate, collect information, and communicate this information effectively.

Objective 3.3: Students will use technology resources to develop strategies for solving real-world problems and making informed decisions.

Objective 3.4: The District will strengthen its partnerships with industry and the higher education community to ensure that the specific technology skills in demand are being taught.

Goal 4: Use research, evaluation, and best practices of effective technology usage to enhance teaching and learning.

Objective 4.1: Continue research and evaluation on state-of-the-art technology applications for teaching and learning.

Objective 4.2: Assist schools in identifying and replicating "best practices" that have enhanced teaching and learning.

Objective 4.3: Use technology to improve the assessment of faculty and students.

Goal 5: Use digital content and networked applications to provide instruction to result in higher levels of student achievement.

Objective 5.1: By the year 2004, technology will be integrated into 75% of all school curricula areas to support the Core Curriculum Content Standards ~~to~~ lead ~~to~~ greater student achievement.

Objective 5.2: By the year 2004, all XXX Public School divisions will develop approaches to infuse technology into their instructional areas.

Objective 5.3: By the year 2004, 75% of school staff and administration will be technologically literate, and will share information, collaborate on projects and utilize networks and digital content in support of the Core Curriculum Content Standards.

Objective 5.4: By the year 2004, student-centered learning environments will be developed in 85% of XXX schools.

Objective 5.5: By the year 2004, 90% of XXX schools will have the necessary materials for the development of innovative approaches of infusing technology into the learning environment in support of the Core Curriculum Content Standards

APPENDIX C
DISTRICT'S TECHNOLOGY PLAN - 2004-2007

Three Year Goals and Objectives

Goal 1: Provide the infrastructure for future growth of technology within existing schools and new construction, and design communication networks to connect today's learners in the schools, the community, and in the home.

Timeline: 2004- Ongoing

Objective 1.1: Design and maintain networks that optimize the District'scapacity to deliver rich content and provide advancedconnectivity that can support multi-media and telecommunication services via current and future broadband solutions.

Objective 1.2: Develop a process to effectively manage the District's Wide Area Network (WAN) and school based Local Area Networks (LAN).

Objective 1.3: Continue to review and examine existing technology inventoryand research the feasibility of procuring new equipment and technologies.

Objective 1.4: Collaborate with school district offices and community stakeholders in developing a plan to identify opportunities that provide access to technology resources (e.g., Internet, digital content) that enrich the learning experience and address the needs of all students and their families.

Goal 2:Require educators to engage in recognized research based ongoing professional development technology related experiences that impact on pedagogy and student achievement.

Timeline: 2004-Ongoing

Objective 2.1: Improve the quantity and quality of professional development activities to assist educators in increasing student achievement through the Core Curriculum Content Standards.

Objective 2.2: Provide recognized research based professional development activities that focus on instructional strategies designed to improve student achievement.

Objective 2.3: Use themes and a variety of professional development strategies to improve instructional support to educators, focusing on using technology effectively to enhance student achievement.

Objective 2.4: Improve the preparation of educators in using technology effectively to support higher standards of student academicachievement and educational leadership.

Goal 3: Provide learners with opportunities to become information literate, independent users of technology, by problem solving, researching and accessing information relevant to all areas of the learning process, in order to successfully function in the twenty-first century.

Timeline: 2004-Ongoing

Objective 3.1: By 2007, all students and staff will recognize and practice responsible social and ethical behaviors when using technology and information, and understand the consequences of inappropriate use.

Objective3.2: By 2007, provide resources to ensure that 90% of students will demonstrate basic knowledge, skills and tools to gather, analyze, and apply information and ideas.

Objective 3.3: By 2007, all students will have equitable and easy access to effective and engaging software and online resources to gather, analyze and apply information and ideas.

Objective 3.4: By 2007, increase our partnerships with industry and the higher education community by 50%.

Goal 4: Use best practices, research and evaluation of technology to enhance teaching and learning.

Timeline: 2004-Ongoing

Objective 4.1: By June 2007, the Newark Public Schools will research and evaluate state-of-the-art applications for teaching and learning in the Core Curriculum Content areas.

Objective 4.2: By June 2007, all schools will identify and replicate "best practices" that have enhanced teaching and learning.

Objective 4.3: By June 2007, technology will be used to improve the assessment of 75% of the faculty and 50% of the students.

Goal 5: Integrate instructional practices with the capabilities of modern technology, namely networked applications and digital content in an overall effort to improve student achievement.

Timeline: 2004-Ongoing

Objective 5.1: By the year 2007 technology will be integrated into 90% of all school curricular areas to support the Core Curriculum Content Standards and to lead to greater student achievement.

Objective 5.2: By the year 2007, all students will have greater access to digital content and technology tools.

Objective 5.3: By the year 2007, all Newark Public School Divisions will infuse technology into their instructional areas.

Objective 5.4: By the year 2007 90% of Newark schools will have the necessary materials for the development of innovative approaches of infusing technology into the learning environment in support of the core curriculum content standards.

Objective 5.5: By the year 2007 75% of school staff and administration will be technologically literate, and will share information, collaborate on projects and utilize networks and digital content in support of the Core Curriculum.

Appendix D
NJ CCCS - World Language

Standard 7.1:
All Students Will Be Able To Communicate At A Basic Literacy Level In At Least One Language Other Than English

Descriptive Statement: Meaningful communication is the exchange of thoughts, messages, or information through speech, gestures, behavior, or a combination of these. It is through communication that we express ourselves and transmit or receive information. For these exchanges to be meaningful, students need to communicate about, understand, and interpret written or spoken language on a variety of topics in the language studied. The key to successful communication is knowing how, when, and why to say what to whom. This standard thus focuses on interpersonal communication.

Cumulative Progress Indicators

By the end of Grade 4, students:

1.	Respond to and initiate simple statements and commands such as greetings, introductions, and leave-taking.
2.	Express attitudes, reactions, and courtesy using short phrases and simple sentences.
3.	Express likes, dislikes, and preferences.
4.	Describe people, places, things, and events using short phrases and simple sentences.
5.	Provide and obtain information on familiar topics.
6.	Express basic personal needs.
7.	Identify some common and distinct features, such as parts of speech and vocabulary, among languages.

Building upon knowledge and skills gained in the preceding grades, by the end of Grade 8, students:

8.	Create and respond to simple phrases, questions and sentences.
9.	Describe people, places, things, and events with some details.

10.	Generate and respond to short messages such as invitations, directions, announcements, and appointments.
11.	Interact with appropriate responses in limited social settings and basic situations.
12.	Express details of their everyday lives and of past experiences.
13.	Engage in original and spontaneous conversation in the language studied.
14.	Organize thoughts into coherent oral speech.
15.	Explore employment opportunities where languages are advantageous.
16.	Identify common and distinct features, such as prepositional phrases and clauses, among languages.

Building upon knowledge and skills gained in the preceding grades, by the end of Grade 12, students:

17.	Communicate and interact in a limited range of task-oriented and social situations.
18.	Respond to statements and initiate and sustain conversations with increasing linguistic accuracy.
19.	Understand a sustained conversation on a number of topics.
20.	Comprehend fluent speakers in everyday situations .
21.	Communicate orally with increasing logic and accuracy.
22.	Research language-related employment opportunities.
23.	Identify common and distinct features, such as grammatical structures, among languages.

Appendix E
World Language / ESL Teachers Roster

ESL & World Language Teachers in the District

SCHOOLS	GRADE LEVEL	English as a Second Language (ESL) TEACHERS	WORLD LANGUAGE TEACHERS
1	PK-8	5	2
2	1-5	1	1
3	K-8	6	2
4	PK-K		
5	K-8		1
6	UNG		0.5
7	PK-8		1
8	PK-1	1	1
9	K-8		1
10	PK-4	1	1
11	K-4	2	1
12	PK-8	1	1
13	5-8	1	1
14	PK-4	1	1
15	K-8		1
16	3-8		1
17	K-2		1
18	PK-4	4	1
19	PK-5		1
20	PK-3		
21	PK-8		1
22	PK-5		
23	K-4	4	2
24	PK-6		1
25	K-8	2	1
26	K-8	2	1
27	K-4	1	1
28	K-4	4	1
29	6-8		1
30	PK-8	2	1
31	K-8		1
32	PK-8	1	2
33	7-8	2	1
34	K-8	4	1
35	K-8	1	1
36	PK-8	4	1
37	PK-K	1	
38	K-5	1	
39	PK-5		1

	GRADE LEVEL	English as a Second Language (ESL) TEACHERS	WORLD LANGUAGE TEACHERS
40	K-8		1
41	5-8	2	1
42	PK-6	1	1
43	n/a		
44	PK-8	3	1
45	5-8	0.5	1
46	PK-7	3	1
47	K-8		1
48	K-8	6	1
49	PK-8	2	1
50	PK-4	1	1
51	K-8	2	1
52	PK	1	1
53	K-4	1	1
54	K-5	1	1
55	PK-8		1
56	K-4		1
57	PK-8		1
58	PK-8	2	1
59	PK-8		1
60	PK-6		1
61	6-8	2	2
62	K-8	0.5	1
63	K-8	5	1
64	PK-K		
65	5-8		1
66	9-12		3
67	9-12	4	7
68	9-12	2	2
69	9-12	8	7
70	9-12		3
71	9-12		1
72	9-12		3
73	9-12	1	3
74	7-12		3
75	9-12		3
76	9-12		3
TOTAL # OF TEACHERS		100	100.5

Appendix F
Open Coding Process

In this study, data is broken down into a series of steps. First, each transcript is color coded as a means to identify participants. Next, key words or phrases were highlighted based on similarities or differences and then grouped under more abstract terms called categories (Corbin & Strauss, 1998). Categories and subcategories that emerge from transcribed interviews, during the initial phase of the research process, are as follows:

ACCESS to using computers and the Internet

Computers (in the classroom / home)

At least two. My class doesn't have one. In my floor we have the computer lab with all the equipment. So I guess that's the reason. I don't know what the reason is, but every other classroom in that floor doesn't have computers.

Why I don't have computers in my classroom, because they didn't give me one.

They didn't give me one. You're going to get computers. You're going to get computers. They didn't give me computers yet.

At the beginning we didn't have access to the internet

Many students complain that they don't have computers in their homes. They say, "Mrs. ? that will make my work much easier." Easier because they don't have the tools in the classroom. How many students' have encyclopedias in the classroom? How many students' have the advantage to take the books home with them? I mean right now I have a total of 350 students' and I have a total of 60 books in the classroom

Schedule Conflicts

I began to use those four computers, and I began to rotate people. You know, I had a class like twenty-seven, thirty-thirty-five kids, high school. I began to rotate them. Four people at a time.

Now I have anywhere from twenty, twenty-five kids, right, and I only have two computers. Now it becomes a question of, "Who's going to be on those computers?" You can't service everyone at the same time. So what I did I had I mean these little charts with there names. Write down, you're getting on today. Next time we meet another two, or three children will be getting on like that. It was too limited just to have two. So as soon as I could I try to get more. So now I'm up to more computers. So now I'm up five computers in the classroom. So now there's enough rotation that most of the classes children are happy. Okay, they're not getting on today, but the next time they come, they're getting on, or maybe they'll skip two sessions, but eventually they're getting on. Where as before they may have to wait a month before they line up getting back on the computer.

They haven't made it possible for us to get into the Internet yet. The computer teacher has her own computer set up, and the students can go on there. The problem is scheduling it so that I can bring some classes down. What I can do at this point is, we have the Spanish World Language Club, which meets on Fridays, and the class is smaller. I already spoke to her. I said, " I could come down at that period with a smaller group, and then maybe other students in that computer room I could go and get on the Internet."

Again, I got to keep jotting down who went on, because they'll notice. They'll tell you right away. "Hey, he went on last week." "How come he's going on again?" So you have to keep track of who's getting on those computers for the twenty minutes. Then another set of children gets on for another twenty-minutes. By that time, class is over. So you get every two sets of children. You get five computers. You can wind up getting ten kids at a session. The next time it's another ten kids in the class.

The computer lab is on the floor below me. Right? It's not a problem. There's maybe a scheduling problem. Right now for that Friday, there isn't. I'm going to go and explore that on that particular period. Will I have access on a more regular basis? Will it expand to the point where at least once a day I'll take out a class down there? That would be great. Will the World Language Teachers be able to do that, and stuff like that? When they go out of the classrooms of another teacher, will that other teacher allow them to put in the programs and let those students go there. Let's say a teacher has three

computers in that. Will the homeroom teacher say, "Go ahead, you can use it, " while your there. Then yes. Then they'll take advantage of it. I would believe. I would hope they do, but if they don't have access to it, then I don't see it going to far

I have my students once a week. We have lab once a week, not everyday. I don't have a computer in my class. Which is bad. I have access to. All my students have, I have a program for my students, the interactive program.

I'm thinking instead of going once a week, hopefully I will have a computer in my classroom all the time where they kids will be able to use it all the time

The computer programs it's like everything they do have their limitations, but the computer programs like in my classroom, right now my computers are not connected to the internet, nor my computers are connected to the network. The chance is that in this computer I could have three different programs at the same time, and I could have the students' working at the intermediate, middle, and advanced level.

Right now maybe twice a week. It depends on the schedule, and for the most part we use the computers in the classroom every other day.

I began to use those four computers, and I began to rotate people. You know, I had a class like twenty-seven, thirty-thirty-five kids, high school. I began to rotate them. Four people at a time. I then used an overhead projector to extend the activities from here and then handouts and books for the rest of the class. The Principal came around all the time seeing this. All of a sudden when I went on vacation and I came back, he had taken the computers from everybody. Which everybody was happy about. Nobody was complaining. He made a lab for me.

Staff Development/Support

First of all the computer person there, I don't know how much she knows about computers. Anyway as soon as she read my resume that I new a little bit about computers, she got violent. She didn't want me to touch any computers. There were two workshops during the year, the staff development. I couldn't go to any workshops because they were for twenty-five teachers, and there were not funds for me and I was a Spanish

teacher. So they didn't let me go into the workshops. Once I tried to sneak in as a and she got very nervous, and defensive. "No your not suppose to be here." I had to get up. I had to go sit in the cafeteria for a whole day.

There was no support from the administration. There was no support from anybody. Some teachers supported me, some teachers didn't.

INSTRUCTION (using computers in the language classroom)

Animation (Graphics & Sound)

When you have technology you know the colors, the graphics, the animation, the speakers they're never tired.

With the use of technology you can make that experience vivid, and you can cover all kinds of situations into one place, or being in that specific situation. So technology exposes you to all kinds of use of a single situation.

Well because like I told you, the book is very limited. Let me give you an example: If I'm teaching the colors, if you look at the book. The book will give you the basic colors. Where that's not enough for me. I would like the students to visualize an object and picture the object with the color. So when they go to the computer lab they do have the opportunity to find pictures, and match the picture with the color. They found it was very interesting. We have done it with the colors. We have done it with days of the week, numbers, math problems, and they find that it's very challenging. Let's say, "Well Mrs. ? we already know the colors." "Let's move on to the next skills, for example." Let's say that we're doing numbers. Now we combine the numbers, with let's say, with the fruits, or the vegetable, and so on.

That's what I found this also interesting, because I did a project about Miss America, and the at night. After the trip, and after going to the website. Have to play that, talk about it. I have to have all the information. I told them okay, "No quiz this week." "Instead you're going to write a project, and you're going to make a presentation about the and about everything you learned during this week." So that was it. Some of them chose to do a PowerPoint presentation, which is great. Some others hated it just to be in the computer lab searching the information. They were so illiterate when they're using the computer. They

didn't know what… was…PowerPoint. They didn't know how to ultimately document a word. They were terrible. They were bad, and I can see those differences. In other instances I wouldn't appreciate that at all. Some of them get to learn a little of what PowerPoint was, and they got to see the presentation that they're peers did. It was pretty good. They did it with the sounds, and the graphs and everything. So they kind of like it. Now they're more interested in learning computers, and learning how to do that and stuff. One of my students also created. I guess he's kind of good. He likes PowerPoint. Created a PowerPoint presentation about him and his girlfriend and why men like booties. See everything with teenagers is related to. If I show the presentation the other students are going to get interested in using the computers. Learning computers, and learning PowerPoint. Something that I cannot do by telling them, look do this. Are you interested in this? On the other hand I'm going to be showing the PowerPoint presentation about a booty. The booty of you're girl. I showed them. They kind of got fun from it.

Assessment

Well that's a very interesting question, because I'm basically, I'm the one accessing the students'. You might find in the web a particular sight that you will answer the questions and then at the end they will give you a total. For example, they said twenty out of fifteen will give you these, ten out of this, but you know I think it's not so much that the web is accessing the students'. The students' are accessing themselves, and I'm accessing the students'.

Yes. I don't believe that it's the web, or the internet that's accessing the students', because as they keep on let's say writing, as they keep on looking for words, or looking for phrases, or matching pictures. They will get a sense of how much I could do in this language. "Oh wow Mrs. ?, I was able to do the colors, or I was able to match the with morado, or I was able to match Amarillo con with the sun. My students' keep up with their progress. Not the web, or the Internet. They keep up with the progress, and I keep up with their progress.

Exactly, exactly. You don't really have to wait for the next day to give them a score. No you give them the score right there and then.

I go on the computer. I tell them the grade. If they insist they want to see the grade, or want to see the quiz, I print the quiz. They could see it. What's is right. What is wrong. I always review after the quiz, though. It's not like they're never going to see the quiz. After we finish the quiz, we get to go answer-by-answer, question-by-question. Putting right answers. So they immediately know what is there, or if they're passing on the quiz. I tell them the grade. This helps me to solve a lot of problems like with quizzes, because now it is on the computer, it's on the hard rive. So they can, you know, anytime that they could go back and look on a quiz. If not, if I give them a print copy, a hard copy of the quiz. If they lose it I still have the copy on top of it.

you know it's not the typical, "Okay here's a quiz with a paper."

It's not just computer. Everybody likes it to begin with, and then this is easier, because as soon as they finish the quiz, maybe ten minutes later they know their grades, and it doesn't matter how large the class is. They see the grades, or when I'm working the computer, I think they'll like it to. They tell me they like it, because as soon as they homework by class administration, or whatever grade, they'll see how they're final grade is changed immediately. You know, not like if I was doing it by hand. Okay today you have 90 in you're homework. What does that mean overall for a final grade. It means just a C or a D. With a computer I put 90, and the final grade shows me that he's still a C. He might need some extra credit, because he's at 89C, or 79C is very precise. Yeah, it's precise. They love it, and some kids would come to me professionally I know, when it's the last week of the cycle. Everybody wants to see their grades, and everybody wants to see if they're low C, or high C. If they can do anything to get to the other grade average. I know they like Office Smart. Maybe I assume they like Office Smart.

We have a program there's a teacher assessment program. So I can go in, put the name, and I can see. I can see their scores. So it's like they can see, and I can print it out. They can see, "Okay this is what I do." Even though I grade them, but it's like a holistic kind of grading. How much have they've done for themselves, really.Their lab grade is not the same grade as if they were too, for example, when we grade in class, it's simply, "Okay you're getting 70 percent, 90 percent." I can see, for example, somebody may get 100 %. Where they had 100%, but they spent five minutes to do the exercise. I look at how long it

took you to do the exercise. If you get 80%, and it only took you two minutes. So for me it's like I can see the of that. You really customize it to the child to see how much they have progressed. So I brief them on that, on the progress, and so forth. Not just, "Okay you have A,B, and C."

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Behavior Modification

We don't have discipline problems. For example, High School, these Brazilian kids they like to talk too much. Talk and interrupt, and some of them come here because they won't to be here. You know.
They come here with their parents because their parents want to make money here and work, and then they're dragged into the states. Some of them don't even want to be here, and then sometimes in High School where there's discipline problems.

They would go to the computer. I would give them handouts, or read them short novel, or short text. Anything to go with what they were doing with the software. It worked beautifully. No discipline problems. No nothing. Everybody loves it.

There's a discipline factor here. They will get on if they're behaving. If they're not
behaving then they're going to have to wait longer. They may miss this week, and have
to wait until next week. So, that helps to. It helps the discipline.

It just gives me a framework. They come in, and you know usually we do some type of opening exercise. Then immediately after that I start assigning people to those computers, and who gets assigned? Well, who hasn't gone on, and who's listening at this point. Who is actually focused, and they get on and of course as soon as they're all filled. You know it's ~~interesting~~ to watch their faces. One person is on there. There's five computers. One, two, three, four. One computers left. They're still like this. They're still listening. They're still sitting up straight. The minute I put that last person on they're like. Then I go wait a minute, wait a minute. That's the first round, okay. There's still a chance that they're coming off, and then another set is going to come on. They're not to sure if that's going to happen or not. They wanted to go on that first round.

Those kids you want to give them something different in Spanish. They're amazingly patient, most of them. They'll sit through the basics of, "Como estas tu", "Hoy es Martes

Yes. I know we tell them, especially a child that's having problems with the grade. Sometimes I would tell them, "You're not really comfortable." "Why don't you study?" They don't study. So what I would do is I would put him against somebody else. So why don't you play tic-tac-toe, and I said, "Just because I want him to go back and study." He wouldn't study, because when you're playing tic-tac-toe you don't know the right answers. So naturally you don't know it. The reason you don't know it's because you didn't study, and you didn't get the concept. That makes them really work harder, and that's competition. Because sometimes, like, so what if he gets A or B. They don't care about grades so much, but if I beat you in a game I think it's more challenging to me than you getting an A, or I get a B. If I just get a D that's fine with me, because I will pass. But if you beat me that game, I don't like that.

The challenge of the competition. The challenge of the game for them is even more important than the grade. I can have a child who has it, especially a child who has like, usually gets A's, and a child who gets a C gets furious. How can he beat. So that's a challenge for them.

Every time you tell the kids to open the books they look at you, and then you have to repeat it again, "Open the books," and then they look at you once again. However when you go to

the computer lab all you have to do is sign in, log in, and boom in a matter of seconds they will do it.

Automatically they go to their computers. You don't really have to tell them, "Okay guys will you please log in." No automatically they go to their computers. They sign in, and they're ready for you. "Okay Mrs. ? what is it that we have to do?" I wish I could have twenty-four computers in my classroom, because that would make my job much easier.

I would say that, because the minute the students' would walk into you're classroom they will go straight to the computers. They don't have to look for excuses. "Oh Mrs. ? can I please go to my locker, I just forgot my pencil." "I just forgot my notebook." "I just forgot my dictionary." So this way all they have to do is walk in, log in and start off immediately. You don't really have to waste anytime.

Not only that but when you're on the computer you're looking straight up the monitor, because Usted esta mirando porque sabe la pentalla. In the classroom you have interruptions. You have the phone is ringing. You have a student my teacher needs a paper. Now if you are in the computer I don't know whether this is magical or not, but you're looking straight at the monitor. When you're in the classroom you're looking at what is it that you're neighbor is doing next to you. You're looking at you're teacher. You're looking at you're books. You're looking at a different page. I have seen it everyday. So when I go to the computer I'm going to say, "Oh thank you Jesus," because all they have to do is look at the monitor, looks at the agenda, and listens to Mrs. ?, because they don't really have to look at me. I like my students' looking at me. They're very concentrated.

Challenges

Well when it comes to basic vocabulary they really try. "Hola, Buenos Dias, Como estas?" They're really responding. You know you be surprised how kids could adjust to different languages at the same time, and they don't complain about it. We might complain about it, but they don't complain about it because it's a challenge. It's a real challenge, and they like to be challenged. Kids don't want to be limited. I don't want you to limit me, because I already know, "Hola Buenos Dias." No, buenas tardas, como estas, como ti sientes. We can't do that to the kids. Especially when it comes to language acquisitions

they like to be challenged. They will respond to it if you give them the proper tool.

Very much. Very much, because remember the students' want to know more than the computer. This is a tool. Okay I'm the teacher, and you mention, "Oh Ms. ? you're the expert, and then I say, "Do you know Im not the expert right?" Then let me put it to you this way, I'm the teacher but the student will challenge me. Let me see how much Mrs. ? knows. Not necessarily let me see how much do you know Mrs. ?, but you have to be ready for the kids whenever they ask you a question. I mean you better be ready. Well this is the computer, and this the student. Now this is the student challenging the computer. So instead of the computer challenging the student, the student will be challenging the computer, because they say wait a minute you're the computer, but I'm going to give you the right answer, okay. Simple because that's what they look for. They want to give the computer the right answer. If they don't give the computer the right answer automatically they get upset. Wait a minute let me go back, and let me see what did I do wrong so the computer will be happy with me, and I'm going to be happy with myself. I don't know but that's the way that I see it. You have the teacher here, you have the computer. I mean I have seen the computer challenging me, and I get very upset about it.

I simply don't agree with that, because I think you're limiting the students', and I don't think that we should limit the students'. I mean let's say that in the first stage I have the alphabet. Okay it's fine with me that we have the alphabet, but when if you look at the next page you know you would like for the book to show you, or to tell you as a teacher this is the way that I want you to help the students' pronounce the letters, or this is the way that I want you to put the syllables together, or this is the way that you're going to put the words in the sentences together. There's nothing with the book to help you with that particular. So why should I limit my students' only to the alphabet when I could extend from the alphabet to the syllables. From the syllables to the words. From the words to short phrases. So if you look at the book, you know the book would give you only the alphabet, followed maybe by the numbers one through ten. It's not telling them much. I don't want to limit my students'. You know like I say I like to challenge my students', but then if every time we have the opportunity to go to the technology lab then we have the opportunity to go from one skill to the next.

To make connections. To go back and forth. I think it's much easier.

By limited exercises I mean, you know let's say that we're doing the numbers. The book would present to you the numbers one through ten. I'm not satisfied with my students learning the numbers one through ten. So I would like to expand, now that you the numbers one through ten we're going to move on from eleven to thirty, or from thirty to forty. So I challenge my students, so when we go to the computers I say to my students, "Okay you have learned the numbers one through ten." "Now we're going to learn the numbers eleven through twenty." I challenge the students to look in the computer in the different Spanish sites. To look for the numbers, and the number words, and make a connection. Look for pictures.

Very simple. Let's say that I'm doing a report. All of a sudden I press the wrong key for whatever reason. The computer will display this will be worse than this and that. I'm not spending all this time reading all that information that you have given me. I'm going to try to do it myself. Even if I take a few words here and there. I don't need all that information. I'm going to do it myself. It's like the kids in my classroom. It's like if you say to one of the kids, "Okay, repeat after me, por ejemplo bien venidos." The kid will say, "Bien venadas por ejemplo." Entonces el dice, I didn't pronounce that correctly. Let me try that again. "Oh Ms. ? do me a favor will you please repeat that word for me." I would say, "Bien venidos." We're going to break that in syllables, because that's what the students' are looking for. Not "bien venidos". "Bien venidos." Would you like to try that, "bien venidos" right? So it's a challenge. He's challenging himself. Porque dice no pronuncio bien. Dejarme tratar otra vez. Entonces it's challenging Mrs. ?, porque me dice, "Mrs. ? mi lo tiene que repetir otra vez." Entonces as a teacher I have to say to myself would it be effective to say just repeat after me, "Bien venidos." No now I have to say let me find another word for this kid to pronounce this word more properly, verdad?" "Bien Ve-ni-dos" Entonces he's going to repeat syllables, and syllables. "Oh Ms. ? I didn't know is was that easy?" Usted sabe, porque we have to find the ways to meet the students' needs. That's how we do it. That's how I do it.

Definitely. They don't have the answers. They don't have the back of the book with the answers. They have to think, or they have to ask me. To challenge them a little bit. Again it all

depends on how motivated the student is to learn. I have a student. I have faith in my student. Sit down in front of the computer, and don't do anything. Don't do anything. Stop and say, "What happened?" Why can't you do it? I say, "I don't know." They say, "I just don't know." I can't do it because I need my books. So they don't do anything. So you know it depends. Some other students instead, they start opening up a new site on cyber, and they start searching for a dictionary. In which they can find maybe the meaning of the words that they need, or they come and ask me and stuff.
Everybody uses the web differently. The activities on the web don't usually offer you easy answers like a like a
for instance, or like in a normal classroom
Usually in my classroom I have two, or three, or five, or more. In Spanish it differs. The one of the non-native speakers don't know the answer for something, they just turn around and ask them if they have the answers. They didn't put any effort into it. In the computer lab the Hispanic students are busy doing their work too. Which is different than the language speakers. They get stuck there with the questions. They think out of it, or they ask me. Usually when they ask me I don't really give them the answers either. I just make them think, or make them associate with some of the English words that they may associate with. If definitely they can't, I help and I tell them this is it. This is what it means.

Comprehension

I know the children are more attentive when it was something visual like a video. I can
replay it until they finally understood the concepts. I can do same video, or I can use it
two, three, four times, and break it down for them. That builds up a lot of comprehension
for them.

I could see it, but I would be missing something that's really working for me. It would be like; it's like having the equivalent of having two teacher aides in your room.

It is and there is a connection there, because then you keep on adding more vocabulary to it. The students help you with new vocabulary. "Well Mrs. ? how do you say this in Spanish?" I say to myself, you know what this is very interesting. I'm going to ask the students' look for that particular picture. I will tell them, "Okay, now that you have a different picture, let's find the name of the picture." I don't really have to

translate for the students. I don't like to use translation. So we will find the name of the picture. I will put the name of that particular picture on the board, and then they will write the words. Automatically they will make the connection, and they keep on adding to whatever they already know.

Comfort Level

Those two particular programs that I have they are comfortable. All of them. There's very few that are not. They make it stop because they hit the wrong button. They may right click, instead of left. Especially with the younger ones. I have to keep telling them. Don't hit this part. If you don't have a printer. Don't hit the menu that has the printer, or it will jam. I think their comfort level; it's amazing that even the pre-k is comfortable.

It's like a question they take corrections better from the computer than they do from us, in other words. Like for me it's trying to correct it. Maybe a human being we take criticism harder from our peers, and from teachers than we would take it from a machine.

Personalities, or so forth to deal with. So I think that's why, because the machine is the machine. I guess the machine doesn't talk back to them and say okay, "Can you do this again." Maybe I'm having a bad day. You did a mistake. The machine will not do that. The machine would just say, do it again.

I think they're very comfortable, because I have to keep them away, for example, I have to tell them you cannot go on the Internet. I want them to really do specific assignment. Socialize. Getting on the web. Some of them are going to find other sites like, there is "Yahoo French." I think the children are very much into computers. Anything that you can do to is a learning experience for them. I would say they're different levels. This is where the program is better, because they can all have they're own pace.

The advantages are, because if you work on the computer, some of them tend to be more relaxed. Because being of course human, they would say something, and if they were wrong they can always go back and correct themselves. They feel like they're friendlier towards the computer, less shy. For example, if they're talking to me, and they say something it's always in the back of their minds, "Am I saying it right?"

Where they're saying to the computer they let themselves go. They're less apprehensive.

They're very comfortable with the games. They're very comfortable looking for new challenges in the website, in the computer. They're very comfortable writing their own research papers. Even if it is a one-page paper, they're very comfortable with, because you don't really have to translate word by word. I don't expect my students' to translate word by word. I want my students' to be able to recognize the language. That if they do see the language they recognize what it means.

Well they feel comfortable for the simple reason, let's say again we go to www.donquihote.com, and let's say we're doing the time. I will instruct my student's; okay we're going to do the time. Let's open up a certain site, or a certain skill that we're looking for. They feel very comfortable for the simple reason that they feel comfortable because they're getting the computer skills, but they're also getting the Spanish skills. They have the chance to listen to the pronunciation that is very important to the students', and they're making the connection with the picture, the word, and the pronunciation. They feel more comfortable about it, because for the most part they're working independently. How can I put this to you. Let's say that I don't know a word about Spanish, and you say okay, "Ana I want you to repeat after me." Well you don't know if the person that is sitting next to you is going to start laughing about you. So when they go to the computer they either have the chance to say, "Okay, computadora." They could say it softly. They could say between, quelladitos, and they feel okay, because they feel okay, here I am pronouncing, but this person and that person doesn't necessarily listen or looking at me. So they feel more comfortable about it. I mean there's no question about it, and then when you bring the students' back into the classroom to continue with the sane routine, they feel more confident about it.

Culture

They have exercises, and they have games, and so forth. So they're using computers everyday, and sometimes every week, once a week. Sometimes for example, for Mother's day we do special things. For Valentines Day we do cards, and so forth. If we have a project that we have to do in different interests

in French culture it's important. Basically what we work on every week is an interactive program.

We have grammar. We have listening skills. Cultural.

Cultural exercises. They have like tic-tac-toe, and they can play against each other. Tic-tac-toe is really good for them, because they love to play tic-tac-toe. They're also reinforcing the grammar. Right now we're trying to get away so much from teaching like grammar, translation grammar. That way they have to reinforce the language.

Yes they do, because about in November we celebrated Puerto Rico discovery day. That could be to that example. I'm going to be real brief about it. We went to the computer lab, and I said to my students, of course I prepare the kids with the vocabulary. We visited Puerto Rico through the Internet. I said kids, "Next week we're going to Puerto Rico." "Oh Mrs. ? are we going to Puerto Rico?" "Are you going to pay for the tickets?" I say, "No I don't have that kind of money, but we're going to Mrs.
Classroom." I guarantee you I'm going to take her to Puerto Rico. You don't have to leave the school. You don't have to leave the state. We went to the different sites of Puerto Rico, and the kids were fascinated. They had the opportunity to look at the pictures, compare the climate. Although the kids were not there in Puerto Rico, but just by looking at the pictures, and based on the story that we read about Puerto Rico, they felt that they visited the island. Because they saw the pictures. They saw the monuments, and they start to compare. ""Oh wait a minute, we don't have this in the United States, but we have that in Puerto Rico. They were asking me questions about, "El Cochi." "How come we don't have el cochi in the USA?" Simple, very short questions we were able to answer everything that was related. I shouldn't say everything because I shouldn't use that term. The web gave the kids a chance to go to Puerto Rico and visit the island, and learn about the geography. So let's say that one or two or a couple of students' maybe in the future will decide to go to Puerto Rico. They already have a picture of what Puerto Rico looks like from looking at the pictures in the web.

Dialogue

They're learning to recognize all those basics. They're learning to recognize their colors first of all. They're getting that. They're getting numbers, unfortunately, only up

to ten on that particular program that they're using. They're getting all the basics as far as certain vocabulary, and certain basic dialogue phrases. Like greetings. How's the weather? What time is it? Those little basic dialogue things. They're getting that. That one program that I mentioned. Now the other one does the same thing, but then it gets into other languages to. The "One Thousand One" extends the vocabulary.

They will respond back in French, or they may put some English into it, and so forth. But in my end I want them to really communicate in French .

I think it's because they're able to put it like, it's easier from the screen to just click, put it together, and say, "That sounds good." Plus it would reject it. Every time they try to put it, you know like, it would reject it. After it you get it together they would say, "Say the sentence."

I have created some dialogues that the students' will complete. Por ejemplo, Buenos dias. Maria will respond, Buenos dias. I have created some dialogues, and some words for my students'.

Well let's say that this dialogue is taking place between Madre and hija, and it's early in the morning. Well it will begin by, "Mama Buenos dias Maria." What do you think Maria will respond to her mommy? Buenos dias mama, and then continue with the dialogue, but of course before I present that dialogue to my students' I will give them a short introduction in the English language.

Okay that was my second point. Once I have given the introduction to the dialogue, while the students' are on their own. I want them to do it on their own, like I said to you. It's not so much at that point how they spell the words. That's not my concern. So once they have completed the dialogue where going to act out the dialogue in the classroom.

Actually they don't create they dialogue; they have to complete the dialogue. Por ejemplo, "Mama, Buenos dias Maria levatande." "Maria, no mama."

Differentiated Instruction

since the computer software has different levels, and different expectancies you can have a class with one kid here,

and one kid here and they are both challenged. That's one point you can make in your paper, that you know with a very structured lessons a teacher can face a situation in which a kid is too smart. You know get bored in his class, or vice a versa. A student that is too slow, or has a learning disability, or something like that is going to go over his head. However, with an appropriate software we can aim at every possible intellectual level in a class. You know it's arranged. You can have specific activities for each kid. Also you can have cooperative learning in which you program. You can do multiple tasks. I'm using the software things that I'm getting around here with elementary kids. I never worked in an elementary before.

Research is saying it's not the natural way to do things. A small percentage of people can learn that way. Most people don't learn. They learn a second language more, or less the way the learned the first language. When you were a child you didn't go around writing a list of things, and translating. Computers take advantage of that. They make it more natural…. The children here it and they have to respond to it and pick the correct answer. They're not translating things for them. That first game has to do with colors, and then you have to click around until they hear the names of the colors, and they painting this picture, but they're always hearing the names of the colors in Spanish. It moves on to the next level in which now they're saying, "Okay, now find this color." They'll say it in Spanish, "Encuentra el color." You have to find that color, click on it, and then bring it over. So, now you're listening. They're telling them blue is azul, red is rojo. They're not doing that. They give you the directions in English, but then the objective is always going to be in Spanish and not in English.

So I could opt to work on it, if I wanted to, because some students, you know, it depends the learners you have. Some learners are not really. Some people are more visual, they more , and so forth. They are hands on. Especially like at , we have a lot of hands on students, and the artists, they're hands on. So they have to really do things, so they get it.

Some students were more, people are more, you would say more logical. People want everything in order; in can go to the book. To verb. You have to write if someone would say, "Write the verb for me on the board, and that's the thing that we're suppose to do." They want to

learn that way. Some students don't want to learn that way. Some students they learn by listening to it, hearing it, and so forth, and by doing conversation. I think if you have that in a classroom you would be able to really customize for each group, for projects.

Yes. They will allow me to do that, because I can customize it that way. I can say, "Okay, we're going to work on this." "You work on that, and the other one you work on this skit on here." You work on the computer, and so forth. I think that's a better way, because you have to keep it moving it. More so than ever before, and I can see the change between the students and

They go right away, and they're really advancing. They go past the chapters we're on, and they feel great when they get a perfect score. So it's challenging to them.

Well yes they are. The students' are different levels, but the advantage that I do have with the computers is that I could have three different programs at the same time, and the students' are working at their own pace. They're working independently, and they feel very comfortable about it.

Just to give you an example, it's very simple, because let's go back to the colors. Let's say they already mastered the colors. I could have one group of students' write short sentences about the colors. I could have another group matching colors with objects. I could have another group of students' write short stories, let's say maybe ten, six sentence stories about the colors. We have the same skill, because I'm not changing the skill. When we're doing the days or the week everyone is doing the days of the week. If we're doing the family, everyone is doing the family. Each and every group would have the opportunity to represent that skill in different ways. Depending on their level.

You would learn faster than way. Especially if you have a class of twenty, twenty-five. If each one of them has a computer, the computer will probably will help them a little bit faster than you would, because it would correct them at the same time. Help them go on their

They want everything instantly, you know. So because of that you have to see if everything has to be fast, fast, fast pace. The computer can do something at a very fast pace. Even us at teachers. When you correct, for example, if you just say

something the wrong way in a foreign language I would just repeat it the right way. I would not say you're wrong, but I would just say, "Okay, Charlie." I would repeat the same sentence. I would say it the right way. Hopefully it will catch on, and so forth. They can pick it at a better way from the machine. The machine shows them right away. This is what it is.

Grammar

Yes, because the activities on the computer are fun to play. It's like you move things. Like Kindergarten activities. You move the yellow balloon to the word that says, Amarillo, and then they get applause when they do it right. So they love it. They like that. They go on different websites. Recently the Newark Museum offered this, America " about the gameboy. The sport of death and life. Life or death, something like that

It went to like southern. It was the first team sport played in America according to what
. They had a gorgeous website in which you can play the game, and every time you score something they ask you a batch of questions about the Aztecs. You know they're just having fun playing the game, and really answering the questions. You can't go ahead with the game, unless you answer right the question.

They play tic-tac-toe. They play where they have to memory games. Flashing something on the picture, and pick a square. They have to memorize. It's good for the memory also, because they have to remember also. They heard that before, where, okay. They have to click that, and when it's all finished they will get the whole.

The other thing is that yes they're learning the basics at least for those particular programs. They're getting that. I would like to see more. I think the computer has a lot more to offer than just that. That has to do with one the programs, and two what we can get done with using the web. There's definite advantages to have.

What they will do they will go very fast, because it reinforce them. It will reinforce the grammar part for them, but in a classroom they used to be, I don't know what to put , so forth. You can give them a scramble sentence, and they can unscramble. They could say. They can sit. They can put it

together, but if you give them that same sentence, right here on a piece of paper, they will not do it, but on the screen they will do it. They will do it just like that.
Hypermedia

They had like a virtual city and then the city; supermarket, fast food restaurant, bus station, train station, police station, hospital and airport. Then you can click on the place, and they give you a couple of sentences about the place. About each word and then you can take, and go deeper and deeper inside. You know inside the rooms. You would hear the sentence.

Yes. There is a site. There is a site in Spain that links yourself. Link anybody from anywhere in the world to cameras in a park. Recording everything that happened that second. I think there are here some cameras too. Some of the restaurants. Some of those places have those types of cameras. In Europe they're popular. Maybe Mexico. Who knows in private school. You know private schools in Mexico probably they have them. I know they have them. When I was in Nutley I proposed that idea. It didn't sound too crazy for them. It was good doing it. They would consider. Here in XXX, I know that. It took me two years to put a little software. Some little software into the net. It is hard to get anything.

Yes the social interaction is that they can be engaged in any activity that would be similar to that of living in a country where the language is spoken, or the example that I give you. Going to the doctor. Going to here. Going to there. Through the computers to the software, they could go into that faster. They don't have to wait to get sick to go to the doctor, and listening to the questions that the doctor asks and understand. All the tools the doctor has, and then why isn't it in the doctor's office. You can see that through technology. You don't really have to visit that place. That's the social interaction in a way to what it would be a brief social encounter different through technology

Independent Learning

Definitely helps you, because there are sites where you can have the picture on the way, you can have phrases. They could create their own pictures. They could create their own images. They could create their own dialect if they want to. I don't care so much about the grammar at that particular point. The

grammar is extremely important, but I want the students' to make the connection with the language. To be comfortable with.

With themselves, right. With pronunciation. They feel more comfortable with repetition. They feel that they can work more independently both in the classroom setting, and in the computer setting, because the computer gives them the opportunity to be more independent when they're learning the second language. They don't really feel that restricted

They would create their own dialogues and stories. We can go to the website and find different types of music within the Spanish world. We can go to the computer and my students' will write their own autobiographies

They can work at their own computers. Meaning, for example. I would tell them you have so many months to finish certain chapters. They have to read certain chapters on their own. That means, for example, if they're on the computer and they learn fast. It's okay to go on, on it's own. He can go on as long as he's comfortable, and even call on me, and I will say, "Okay, this is good, this is good, and so forth." If for example, Alex doesn't feel comfortable he can repeat that over, and over again by himself.

Interest

It's just something that the children are really interested in doing at all ages. It doesn't matter what ages they are. It works for pre-k, and I only go up to the fourth. For all those levels in Special Ed., the autistic kids, everybody. Very rare do I ever get a kid that I say, "You want to go, and it's your turn." It's very strange for them to say no

That's works for all of them. That seems to work for even the ones that have no aptitude, or no interest let's say. They're interested in the computer, because it's very child centered. It's geared for them. Bells, and whistles that they like. For that, they'll focus in for that. They'll play the game just right. Like I said it doesn't require them to speak. So what they're being able to do is identify. It's not a high level of on that particular program. What an extended program will be if they get on the Internet, and get into something a little bit more sophisticated. Whether it's communicating. I'm wondering if there they're going to find something a little bit more advanced

It has to be geared to them. It has to, for instance, if your doing like a video thing. They say videos work really well for teenagers. They'll have teenage children, and teenage themes, and stuff. You do that with a first grader they'll get very distracted. It doesn't hold their attention. If it's going to be like, for instance, a Spanish Language Video. If it's a cartoon. they'll see that ~~it's a cartoon.~~ Repeat, "Como estas tu," they'll do it because it's cartoon.

It gets them at their level and that what it is there dreams focus in on. For some reason, children like animated figures. The more animated the better.

With the technology, because they can stop it. There are certain things that they really like. Each class what has certain sentences that they like to say, and they would say perfectly, you know they practice it, or with the accent they would say it perfectly

They hear it all the time, but they would also make a point of saying it all the time. Make a point of when they go to the computer; they would go to the same exercise. Say that same sentence that we love so much, and so it's reinforcing.

All of the above, because we might go to the computer to play different games in the Spanish language. We might go to the computer to cut and paste pictures. They would create their own dialogues and stories. We can go to the website and find different types of music within the Spanish world. We can go to the computer and my students' will write their own autobiographies.

I thought they would botch it up. I just make sure they get on the easiest part of the program to start out. In the beginning, this year I made a mistake of putting them into a thing that had to do with numbers. It's a little bit more complicated. Then I was saying what am I doing this for. I know that the school was trying to get us to do more with numbers. Their math levels they're trying to bring it up. That's why I did that. That's why I was directing to them. Then I realized that they're not the pre-k. It's not fair. They have to start out on this particular program. The easiest thing for them to move around. So we went back to . If the program is meant for children, this thing whatever was made. Was meant for them is fine. You can't go get a Spanish Program for adults. You can't teach World Language to

children. The same thing goes with the computer. You can't do it in a way that you would do it for an adult. It doesn't work

With that what I noticed was there were very good programs. One in particular was for the low level, for elementary. Which is all that Camden has anyway, was "Jump Start Espanol", it works very well till about second, or third grade. Then there's, "Jump Start" languages that work out pretty well too.

That particular program, "Jump Start Espanol," as long as they follow the correct pattern of going from one level to the next level, they're okay. They're learning. They're getting something out of it. It's not; I don't consider it a higher order of thinking for those two programs. I consider more like they're learning vocabulary mostly from those, but it's something that they are learning, and it is motivating them, because they know it.

It is possible for them to do that, because as you move from level to level you will challenge them. But I'm willing to do that in front of my students. Some of my students are very, very good. I'm willing to just let them move on to the next level. One girl, she's in level two. I'm going to let her finish level two, because for example, I have some students who are terrible writers, terrible grammar. Because of the program they can go to the program very fast

I always tell them to. I use this in Spanish too, level too. I offer them sites. Here are the sites that I want you to work. A little bit challenging, and I tell them a little bit challenging, but do it. Try to do it. Try, go there and try. If it's frustrating you can't do it, then move to the easy level. There's Spanish too, but it's easier. It's the fact that you already know. Most of them get frustrated a little bit, but they go through. They work there way through the harder activities. For new speakers that are sites that offer you also conjugations, and essays in which you have to pick the errors. This one is interesting. I had a few Portuguese students that are going through this. They can't understand, because most of the time when I grade them in class, it's a 100, 100. They produce the simple sentences that I give them easily. When they go to the website, I don't grade them. Beside that it's 40%, 50% of the accurate answers. They get so frustrated, because they end up with 20, 30% of the. I tell them you didn't put the accent marks, or you didn't put the commas right, etc. etc. It is kind of shocking. It all depends on the website you go to. There are so many websites that

students can get. It's just a matter of you sit down, and searching, and find the right website, and what you're objectives are.

You have the same page. Let's say you have the same page. When you go to a web page they have options. You know, beginner. Most of the pages do. Beginning level, or Intermediate, or advanced level, and even some of them native speakers. So I always tell them to go to native speakers, instead of the beginning. With the book I don't have that, como se dice?

Motivation

They look forward to. I mean the students' are fascinated by computers. Students' are fascinated by the different websites. Students' are fascinated by all the information that there is out there.

The kids are not afraid of trying. Are not afraid of learning, and they're fascinated about that. I have a kid who who just wants to do computers, and then that's negative because he has nothing else to do. He has books to read and things to do. As a matter of fact, when he goes back to homeroom, anything that he does, anything that he wants his teacher too let him do, computer, computer. He's from Mexico. He's been here for two months a little kid like this. You don't do this. You don't do computers. So, "Oh my God." I want to go on the computer. Then he tries and he goes and gets the chance to. If you would leave him, if you would let him he would be in the computer room full time. They're fascinated and we get from Mexico, kids a lot of kids from Indian descent.

The students are motivated. They come to your class. They're happy. It is fun. They want to go and do more. They learn more.

They like it. They like it so much. You can put them in a computer using tools teaching with the computer for three hours, and then they don't want to stop

It feels good. They're very motivated. Those programs are, those children were very interested in coming to class because they knew they're going to get on a computer.

In other words, there has to be something that is valid as far as there learning Spanish. If you're going to do once a week

it's got to be basic Spanish. It has been valid enough. The key point is that it holds their attention, and they're interested enough. That they want to go there.

What's interesting with them, the autistic children, is that a lot of them love the computer. They like the visual, the games. They get to click to pick the right answer. Find the color. They find the color. Click on rojo. Bring it over. Make some other part of the screen turn that color. It's simple enough for them to handle most of that, and it doesn't require human interaction. I noticed that years ago when I had those little speaker machines. Whenever I had autistic children, they loved that. They loved hitting those little buttons. Watching the letters show up. Spelling the word correctly. Fill in the blank. They like that. It's amazing. Isn't it.

The first thing in my case for my class is that it motivates them. They want to go on. So because they want to go on that makes things a lot better. So it's a reward system. That's the way I see it.

Oh, they love it. They love it. They're very enthused about it, and I found out myself that I have one student in the beginning did not like computers what so ever. Now she asks, "When are we going to the computer lab?" Even some people even though computers are all around them, they may not like computers. Also, it's good for me. I would say to myself, "I'm computer illiterate." Even though I would tell them, "I know all the tricks." I manage. I would tell them, "You know you have to this, you have to do that." I'm a terrible typist.

Now with the computers, everybody enjoys it. Enjoys the activities. They were challenged by the activities. Time to explore, to see, to learn. So it was very, very positive.

They love it. Learning is fun. It's fun for them. It's not like sitting down with a book, or trying to write from a board or something. You give them something in the computer, and you ask them to write, and then you know they have to write to continue doing that so they do it.

You know they get really excited when they're new students. When they can start communicating, understanding what other people are saying. Even though it's very busy. So kinds of self-esteem of the students, at the same time motivate them. They know the more they learn, the more then can say. The more

they can express and receive information, you know code and decode.

Pronunciation

Because I already know what I'm expecting from the computer. I already know what I want in the program. If my students' are doing beginning sounds. Let's say that the students' are doing beginning sounds, although in the Spanish language we don't talk much about beginning sounds, because we don't really have them in the Spanish language. Let's say we're doing pronunciation and we're going to concentrate on the following, a,e,i,o,u verdad, entonces I'm going to look in the web for a program that has the vowel sounds in Spanish. Entonces my students' will repeat with the program, verdad? How is this challenging the students'? Porque the program will say, "Repite depsues de mi, A." Entonces the student is repeating, pronouncing, but at the same time he, or she is listening to herself. La computadora el programa le dice, "A". Repita "A." Pero automatically he's going to say, "That didn't sound right." Let me go back and try it again. I got it now. There is a challenge there. I haven't seen this program, but if the program could say to the child, okay repeat again, because capturo that he or she didn't pronounce the letter, or they were properly. I don't know if they do have that kind of program, pero

Exactly. Exactly. Entonces el estudiante dice, "Oh, okay un minuto." Por ejemplo, last week I had a group of special education students', and we were doing, "ma" different sounds, because of course they have to become familiar with. Entonces y le dijo, "A". It's pretty close to the word father. Pero el mi diceron, "A, or E". Porque sabe. El dice, "Okay papa." Let's try it again, because yo le dijo papa y mamita, usted sabe. Let's try that again. So I say a todo el mundo I say, "Guys silencio porfavor, verdad, y el nino yo le dije, "Diga a, e, ." I say, "Would you like to try again, "Dije, a, a, a,. a, a, a, y cuando , Mrs. ? I don't think I'm pronouncing that letter muy bien. Can I please try it again. Entonces bien otra vez empezar. I found it fascinating myself.

To practice, and also we have in the computer the audio program where they could speak. They can even speak and so forth.

To the program, and they can listen to their voices. Even six months later I can see how the progress with the pronunciation was, and so forth.

Pronunciation, and so forth, the conversation. After that six months later on they can listen to it, and they can see how, you know.

It's pretty authentic, because the program uses a lot of conversational things that you would say. You hear the native people speaking. You hear people from, all over, for example my friends, all over the French-speaking world. The students are used to the different accents. They can tell you when someone is speaking, they would mimic, for example. The thought that's really funny. They would find it interesting the way someone from Canada would speak. It's good because they can listen. For example, as a teacher I speak French to them, and so forth, but they get used to you. Even just like with the videotape, and so forth they listen to all the people speaking French. The whole program is geared to that. The computer they can listen to the person who's speaking, and so forth, and it's different.

You know, languages they can repeat the same phrase a hundred times and they will always say it perfectly. The right intonation, the right pronunciation. You know, sometimes, "Teacher, how do you pronounce this?" and the teacher tells you. If you ask them three or four times he's going to get angry, because you're not getting it. He had a problem with his wife last night and he's tired, "Don't you get it?" You know, and the computers right there and you can click on that icon one hundred times, and listening as much as you want. You know it's a perfect tool. It's the same as using the tapes. You know you can speak the language perfectly. You can be native, but the tape is done by professionals. How to write. You play the tape, and the tape is always a perfect model.

It was interactive in a way you can record your voice and compare it with a native
speaker and see pronunciation. You can study. It's like a book, but you know, fun.

They try to sneak out of their classes to come back to you, for lunch or you know. Even like grammar period or when I teach ESL. Come on, give me a break, and sometimes they interrupt my classes. I'm always behind with the lessons

plans; because it's amazing I don't have so many students, but I'm so busy because they want to learn so much

Yeah. Yeah. It's modeling. A lot of teachers model easy Learning music is like, the right tone, the right tunes. You know, and the computer gives you the graphics, the colors, the attraction, the challenge and regarding pronunciation is the perfect model.

Self Esteem

Well affects it in a way that it is more fun, but it's much better for the students. That is more interesting. The environment is more positive. They're not afraid of asking questions. They're not afraid of asking the teacher to repeat. They're not afraid of getting reprimanded of asking too much. They're not afraid of negative consequences of getting involved or right. That would be the positive of technology versus

If they know what to do it makes them feel comfortable, because peer pressure is not there. Learning the language for somebody would be devastating. Some people have a musical ear, and pronounce things right. Some people don't have musical ears, and you would always have an accent, and those learners at the beginning every time they open their mouths people want to laugh. You say something when they're when you say something else, and then people make fun of you. So it's a very stressful situation. It could be traumatic. With the use of technology you can say right, you can say wrong. Nobody's going to laugh at you. When your doing it with a computer, you're going to listen to yourself. You're going to listen to software. Your going to compare. If you make a mistake you can pause and try again. Give it another try, and then like that, "Oh no that's not a right answer, you know and kids laugh at him. So, technology is very positive

Translation

They're like twelve CD'S. It goes from zero to . It has everything in it. You know, grammar, listening, vocabulary. The good thing about that, last software is that anybody can translate anything into fourteen different languages in the computer. So you can be reading something and you don't understand a phrase, you highlight it, you go to translator and it will give you the translation in Russian or Arabic, French, Spanish, Portuguese, you name it. Also

individual words, so you can translate most phrases or individual words. Which makes it very very good for students to learn.

Writing

I think computers make the writing much easier for the kids, because the work is already there, and the writing is so limited. The writing is so limited that they're interested, and at the same time they say but wait a minute I don't really have to spend that much time writing, because the work is already done on there. Of course that doesn't mean that the kids are loosing thinking skills. They are not. Automatically they don't really have to spend that much time writing. For whatever reason they resent writing. I don't know why. I mean I am not an expert.

They don't resent the writing. Maybe it has to do with the noise that the computer makes. Maybe it has to do that they're getting speed with the . They love it, however for the most part, "Oh Mrs. ? I don't have a pencil." That's an excuse. Well you know it's not an excuse in my classroom, because I do have plenty of pencils in the classroom.

Exactly. Exactly. It is. I mean it's like when it comes to my lesson plans, I say to my Alex who just turned twenty-one. I said, "Oh thank you Jesus that we have computers." Since I had an accident I broke my wrist, I didn't really have that many problems, because it's much easier for me to click than to do the writing, or like I said I like writing, but I prefer the computer versus the free writing.

Right, and for us we have to say, "Okay bring it to me." They finish writing it, and the process is a longer process. When they're writing on the machine, it's like if they're doing exercise it's being done automatically, instantly. We're like a really instant. at the same time they can be hear a lot also. The computer it's bad, at the same time it's good, because they could repeat it a little bit more often than the teacher will. The computer can be more personalized than we can be. To be perfectly clear it would be better for you to be learning French with one to one.

DISADVANTAGES (of using computers)

Assessment

That one doesn't have the dictionary and doesn't have tests. That's the bad thing about it. I developed ten tests or ten units. Took me some time. You need to give them tests, and then they were going to write my name on their brochures and stuff like that, but I said forget it.

The information in technology would be fixed. It would be like the first step. Would be recalling. With technology you can record. You can apply. Now to explain, or to tell somebody about what you have learned has to be done, so far, have to be done with a teacher through an extended activity.

What they're not getting is enough of responding back. That's what I'd like to look for. Something that gets them to respond, and to put messages back in where they have to type. They're not typing. It's all point, and click, but what I have is motivated enough for them to stay focused on me so they get a chance to get on

I'm not at all. I am not at all. So certain things that we do on the computer is like really neat. How you can do a code, and so forth. The only thing is as languages there's nothing like reading, you know to speak, a human being. I don't think computers can't replace a human being, and so forth. Really true communication you need to have people contact.

Which is without the human contact they might have another reality view of how languages. In the classroom we do skits all the time so we have contact.

All the time. All the time. They have to get up. They have to kiss each other. After that first thing when I first get there, because at the beginning of the class like your so scared in school, and they're not going to say no to you, or anything like that. They're not fearful

The disadvantage is they have a little bit more tone. Like when your speaking to someone it's like it has to be just like that. You can't repeat it, and so forth, but you can tell somebody to repeat for yourself. "Okay, I don't here you." "Pardon, and so forth." It's the fear factor. For me that's the only disadvantage I would see in a computer.

Cheating

It's easier to tell them, "Okay go this side, and do this." Then sitting down, grade the document, and send it to them. I

think it's better when you send documents to them they completed, and they , because they found some of the students are so proficient in the use of computers. But they get their input . Valerie is my honor student too. It's so easy to cheat when you're working the computer because you have copy, paste. You have the editing. Since everything looks the same, you never know whether Johnny, or Maria did the job. They're playing with the computer, you don't know.

Distractions (in the language classroom using computers)

Emails & Chat Rooms

Then the internet is a hot spot, because you have to really go around and keep them on track. There are too many things on the internet. You really have to work hard to keep a kid doing something constructive on the internet. If you have twenty-five, thirty kids in a classroom, twenty-five computers, you have to keep moving. Otherwise they began to chat.

Their personal e-mails, and sometimes you have to keep . That's one way to keep deterring them from doing that. The point of using the technology for me in the classroom I had to make sure that they keep it just centered to the French. If they have finished everything I will only let them get into stuff that has a little bit of French. Otherwise it gets all over the place.

Yes, but you always need to be on top of them though. As soon as you they're checking their mailboxes.

Yes. So I always have to be on top of them looking at what they do. Most of the time they begin doing it right. Probably when they finish, or when they get tired of the game, or whatever, they go to something else. That's something that happens, I guess, with every other teacher for every student that's taken the computers. Are you familiar with the Venus

In a class of twenty or more, in which everybody is just sitting doing some unit. When working on the keyboard. You have something in front. It's so easy to hard information, and to work. When you work, "What you're doing?" Like I said, you click twice on you're keyboard, and you're page completely changes. You go with the page that you're suppose to. As soon as I come right back, they go back to whatever they were doing

Instant Demand

It's good for them in a way, but it's bad for them in a way. I think it keeps on spoiling them at the same time. It's helping them, but at the same time it's spoiling them, because they want everything instant, and not everything is instant. You ~~have to wait~~. Even for example, for a concept they would get very inpatient. How come we'd be going over that, and I still don't know it? I would have to tell them, you know, really we have to go over it a little bit more. They still don't know how the brain works, and it takes a long time to learn a language, and so forth. They have to hear it so many hundred times before it sticks.

Interruptions

There is a feature in that. Where if they click their name on it, they would click there name, and then it would keep track to a certain extent. You hit options, and it would show what the children have covered, and what they've completed. It just got to the point where it's too many. If I had a teacher's aide they could do that. They could make sure that the child goes in, clicks on the name. Sticks with the program. Go through the assessment chart of the back of the program, or at the options section of the book, and actually follow that. It's like too many things going on at the same time. They're on the computer. I'm trying to teach. So basically I let them get on, and let them go where they want to go. They're not being assessed on the computer. It would be great to have a program that would access them very specifically, but I've hadn't gotten them yet. I haven't found that yet. I'm sure they exist. It's a question of finding it, and trying to see if I can work out some kind of system.

That's one of the problems right there. In the middle of the class all of a sudden, you see the screen has a jam. Since I don't have a teacher's aide, some how I have to coordinate that interruption. I have to run over there. What I've done lately is when that happens I'll have some other material on the side for them to do. I'll say, "Okay, read those booklets that are there, those flashcards." "Look over that." "I'll be with you in a few minutes after I finish this." I go. I run over. I try to do it. If I have five computers I'll have four children on the computer and I'll least have one available in case that happens. Then I'll say, "Okay go to that one." Something like that, but you do get some interruptions.

In may case, one of the reasons why the teacher would probably say is that they don't have headphones. They won't put headphones on. So of course it's going to distract. If you have three computers, and they're all blasting away at the same time, and your trying to teach, and the kids are talking. I make sure that I get them headphones, and I put the headphones on. Right. If possible, every so often I get this jack where two kids could be on the computer at the same time. Then they get a little bit interaction, but from time to time you can do that.

It may be a game in which two players are supposed to be taking turns. That's good to be able to do that. Let's say you have five computers, and you have ten kids, and they may start the talk amongst themselves. The time to do that is when you have the rest of the class doing something interactive. Where then you have like a general hum... but if you have those five periods of kids doing that while you're trying to instruct. They start to argue. Then that starts to distract you, and the kids, and that causes a problem. There are moments where you can actually have two kids to a computer, and you have them on headphones and they're working away. That's great. That's good. They don't even have one. I think that's one reason why they don't have them on. I've been telling them, all you got to do is get this little jack, and little adapter put it in and that's it. It is distracting sometimes for instance, even with the headphones. For instance it has songs in there. Some of the kids like to sing. So you're in the middle of the class, and all of a sudden, they can't hear how loud they are. "Buenos Dias." They don't even know what they're doing.

They're singing a song. There's like four, or five different songs in there. They'll click on a song. Then they'll start to sing. Then I'll have to tell them, "Just kind of hum.. keep it down," but they can't hear how loud they're going. So every so often you get those distractions.

Restricted Sites

Yes. If your tired you don't want to be caught given this . They put the kids on the computer, and they come around faking that you're doing something. When the person leaves then you train you're around and then you continue doing what you were doing. Nobody knows that what your doing in that class.

Honestly I don't see any disadvantage. I wish I could find some kind of disadvantage, but it hasn't been a disadvantage for me. So there is no way that it's going to be a disadvantage for the kids. Unless the kids go to the wrong site. If we're going to talk about everything that's going on in the world. Right there you would have a disadvantage, but since we're talking about the classroom. We're not talking about home computers where they could have the chance to go to a different site. In the classroom setting, in the computer lab I don't see any disadvantage.

Oh yes they are. Yes they are. They have to be supervised. That would be a disadvantage to the kids. Not necessarily because they would go to a pornographic website, but maybe they want to learn about Aliya, or one of their idols that they want to check some information, but this is not the time to look for that type of information.

Software

No, nothing. The book. The book that I'm using is in "Espanol". Has two games. Two different games. One for Spanish 1, and 2. It's a game. It's regular games, but it seems to be too boring. Like I said, especially these High School students. I guess if you work in middle school, grammar school, they're great because they're just knew to the games. Again they ask you questions about the culture, and about the grammar. If you don't answer the question, you can't go to the next level. So for High School, they're too challenged. The other Spanish teacher is using it. I don't know how to well she's doing. Most of them got bored with it as soon as they started.

Yes, because it was too. The game is about. This software was developed by the same company that created the books. So it goes hand in hand with the books, and goes hand in hand with the chapters, and the unit, and the content and everything. So it's not interesting enough for high school students. The game is about supposedly the detective that is chasing the criminal, and he has to go to different places. Like Puerto Rico, Chile, Spain, etc. etc. chasing these zombies. While he's chasing it, you know, he gets to answer the questions, and learn about the . It is too boring. The graphics are very small. The sound is bad. The graphics are very slow, the figures.

Time Consuming

They both require the same amount of energy, but in different instances. For example, in order to have a class, computer base, I need more time to plan. To develop a lesson. To create lesson. Then the free time comes when the supervision, and correction, because then the machine is going to do the ~~correction~~ for you. Well you supervise the lab, but it's not the same if I was teaching. Like in which I have to, all the forty-five minutes of the classroom I'm they're constantly teaching. First teaching their supervision. Then managing the discipline. Then correcting everything that they were suppose to do. I'm busy from the time the bell rings until the time the kids are out. When in the computer lab, you plan a day ahead. Last night, or the night before and after they sit down in the computers, you're kind of you're job. Not that you're job is there, but you're not teaching all the time. You control around

Technical Problems & Limited Programs $ Obsolete Hardware

I think it's a frustration thing. Yeah you're right. It's a patience, and a frustration thing. You have high hopes for something, and then you realize you keep hitting these obstacles. Which you have to refer to somebody else to ask for help, and you know, it's like especially with men. You don't like being on the road, and asking for help all the time. I think that's part of this issue. It's like every two minutes you want to come up to the computer. You're having a problem. I don't understand, or be on the phone. A lot of this is you have to get on the phone, and call up like, for instance, Verizon. You don't want to deal with, press one for this, and press two for this. I guess if you have a good contact person, if you feel comfortable, and you don't feel like you mind being an idiot in front of them, I guess you'll move along.

Yes. It's an expensive piece of equipment. It keeps getting improving. Becomes obsolete within a short amount of time. By the time you figured it out, it's obsolete, and somebody else will tell you when now there's something better. That's one problem. You got to stay on top of it. It's not just a simple, one, two, three, and you get it. You've got to keep involve. You've got to read the manual. Somebody won't just have to pay to be sitting. It be nice to come home. Cook their food. Sit down, and watch T.V. then sitting. The idea of your car manual, your owner's manual. It's not exactly the most exciting reading.

It boils down to the quality of the program. For instance, that particular one it would be nice if it would access each individual student. Without creating a problem. Like when they start hitting on different keys, it sometimes jams.

There's a technical problem. The other problem is resentment on the part if you don't have enough computers. Resentment like for instance, all my classes are fine, because you know I have five computers. There's the classes on Kenneth St., are not that big. If I have a combined class, now I have a larger, larger number of kids. It doesn't satisfy them as far as them being able to get on, and being on, "Jump Start Espanol." Then you have other kids walking out of the class, looking at you, "I didn't get on today." If they're really young they'll throw temper tantrums. They'll get on the floor. Yeah. Really. Usually it's the same children. They got on last week, but they want to go on every day. They want to do it again, and again, or they have to tell you, "She hasn't been on it for two weeks." I guess some of the children don't have this at home. This is the only chance they'll have to be on it if they don't have it at home. In the classroom the teacher may not be doing that, and it's only a number of reasons.

There aren't many out there. I spoke to, and she never got back to me anyway. I forgot her name. She's over at . I told her that there were computers available. Extra computers available from South Street. Ms . had told me about the She had extra computers. If she was interested to let me know. I told her it's a very valuable resource to have in the classroom. Maybe I should have been a little bit more aggressive. In the end, it's in her interest to call me. Then I would have contacted her. She would have gotten them. I'm at the point where I wanted them myself. If I could have six computers, even better, but I have electrical problems. Beyond six the fuses start to go.

They asked them to, but they're going to upgrade other things before they come to my room, I'm sure

We do experience that, and of course that's a disadvantage. Sometimes you put you're password, and it doesn't work. You're in the middle of creating your own activity, and then the computer shuts down for whatever reasons. I would say that would be a disadvantage.

Now that you mention . In the other hand I could not get access to some many wonderful sites, because of

That have nothing wrong with it. It could be jobs, maybe an ad. Maybe one of the words. I wouldn't say most, but a lot of them they have Most of the websites, most of the sites that I visit they're good for writing, for assertion, for learning grammar rules, and etc. vocabulary, but they don't have sounds. Just a few actually tell you how to pronounce the word, and many of them tell them ~~pronounce~~ "Amarillo" They don't know "Amarillo" What's Amarillo? Amarillo, Amarillo. Say Amarillo. They say Amarillo, but they don't know what it is. I write on the board, Amarillo, "Oh, yellow."

EXPERIENCES (initiative of teachers using computers)

Administrative Use

When I was in Nutley I was doing everything on computers. Even then grades, assignments, a web site. A personalized web site for parents to check their kid's grades, and everything

I have all the grades, and everything, attendance and everything is computerized. I have a small laptop that I carry everywhere. That's when I have to find the world, sit there. Administration finds me. I don't find them. I just use them. To make me use the grade book, but I find that

When I came I said all right, I'm fully capable of whatever they need. I'm fully capable of planning, personalized progress reports for every student with a grade, with a mean, with a final average and everything. Why would I speak to the judge, because I have to be looking at my scraps to see what the grade is, when I can have a conference with a parent. ~~I show~~ them exactly. I give a copy to them. Clear copy with date, and exactly what the child is doing. What the board. That's why I use the computer. I'm still using it. Right now what I'm doing is just like keeping up with it. One is for the teachers to do it by hand, and another one for me to manage the classroom. So that program that I'm using allows me to have off the internet. The first year when I was there the program also creates password for students. Password for parents. You just enter the e-mail and the computer mails, you know. You customize the program to mail parents and students as often as you want. It's done automatically, or you can have internet you can do it , and it's great. That worked for me. You buy a license for thirty dollars for a year, a whole year. You know you have a few more tools that you interface

with excel, and word, and finder. You can create kind of your own. You customize more stuff. Just is great. I worked two years with the version. It's easier than having these other versions, because like I said, they wanted to do by hand. I'm putting everything on Excel, and I'm printing of the grades.

That grade book. They want to see that grade book with the grade day by day. With activities that I did, etc. etc. If I bring the sheets from the program that I use, it's exactly the same. Even more organized, and cleaner. Plus it saves me a lot of paper. The reason that I like to use, not that I actually use it. Not that I use it as often as I want. If it was for me I have computers everyday for class. I'm not sure if you're familiar with, "Office Smarts."

I used them for quizzes. For essays. I use them at least twice a week. They love it, because it easily grades. All the quizzes are graded automatically for me.

I used them for quizzes. For essays. I use them at least twice a week. They love it, because it easily grades. All the quizzes are graded automatically for me.

You create a quiz. You download it, and then when they're ready for the quiz you plug it in. You upload and it's ready. You still have the option to print it. To check it on the screen. Check right and wrong answers.

Instructional Strategies

Well for me that's a personal question. Initially you would be interested in using technology, if you like technology. You know, here's a guy who likes a video camera, or vcr's, or any kind of those machines. When you buy new things for your house, then you have the tendency of being inclined to use technology. Anything new that it would you would examine it and try to use it. If you're a person who doesn't want to mess with that, or don't want to mess with new TV'S, new vcr's, new things, new machines. Then you try to keep away from things like that. When I came from Cuba, I became a teacher after one year of being here. It was a very to hear people talking about computers, because they didn't know anything about computers. In Cuba, because it's a communist country, computers were only for people in the government. It was to listen to people talking about computers and I didn't know anything about

computers. You know and I was already a teacher and some people had computers. But I was fascinated by computers, so I began to learn. Four computers came into my class, and then I began to play with the computers. It was fun to play and see how they work and tried to use them. You have to have the desire and really like it to try it, otherwise you don't.

I'm always thinking how to do things, and that's why lesson plans are for me. You know I do my lesson plans and all of that, but most of the time when I'm in the middle of something I, "Oh my God, you know this could be better again." Then I go my way, and then I write a note on that lesson plan. What I did. How far I got and then tend to be that I verify everything. Because sometimes you come up with ideas when your doing it, or you can go and expand this, and do something else, or you can ask them a question where they would have to think. Then I found that here in XXX the most important thing is writing, but also thinking. The kids have to think

So he gave me other computers for ESL, from the ESL Department. So I got twenty computers. Wow! Everything began to work just fine. Then after that, they wanted to pilot a new software program, "English Discoveries." So I did. At the same time the night school heard about it, and they wanted to teach adults English as a second language as well using computers. They had a lot of money. So they put together the money and they bought out the State Of The Art Lab, twenty-five Pentium computers. This new software, which I piloted for six months and it, was excellent. Everything began to work just fine. Then after that, they wanted to pilot a new software program, "English Discoveries."

It was the summer institute of World Languages. Where really they told you about the different areas how we could teach using a student sense of approach. Even though for me I felt like I was always using them, because in my teaching area I always did a warm up with my students that they involved in and so forth. We still had to teach them. I find out using the computer was a way for me to really to get them to see how they can really improve themselves without being like right on top of them. With the games they can see, "Okay I did that wrong." It's repetition for them.

I would say I think you have to work, you cannot teach them the same way you used to teach before. Okay this is why I say, I have to use like pictures, or I use the T.V. I have too use all that in that one classroom. We may have to use that to get

their interest focus. To really some people may stare at them if they're learning. In order for them to learn you have to do that

Well I did because I noticed; when you go to the textbooks the skills are very limited. The exercises are very limited. It's not enough. Whatever the book is presenting, it's not enough for me as a teacher. It's not enough for the students'. So I decided well, you know I'm going to use the computers in order to reinforce what I'm teaching in the classroom. So that's why it came about.

Well both ways. I spoke to Mrs. , and then I have computers in my classroom. We decided to use the technology lab for my students to receive more instruction. Not only in the technical part of the computers, but also in using a second language

that technology aspect, I was always interested in using either the computer. Even back at the beginning when I was doing ESL I bought my first little Texas Instrument Computer. I was probably one of the first people using that. Back at that point it was easy to work with that. All I need was one computer. I had very small classes. I had Special Ed. and ESL. So that meant I was pulling out maybe two, three kids at a time. So having a computer will work out very nicely.

I always taught the audiovisual, because it's always very good for students. So I always use tapes, and transparencies, and so forth with them. With the new program I had a summer institute this is when they said, "Why don't you use computers in you're classroom?" Which is a workshop on that, and that was introduced to us

For me what was in my mind was, "Okay, this is a way I can get my students really into computers." Students of today are very interested in computers. They know what to type in faster than what we think they know about computers. This is one way I can integrate my teaching into the new age, and this was the way. What I did the first year, I even have a graph I could see the understanding of the language, and the speaking, and the skills went up at least ten to fifteen percent.

Okay, I became interested in using the computers during my second year as a teacher. You might say, "Well Mrs. ? how come you didn't use the computers during first year." Because during that period I didn't have that much experience with

computers. So actually I had to train myself in order to help my students in that area.

Yes I was. I was very much using the computers in the lab, because not only was I helping my students, but Mrs. , the head of She's the computer teacher. She was also there to assist me, and to assist with my students. That gives me an opportunity to receive more training in the computer.

Within the schools that I first started. I always like technology. I always like it. As soon as I could save a little money here, I'm bought myself a computer. Start playing around. Start doing things. You know, learning by myself first. Then college when I was getting the training that I needed. I always liked technology, and then when I became teacher at Nutley, that was my first year of teaching. The first year that I taught was in Nutley in the middle school. So I began to use it. First, because I liked it, and also because I thought it was useful.

Research (Web)

For me it's been a research thing, and also I went out and I got my own program on American Sign Language. So that helps me, because what they have now is, a good program will actually show the picture of the person actually in motion doing this. So you get it just the right way. Instead of the description of it, and the picture, and drawing. You actual see that. You actual see the hand in motion. So for American Sign it's good to actually see the actual way it was done. I don't have any sign language for the children. That's for me to use it. I present it to them in conjunction with Spanish to make it easier for them to understand me, and to make it easier for me to access them. To see if they understand the Spanish.

So, it's true about going on the Internet I found about, Spanish sign language, Mexican language, and all these other sign languages that exist. Now I started to debate, maybe I should be using Mexican sign language, or some other, you know. Still sticking to ESL, and then by being again on the Internet I found out about International sign language which is something that is really artificial, but because it was made up.

It's great that I found out by going on the computer and searching through, "google, google," whatever you call that? I kept searching till I found it. If I would have asked anybody, nobody would know about this. This particular thing. It was only on Internet that I found information. If I finally do get this thing, forget it, I'm going to probably shy away completely from American Sign Language, and get into this thing because it will be much more useful.

INTERNET (based instruction in the language classroom)

Chat Rooms

Because you can open chat rooms that are monitored by some company. By some institution. Even monitored by the school. If they really do have extra money. To have them chat, and talk, and interact with native speakers. There are sites like this that are done by professionals. Let's say that, if I own my own company, and I needed to learn in Spanish, because I need to do some presentation in Mexico in about six months. I need to enroll in classes. I know I'm not going to learn in a college. I'm not going to learn my Spanish in six months in going to a college, or something like that. So there are these websites available from professionals that can exchange language learning from people that are in the same situation in other countries. The Spanish will need a teacher that speaks English. Here's English in order to be update. Every night we can meet in a chat room and practice. My and my son go. He needs the English. The English speaker that the Spanish that he needs to know. Actually it's coming. While you're in a chat room you can change. Interact for everything. Pictures, files, experiences, everything. It's like being there. It's like being in Spain, Mexico, whatever. There are sites that put you there after a small fee. Like I said it's only for . There are some private institutions that also do it.

Email

E-mail and so forth. I'm using my class who had to be out naturally, to reward themselves since you're going to be in a special program. With that I'm going to monitor them and see how, where are they now, and how far they can go

The details of the program was, we're just getting started with it. They will have once they get into it, they would assign a school overseas that we would be able to work with, and you can do special program with, and so forth. I can give

you later on more detail about it. I have something on read on it

Epals

She's already been given me some insights into where I could go. There's something called "E Pals", and they could start talking to me about today. Where they could start actually communicating with other students in other countries. First I was like, "Oh my God how could they do that at the level where they could start," but she said, they could actually write in English, and that system will translate over into the language of the children in the other country, and then vice versa. They communicate back. Which is good. Okay maybe they're not getting Spanish per say, but they're getting cultural interchange. Which is also a factor in core curriculum

And then they're e-pals are going to writing in English?

Research

They would research on different topics and write a report, which is to use English.
Sometimes we got a sample where you change letters in English, or you try to get a friend from another country, and make reports on a specific question about the other country. Basically that's what I did. Sometimes you get in touch with a teacher from another state. Get two classes line up and they exchange information.

The internet could be used as a tool, an additional tool to use English. The software has already all the exercises, and all the skills lined up, outlined, clear. The internet is more challenging. The teacher has to work more developing the objectives. What exactly you want them to do. So, basically the internet is something new that you have to develop. On the other hand, the software is already here for the objectives and things like that.

Basically to find information and write projects for the higher levels of ESL. Lower levels they change e-mails with people more or less with the same level. Basic English, "Hi, what is your name?" "Where are you from?" "Tell me something about your family?" Things like that.

They get information. They practice it on the web, or with the software, and then they would have to write or express it to

the teacher about what they learned. It would be an extended activity.

They like to do the Yahoo web, or some of them say, "I'm trying to, and I look and say, back to French." They go back to French. They want to go into the web, and they want to ask geeves, and they do all those.

Well they're different because if you're looking at the web you can get the information almost instantaneously, right? The book you know tells you okay this is what you're supposed to teach now. This is what you should be teaching next, and I don't agree with that.

There are many great websites with different activities, but don't have any sounds, or they're kind of boring. If you were in college, a college student, they web is for you, because you have to learn. You know they're easy to learn. It's great, because you're stuck on what to learn, but when I teach students it better be interesting. So when I'm doing my plans, and doing research for computer activities, I try to look for sites that offer that work, and excitement.

The web is more updated. If an earthquake occurs from Mexico today, I can be talking about that. They can be watching pictures of that today. The website it's realistic. For some of them that's irrelevant, because it doesn't talk to. Doesn't refer to them at all. That happens to the books. A book after three, or four years is out of date. The pictures are out of date. The context is out of date. On the website everything is up to date. I can send them to the website, or MTV Espanol. I have them read about their artists, and they go in the last presentation that they had, the Emmy Awards. Have them read in Spanish.

Using the Venus tool. Have instructions in English, and then the questions will be in Spanish. Introduction, and presentation of the words would be. This, I'll say the words first. We start by going through this page, and this page is… The last one that I did was about," Condonde." All teachers were requested to talk about black history month, during this month. Put it in our lessons. I started talking about, "Condonde." Condonde is an African riddle that changed totally the lives of your in the last century. I taught that in English first to explain to them what the lesson is going to be about. Then the questions. From then they go to the website and start reading, and answer the

questions. Of course the question if the
says, "Condonde es un Mexicano que llego a Uruguay en el ano 1900. The question will be, "Condonde es un
Mexicano que?" At least I have them working with the language.
E: Right, because these are all basic, level one, right? So you have them fill in the blanks, finish the sentence? Compare to when the kids were doing the web assignment when they're typing, versus when they're doing a pencil and paper assignment. What the difference there?

Songs

Right, and then we have the opportunity to listen to different songs because we went to another website that they do play different music from Latino America. I said, "Okay guys we're going to listen to this song from Puerto Rico." "This is the "el compositor" and so on and so on. Some students' say, "Oh Mrs. ? we don't understand the words, but it's beautiful." I said, "That's all is takes." I said, "It's fine with me you don't understand what's going on right now, and then but some day you will."

Translation Tool

They have a translation program, and it also, but at the same time I feel like translation is never. This translation they have, even if you look for something on the Internet they have an instant translation. So the students, for example, if they wrote a sentence, and they miss a word there, the program can give them the word in French.

Vocabulary (Practice & Drills)

If we go to ww I don't know if that's how you pronounce it or not. Let's say that we go to and we're going to play concentration, because we already have mastered the colors, and the numbers. They go to
will select a particular game, but the students to select and look at different games that they are comfortable with, and it works that way

Well with these games they will either match the pictures with the word, or match the number with the word. Match the time with the clock. Match the situation with a greeting, "Buenos Dias," or "Buenas noche," or "Buenas Tardes." They do get an opportunity to say to me, "Okay Mrs. ? since I already know

the numbers can I please go to a different game." Por ejemplo, las partes del cuerpo, o podemos decir los dias de la semana. So automatically that you know that you're kids are learning the language. Maybe they're not really ready to start communicating, but they start recognizing the words, and the pictures, and then by recognizing the words, and the pictures they start verbalizing the language. They have to have that connection with the words, and a picture, and a situation. Whether you're going to mimic the situation, or you're going to play the situation. They're very comfortable with.

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From the top of my head I don't know if I'm going to remember. Quia.com and from there, this is the website that has activities, and language learning on any lengths. Arabi, Chinese, Portuguese, all the languages. So you pick Spanish and then you go from there. The activities are from hangman, to car racing. All the games. In which it's not just games. You begin like the game. At some point of the game, you answer questions about the language, or about whatever you're teaching.

Quia.com. One of them, and the other to begin you're e-mail. All of the games are free. I'm not subscribed to any group, or anything like that. All the games are just, games that you just browse a little bit on the internet you'll find them.

Web-quests

From you're location to everyone of the you're side. Then they'll log on. They go to start programs, and in programs they'll see you're name, and the name of you're class. They'll log on there, and they have two folders. Some assignments, and hand-in folders. When they open the assignments folder, everything you send them is there. So what I do, easier trying to do it, and it's working pretty well. I create documents on Excel, or Word Perfect. Documents on specific instructions on what I want them to do. Questions it could be in a Quest format. It could be go to this website. This is what I'm doing lately, and I started teaching and they're doing okay. Go to this website and find this information. So they have to go, look in the website, and I think this is teaching web skills to. Most of them know how to do it on the internet. You just chat, or check the mail. Check the mail and stuff, and watch stuff that they're not suppose to watch. They probably never use it to actually work, and so they get . Okay, first question is, "How did this event occur?" In order to answer that, they have to go to that

website that I ,and they read a little bit, get in. At then end, I did this in my lab class. It seemed to work well, but at the end it said, "For extra credit." You do this if you want the extra credit. I kind of get them to challenge to get the extra credit, because I knew there was going to be time left. The lazy ones, "I don't want to do it." They close the thing down. They send it to me. So they close the folder. They close the document. They go to the assignment folder, and they drag in from assignment folder to the hand-in. That's how they send it to me. So, I can watch from my station what they did. I can print it. I can correct it. I can do whatever. All the answers from the extra credit were on one side, in one page of the document that they're were originally. So if they can read a little bit, they knew that all the answers for the extra credit, and about ten questions were right there. They just needed to copy, paste. Two things. Two moves. Copy, paste and they had the extra credit. Which was ten points on that assignment. The lazy ones didn't do it. The ones that and got it. When the lazy ones realized that it was that easy, didn't have time. I like to play games like that with them. I like to always teach them, it's good to work the extra mile. It's good to sweat a little more. It's good whenever you do…

RESISTANCE (Why Teachers Don't Use Computers?)

Age Factor (new vs. seasoned)

Well at first there were problems, and later they didn't want to go through the hassle of learning computers. Three that were people in there mid-forties, and then they didn't know much about computers. They didn't want to learn. If a teacher has been in the system for ten, fifteen years. He's on the way to retirement and never used computers. Had the same lesson plans for years, same books, the teacher has a tendency to react against technology. A now it's a new thing. It's a new trend, and the fear factor is there. You will be feeling inadequate. You don't know enough about computers. You just don't want to use it. We have that case in our school. The fifth grade teachers have internet, computers. Have everything. There are teachers there, "I never used computers, I don't want to use them."

New teachers have energy. They're open-minded. When you're new your open minded about anything. About learning. About doing this and doing that. When you have a system set, that's it.

Like you when you are a vice-principal. Some teachers when they teach after two years, I don't know, they get lazy. You know, and they know that they have been there for a long time. So people respect them and guess who's suffering? The kids because they're not learning enough or they don't want to move. However there are teachers who are excellent. Who teach other teachers. There's all kinds of transformations. Teachers in the same way the way it works for technology. I don't know if I'm making sense with what I'm saying. That's what I observe.

Usually it's the older group that has done things for decades at this point. Now whenever you introduce anything, that's whether a new way of teaching. They're the ones that will be a little bit more resistant, because for them if it ain't fix it, they're going to go with what they already know. Where as the younger teachers are going to be more open, and this case more familiar with technology. So it's sad though, because each classroom had like two, or three computers at least. Some of them would just sit there.

I've spoken to the computer teacher. She pretty much pointed out what I just said to you. That they don't use it as much as they should. She's doing her best to give classes, and stuff. As a matter of fact she's given one today on, "Kids Inspiration." I don't know if you heard that. She's starting that now. I was in one class that she had, and I noticed it was pretty much . some of the older teachers. How much they're using it in the classrooms? I don't know. I'm basing my comment on what she told me. That the are not really using it as much as they should. Some are really resisting it. Now that I have my own class, when they come to me, it's hard for me to see. It used to be that I would go around to them, but that was like three years ago. I would see for myself if they weren't really using it. When I say they're not really using it as much as they should, I'm really basing it on what she said about it.

Yes, but most of the students too. It's just like, come on they're been using the computers since they were two years old. They are ready for different things. You've been trying to use the computer. If I don't know something, I don't know it, and I guess this is not my fault. We were doing that in school that even to show the students, because they have different majors. So, one we were learning different things off different majors. We were so bad, and so we had to say that you're not good at everything. You may be good at

creating the subject, but you're not good at. Somebody else can be good at something else that you're teaching. I guess teachers would look at it that way.

Challenge (Comfort Zone)

The teacher has to challenge himself to come up with new things. If you don't do that you get bored and you get lazy. Myself I try to do things when I taught in High School I tried to do things different every year. Sometimes activities were better. Sometimes activities were worse. However, I tried to do things. I experimented with new things. Then you get a lot of experience. You know what I mean? But, you know it's the same as teachers. You have the same lesson plan for years and years.

They got discouraged. They didn't know how to use them. They were not into that.

Maybe his mind was locked into not learning anything else like that. Maybe psychological problems. Who knows. The other guys didn't want to mess with computers. They were too complicated for them, and then also in high school you see that most of the kids know about computers. It's internet and this. It's very detrimental for a teacher to go on and try to teach something on computers, and find out that kids know more about computers than you. Bad performance, you know. So, some people cannot accept the challenge. You know the kids know more about computers than you do.

They don't know. They don't know how to use them. They're getting all narrow minded. They have the traditional way of teaching. If you don't push them. If you don't show them. If you don't make them feel comfortable about technology; they don't want to use it. Technology, using technology at the beginning is difficult, because you have to put all the cables. There's people who don't even know how to hook cables. A computer to a projector.

Yes. Curiosity. What is the difference between us and a kid? The kid is not afraid of asking. He's not afraid of trying. That's why kids learn so much. It's not that kids that their brain is new. It's like a sponge. It's not exactly that. The kid is not afraid of asking. So if I see you fixing a car, "What are you doing?" "What is that thing that you're moving there?" They're not afraid of asking. The kids are not afraid of asking. So they get all kinds of new information. Then when

we grow up and we are teachers, or we are doctors and stuff like that. Then we don't want to show our ignorance, and then therefore we don't want to ask that. We don't want to look, ask stupid questions. We don't want anybody to know that we don't know how to use the mouse. Therefore what is the best way to hide that is to reject it. Say you don't like that. You don't ~~like technology~~. You don't believe in it, and that's the attitude of many teachers. If you are able to accept, and you don't know, and you want to learn and that would be rejection.

You can give a teacher 13 cd-roms. Even myself I was given fifteen cd-roms. I haven't had the time to go over what everything is.

I was noticing was the teachers had to teach computers, but they weren't using them. So they'd come to me and then they use them. So they were, "Wow, I get to be on the computer.

They're working a little bit harder doing that in the classroom. They're working harder, and the children are learning less.

Because I feel like they're working harder meaning that okay if they're in class, or they going
they're doing a whole lot of work. They're not getting as much as result as they could get if they did try to diversify the teaching style.

Some people are really hard to teach. I know someone, "Oh, no, no I don't want to do this, and so forth, because they were taught that way, and so forth. I just think you have to. There's certain things, for example, grammar. I hate teaching grammar, but I have to teach it. We will find little things, and so forth. I find the computer helped them with the grammar.

Well I'm talking about my colleagues in this .
Pretty much in our school now everybody uses the computer, and so forth. Once I did that, because I even told them, because I was gung-ho about trying to get the computers from the students, right? To get them into the computers. It was like a big thing, I say okay come on. I even made some copies of things so my students would know what to do, because I want everybody to have it, and so forth. I think some of them have made excuses, like they weren't ready, it doesn't have software. For me it's work. Some of them don't want to do the work. If you're on the computer. You're going to go back, and

forth. You would like to sit down. You cannot sit down, because you're going back and forth, and you have to monitor them also. It's a lot of work, and you have to check everything.

Well more work, and it requires them to get out of their comfort zone. For me I tell them you don't have to really know computer that well to do that. Some teachers might say, "Okay I don't want to ask teachers." If I don't know how to do something, I say, "I don't know how to do that." Some teachers don't want to show there in front of, but some of them know more about computers than I do.

Complacency (teachers)

The down side of it, is a teacher that is not creative, or a teacher that becomes lazy; the computer has a tendency to make teachers lazy. if you have a computer, you have the software and the kids like it and you know you do this, you do that. Everybody comes around. and they see they're having so much fun and all this. It comes to the point that you don't plan anything, or you don't create new things, or you don't try to challenge them anymore, and you go into a state of complacency in which your happy with what your doing, but they could do more. In other words, you can get a software and you can implement, and then lay back, and do nothing for years. That's the downside of it.

Curriculum Focus (Games & Free Time))

I bet many teachers don't know what is in those cd-roms. They haven't sat and played with the cd-roms to see what is in it. What confidence is the skills are contained there so you can learn with your curriculum. They don't have the time to do that and decide. They give it to the students on a free time basis. "Here, have fun, learn something." With expectancy maybe they play around with that computer, and they will learn something from that cd-rom. They don't know what is learning until there's no further assessment to determine if they got what they were suppose to get from that cd-rom.

Yes. If your tired you don't want to be caught given this . They put the kids on the computer, and they come around faking that you're doing something. When the person leaves then you train you're around and then you continue doing what you were doing. Nobody knows that what your doing in that class. Nobody knows if that's contained in the

curriculum. If there is a person in the school gives you that software and explains what is contained in that software. What possibilities you have. What you can use if for, and give you an overall explanation of what is cd-rom, then maybe you have more chances to use it appropriately. Otherwise the teacher has to have a desire to go through that and find out for himself what's in the cd-roms. People who purchase cd-roms maybe they go to workshops, and then they get to know what is in the cd-rom. "Oh this is good for my school." The standard cd-roms. Yeah there are some standards and give them to the teachers. Most of the teachers aren't going to find out how it correlates with the standards. With the grade level standards, or with the District standards, or any standards.

Some teachers give free time. Okay, you can go to the computers and play games. There are games like Pac-Man and specific games. There are software games that they learn skills, but because of this teacher who uses technology to play games kind of thing, not linked to a main curriculum. When he sees that his kid who is attending the ESL class twice, or two hours a day wants to go there three hours a day, that person immediately thinks this kid is going there to play games and stuff like that. That's what he's doing. Why am I going to ask what they think? If I go and ask Rodriguez what he's doing with this kid, maybe Rodriguez is going to be offended, because I'm trying to tell him that he's playing games. That's what our teacher does with the technology. Technology is free time, because it's fun. So they find free time to play games. Game category. Why don't you put technology in learning category. Specific assignment category.

Haves vs. Have Nots

Exactly. I went to a workshop where hosted by the company that produces the book. Editorial company that produces the book that we use, and they have developed the Internet book. An online book, and also a CD-ROM Book. So students don't carry the books home to do the homework, and back to school, etc…So they don't lose the books, or ruin the books, etc…
I propose my chairperson to get some of these books for every student. So every student have his or her own copy of the CD-ROM, whatever in there home, and one in the school. So all these problems about not bringing books to class, etc…would eliminate. I proposed for the idea for some of the students. Yet to see a group of students. They didn't like it. That would be denigrated to other people that cannot have access to a computer at home. Denigratorio, denigrated.

Technical Problems

there was some glitches with the software of the computers were malfunctioning or anything. Just teachers who didn't know anything about computers didn't want to use them.

RECOMMENDATIONS (How will computers impact classroom in the Future?)

Access (availability of computers in the language classroom)

So how much access will they have to use computers, and rooms that are not there. I mean, if there's access to it, and then it's going to develop. I'm really curious is to how far they're going to go with the web. That's like an unknown territory for me. I'm just beginning to explore. It boils down to that. Will the World Language Teachers have access to the computers? Once they have access to the computers, and they're aware of what exists, and how it fits in to what they do. Then it's going to go somewhere, but if they don't, they don't have access. For instance, I now have access to the web, because of the computer teacher. So something's going to happen there. I don't what exactly, as far as it's going to go, but I know that there are a lot of possibilities. Will the other World Language Teachers have the same access to the computer teacher?

Instructional strategies

Such as instead of just sending them assignments from the book, I could have them do a PowerPoint presentation. Do a visual photography presentation about something. Different things, you know, spreadsheets with in Spanish. Graphs using the of different programs. I know these students; these kids are going to need these skills, because that's the way society is.

Software Improvements (with language programs)

In a few years the DVD's with technology languages it's going to be, "My God." Just
imagine, this book to have the pictures and a dialogue it says to you, "Good Morning. How are you? " You can have a CD ROM. You can go, just click and go into that. From there you have the perfect model. You do the exercises. You do other things. The technology is going to rule teaching at least in the

second language by position. Just imagine what would learning English in Cuba if T.V. would have captions. That would have been awesome because then I could see the words and listen. When I began to learn English in Cuba when I was a kid. You know every time I met a tourist a Canadian, or somebody like that and he, or she would become friendly. The first favor that I would ask was, "Can you write this song for me, lyrics and see the lyrics and listen to the way they pronounce it. Every song that I got, you know with a big Just imagine captions. Technology now, how easy it is. Just to have all that in your hands. So in second language acquisition, technology is going to have a big impact in the next five to ten years. It's going to revolutionize the way we teach we teach languages, because it's all there. The graphics. These pictures, dictionary kind of got in technology , ppr verbs. CD Rom with ppr verbs. You know the guy fishing and you see the guy fishing, or moving, or boxing, or running and you see it. When you see it then the brain receives the sound, the graphics, the movie, and also you can see the way it spells. Three signals coming to the brain in one single action, and if you make it attractive, you never forget. I remember like 75% of the words in English. The movie people words I remember exactly when, and how I learned it. All along I learned a word when I was in this situation, and you never forget. If you have a movie. If you have something that the kid that the brain uses all kinds of memories. Makes that decision divides us into the brain then the learning language would become more efficient, and faster way of thinking.

If the make more software, better software, and the language teachers have access to those computers. I have them, because I have my room, but most World Language Teachers do not have

I think so, because it's definitely good to help, because the students will get to really practice. In Europe everybody speak at least two or three languages, because they're so close to each other. We don't have that here. This is a big country, and everybody speak two, or three languages, and now if you go anywhere they would say, "I don't speak English." Yes they do. Everybody speak English. They speak English and they speak something else, because it's so close, and they make a point of going there. With the technology is like virtual and you can really each other.

I think so. I can see they can mimic some of the tape, or some on the computer. They would mimic to the voices, because they think it's very funny, or they like it, or whatever. Some of

them are saying it perfectly with the . It's because of that

.

Solutions (how to get teachers to use computers?

Resources

It would take to have the proper tools. Have the computers. Have the software in there classrooms, and then give them workshops. How to use that technology. Begin little step by step with little things.

Such as giving them the software and say, "You have to use this, this year." Teach this part, this part, this part. Use it and supervise them using it. I guess once they start using it and seeing how the kids react, they begin to like it.

There are people who cannot understand how to program a VCR. There are people who are not like that, and then to throw a software to a teacher, that beside the software they have to use the computer, and mouse and settings and this and that, plus activities. They cannot see it. They cannot with stand it and then they say," Well, I've been teaching for ten years. I've been teaching for twenty years. My kids learn." Yeah, they learn. It's true, they're good teachers. They're excellent teachers. However, the kids could have more fun in your class, and learn about the same or more. School should be fun as long as we're learning, and there's control. Other wise fun becomes a place to disrupt and go the other way. So you have to do it step by step. You can give assignment. You can give weekly assignments using technology just for one assignment. One assignment they have to use the computer. See what happens. See how they enjoy it. It's the same everywhere. Here, Florida, everywhere old teachers.

If I picture myself in a computer classroom, and I don't have to keep on wasting my time telling the kids, "Okay, would you please turn to page forty-nine, or page fifty, or page fifty-one, or go back to page thirteen." Right there you're wasting a lot of time in the classroom, believe it or not, because every minute in the classroom in very valuable. However, if you have the computers in the classroom before you tell the kids they will do the work for you, because it works automatically. You conditioned the kids. You put on the board for this week this is what we're going to do. You have the

agenda for the students'. Once you have that agenda I picture myself in a classroom with twenty-five computers. Give the kids the agenda and they will take it from there, and you don't have to keep on repeating. You don't really have to aggravate yourself. Although my kids are very responsible, and I'm very proud of my kids. Automatically they will look at the agenda. They say okay this is what we're doing for Monday. They will go to the computer, log on. Find the web site. Find the skill. What is it that is expected of them. They love the computers. It makes the work much easier for them. I mean there are kids for whatever reasons they're very lazy when it comes to writing. When it comes to writing, I don't know what it is.

They can't take the books with them. I have a total of 360 students' and a total of 15 on dictionaries. Imagine if every child will have a computer at home. They will have no excuse. "Oh Mrs. ? no hizo la asignacion." They will give an excuse, "Oh Mrs. ? I couldn't do the homework." Usually my students' will do the homework in the classroom. They will practice dialogue at home for the most part, but I prefer for the students' to watch different Spanish programs when they go home. I prefer for my students' to review the dialogues with their parents, or a family member. When it comes to the grammar, for the most part we will do it in the classroom. That's my decision.

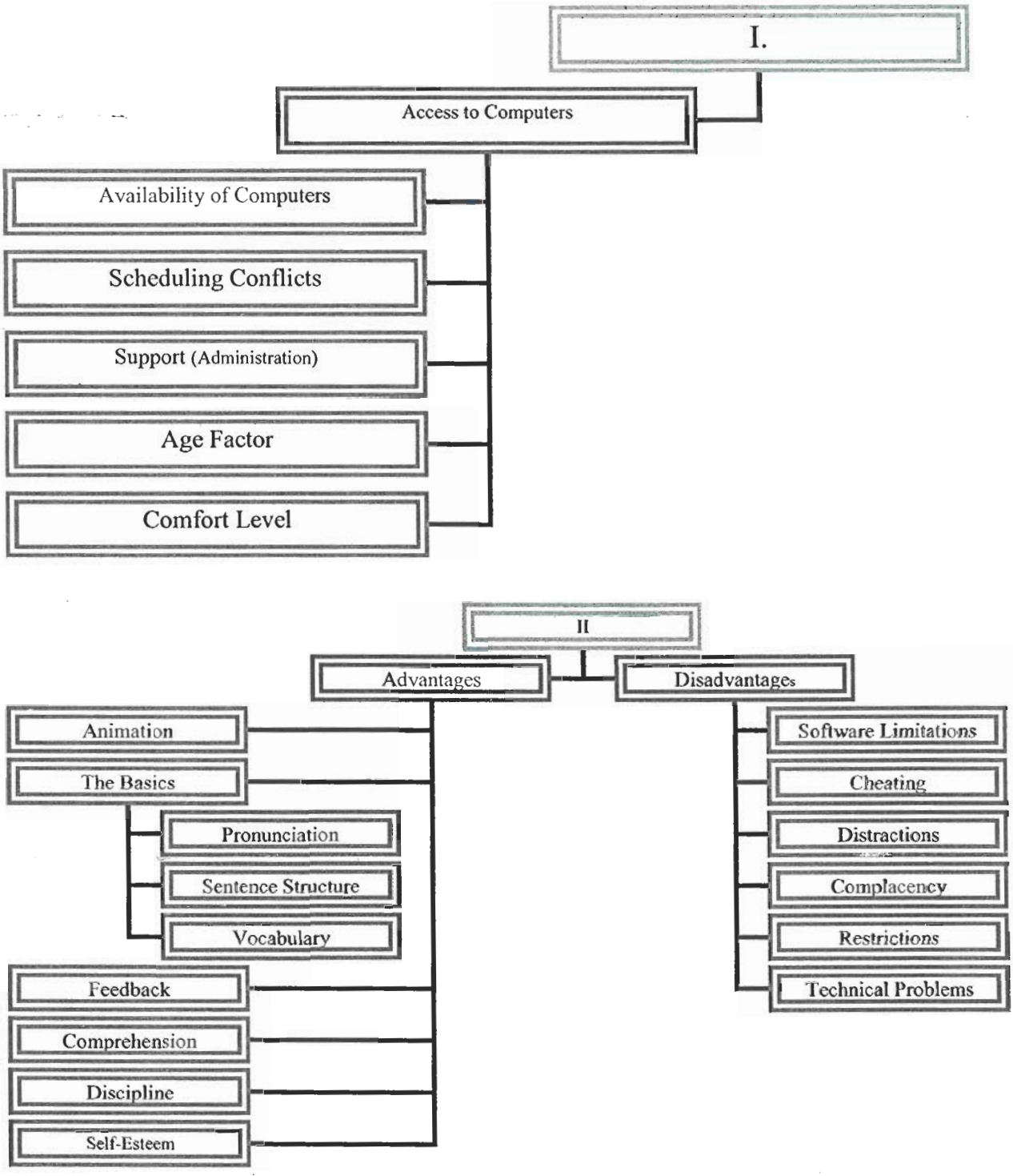
Staff Development / Training

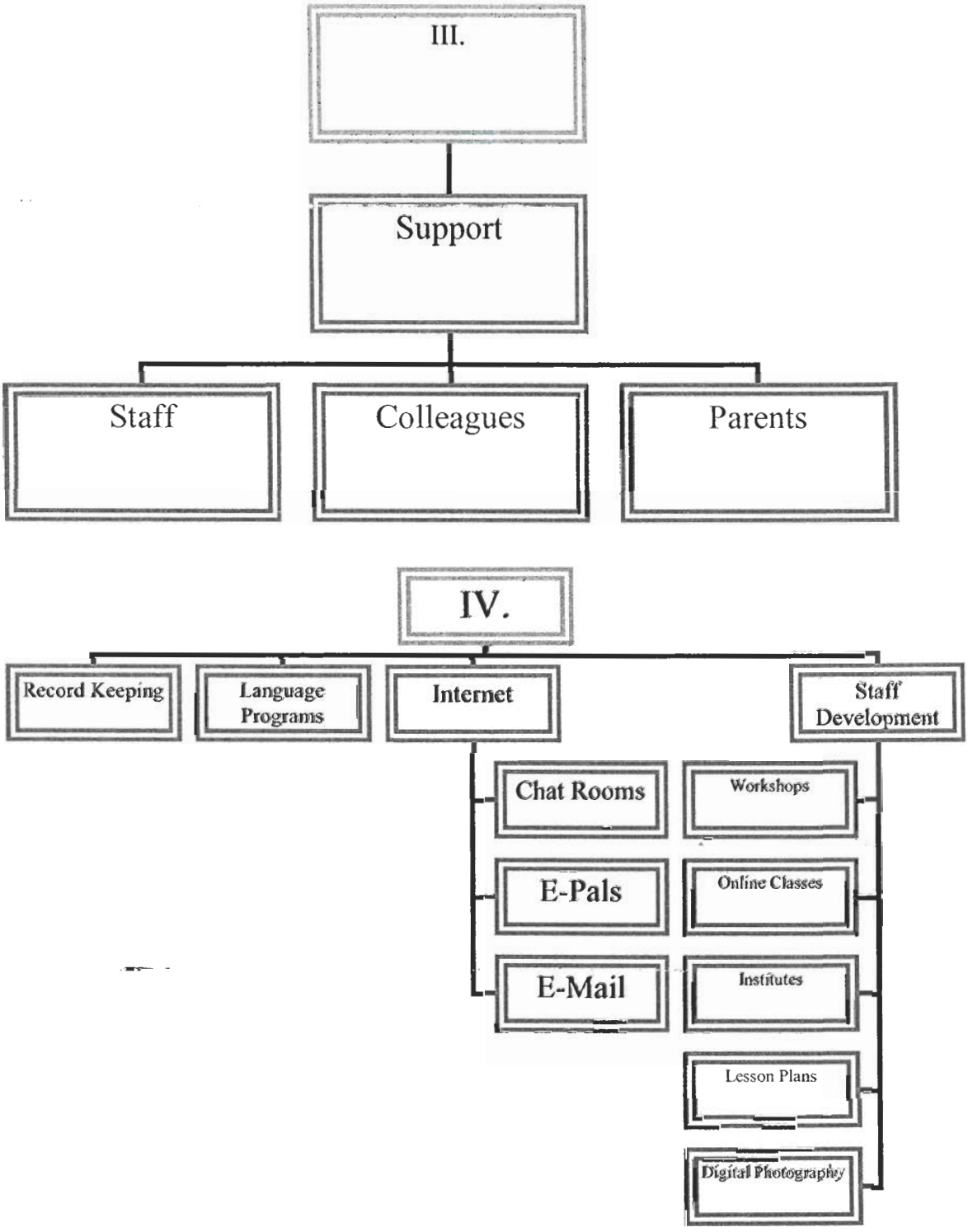
They should spend less money on technology, and more money into teaching teachers all teachers, all standards with all how to use technology. More workshops. Maybe somebody in the school to plan to supervise, and implement technology in the curriculum. Buy half of the [redacted] and get more support to open people's eyes. Try this. This is the way you can use it.

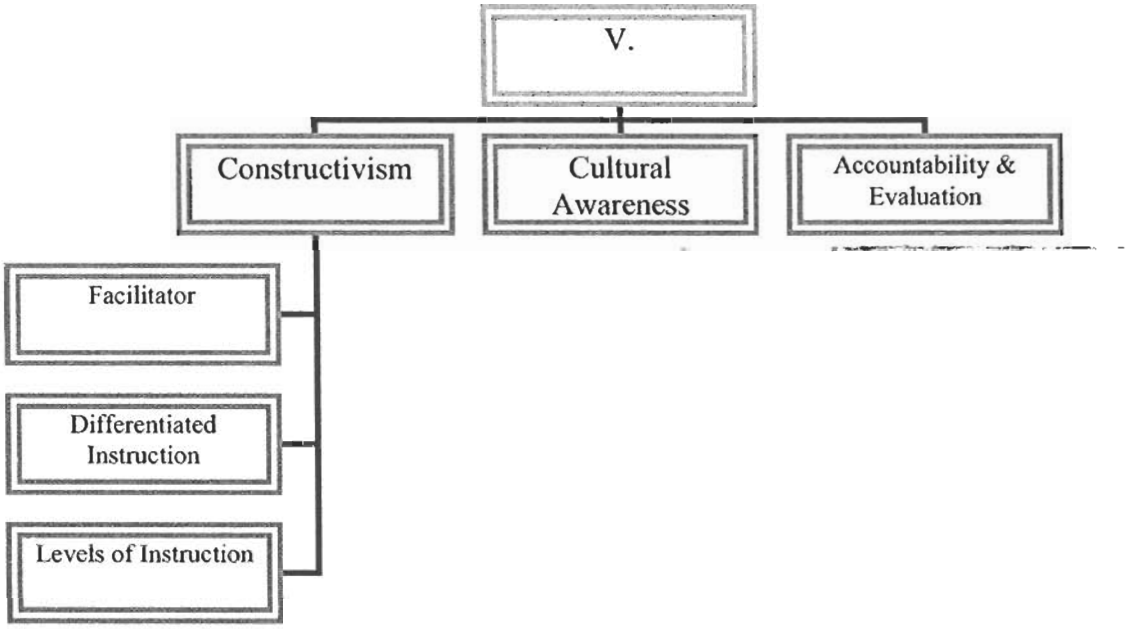
You can do it by yourself, or you can do it with the help of the teacher in which you follow lessons progressively or the teacher tells you what to do

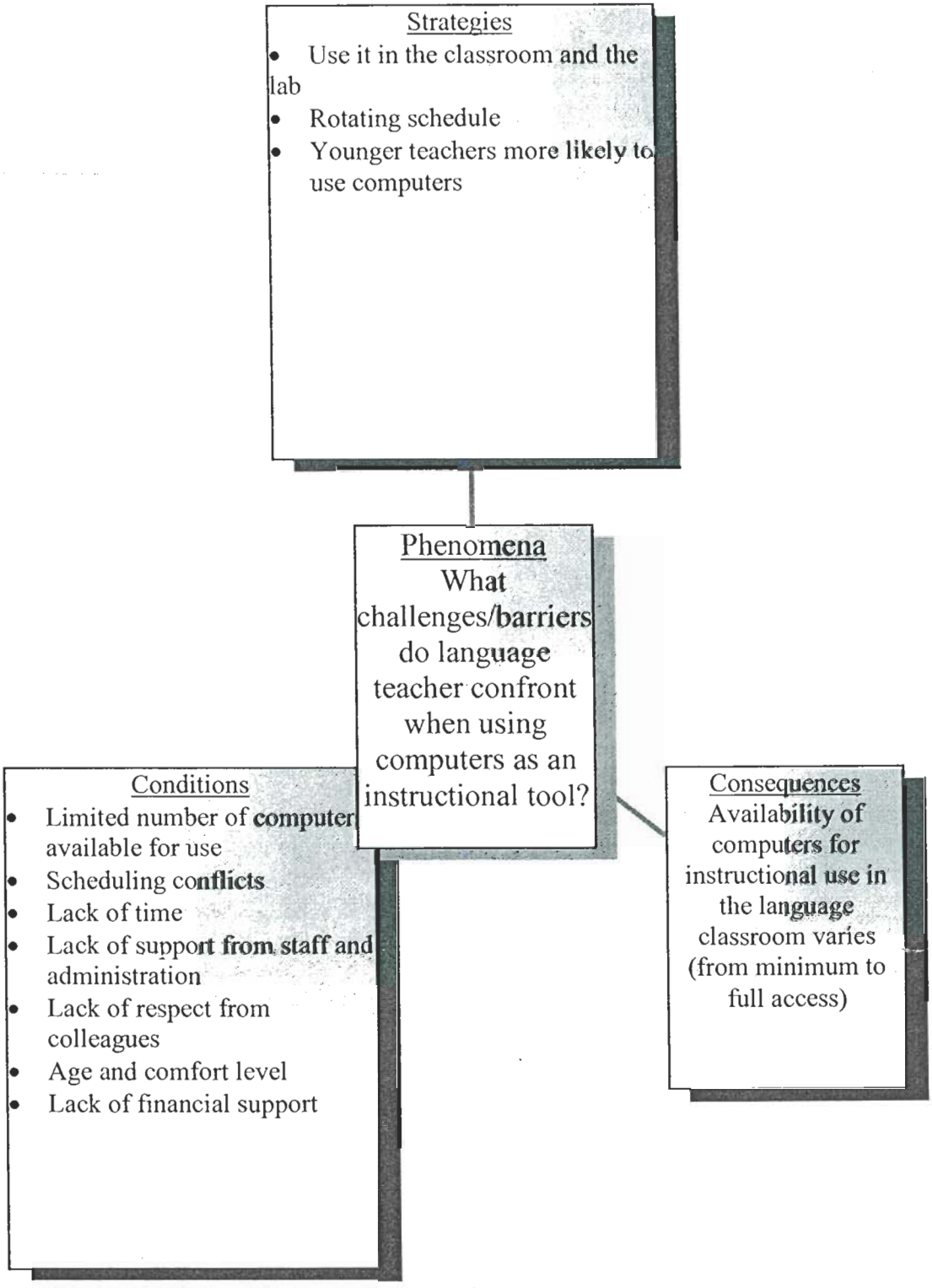
Appendix G
Axial Coding Process

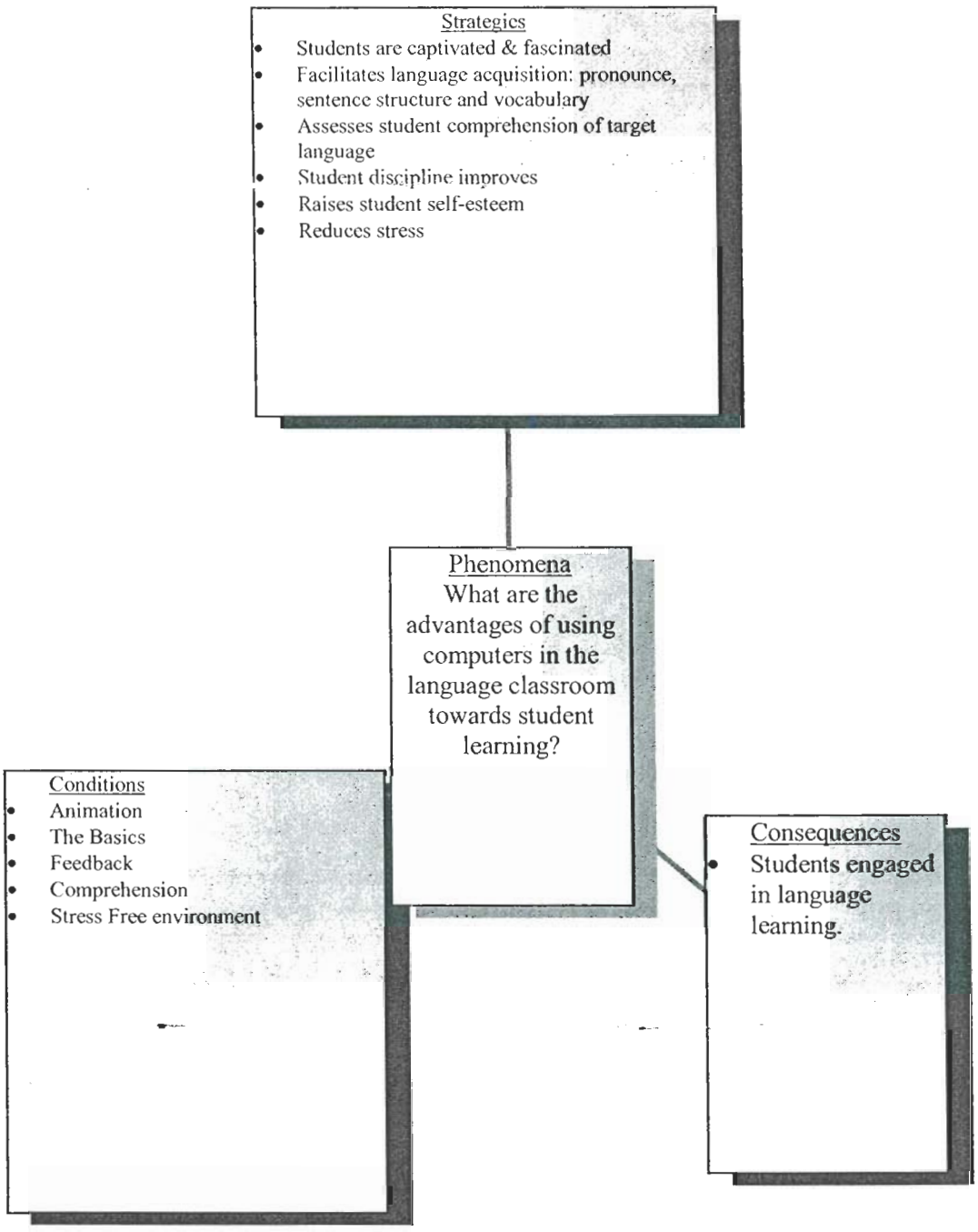
Outline of Categories & Subcategories

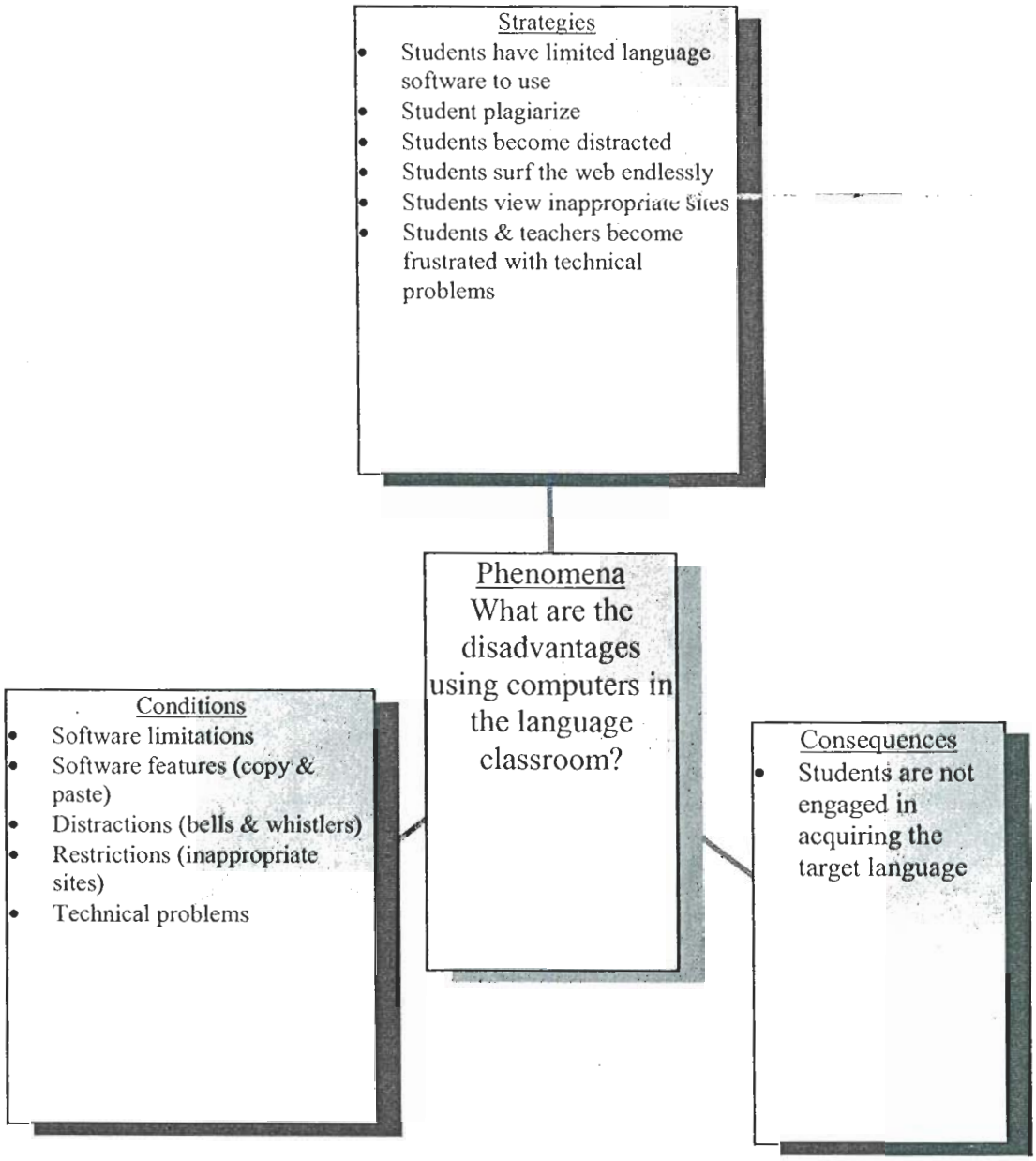


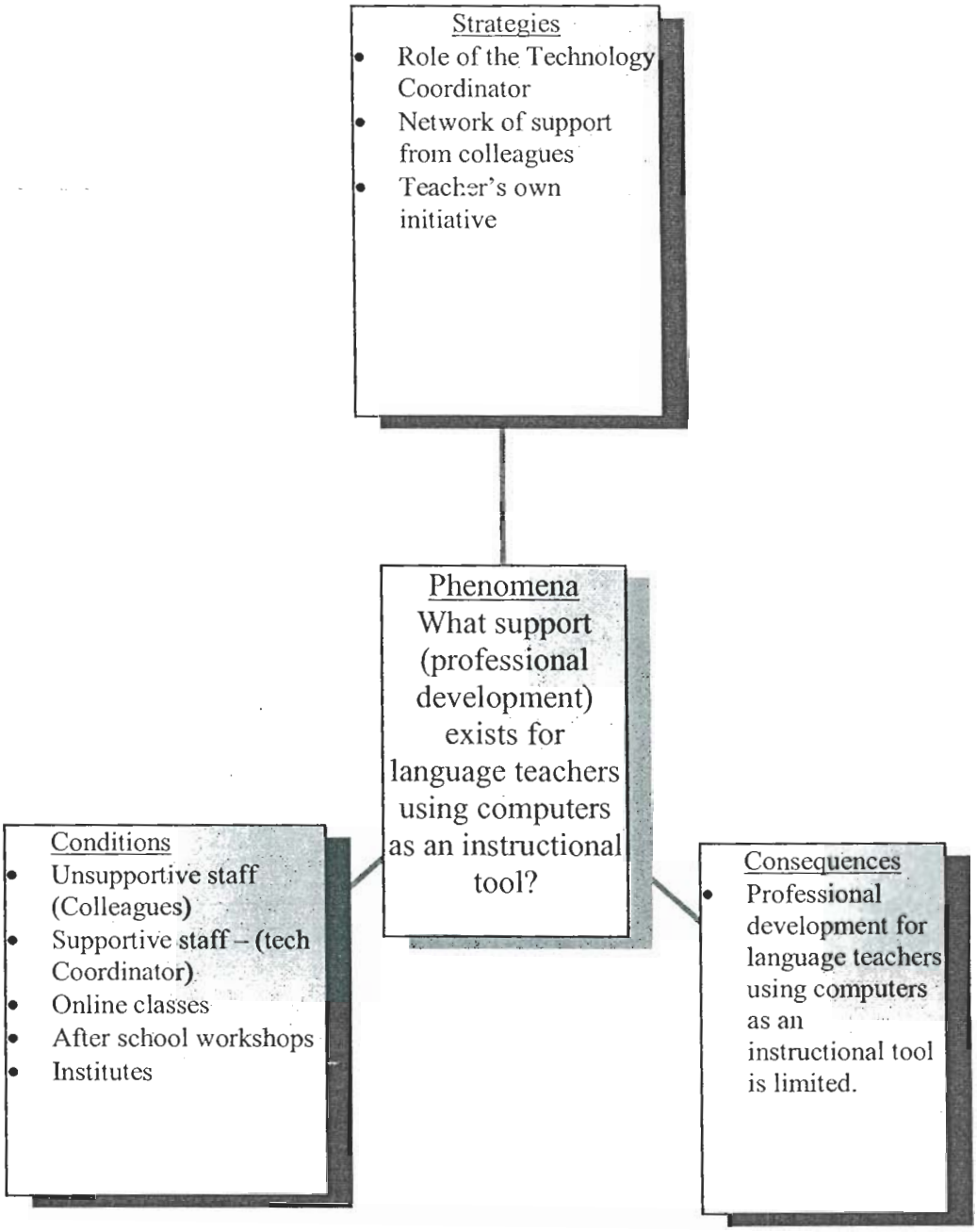

III.
Support
Staff
Colleagues
Parents
IV.
Record Keeping
Language Programs
Internet
Staff Development
Chat Rooms
E-Pals
E-Mail
Workshops
Online Classes
Institutes
Lesson Plans
Digital Photography

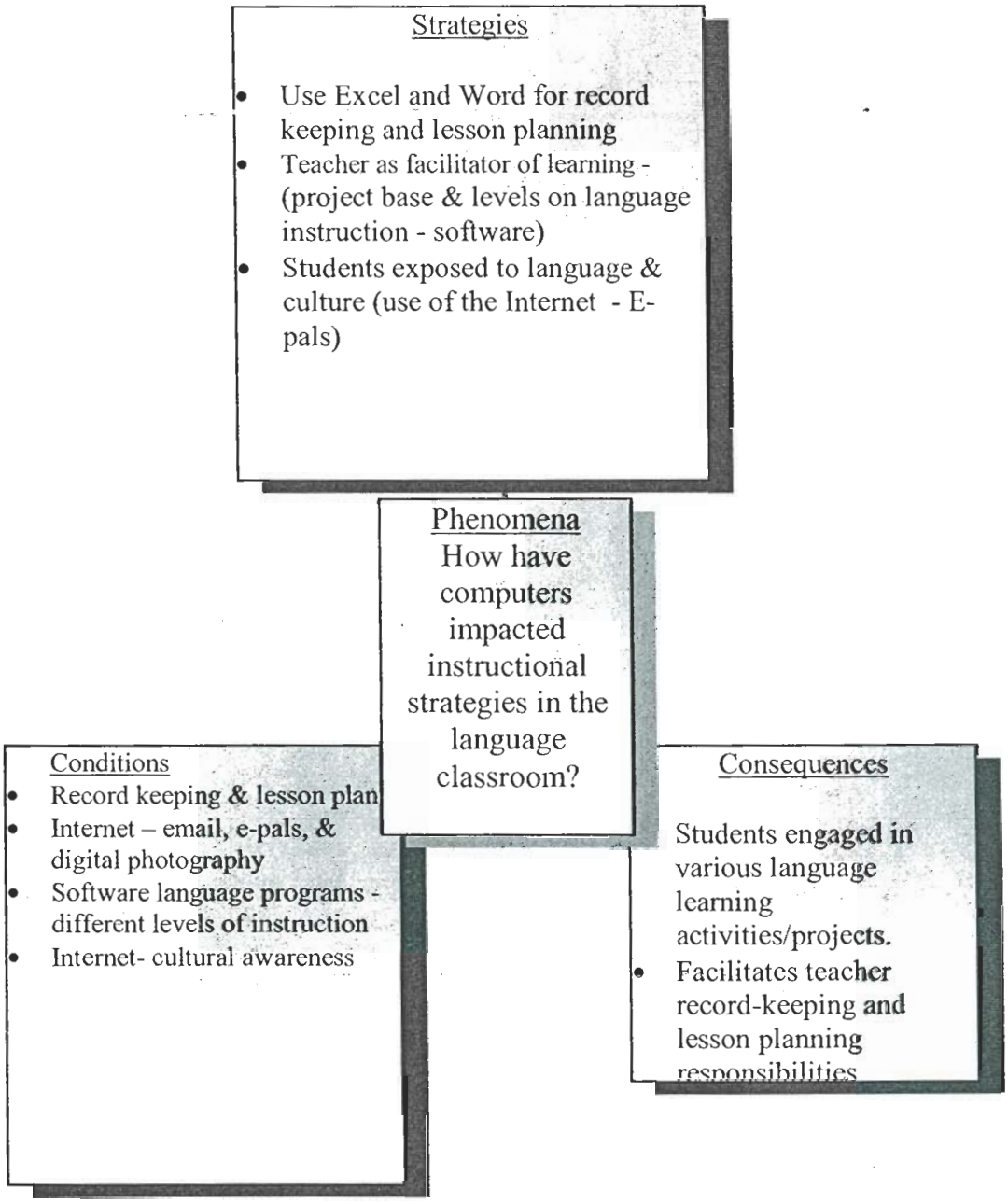

V.
Constructivism
Cultural Awareness
Accountability & Evaluation
Facilitator
Differentiated Instruction
Levels of Instruction


Strategies
• Use it in the classroom and the lab
• Rotating schedule
• Younger teachers more likely to use computers
Phenomena
What challenges/barriers do language teacher confront when using computers as an instructional tool?
Conditions
• Limited number of computer available for use
• Scheduling conflicts
• Lack of time
• Lack of support from staff and administration
• Lack of respect from colleagues
• Age and comfort level
• Lack of financial support
Consequences
Availability of computers for instructional use in the language classroom varies (from minimum to full access)


Strategies
Students are captivated & fascinated
Facilitates language acquisition: pronounce, sentence structure and vocabulary
Assesses student comprehension of target language
Student discipline improves
Raises student self-esteem
Reduces stress
Phenomena
What are the advantages of using computers in the language classroom towards student learning?
Conditions
Animation
The Basics
Feedback
Comprehension
Stress Free environment
Consequences
Students engaged in language learning.


Strategies
Students have limited language software to use
Student plagiarize
Students become distracted
Students surf the web endlessly
Students view inappropriate sites
Students & teachers become frustrated with technical problems
Phenomena
What are the disadvantages using computers in the language classroom?
Conditions
Software limitations
Software features (copy & paste)
Distractions (bells & whistlers)
Restrictions (inappropriate sites)
Technical problems
Consequences
Students are not engaged in acquiring the target language


Strategies
• Role of the Technology Coordinator
• Network of support from colleagues
• Teacher's own initiative
Phenomena
What support (professional development) exists for language teachers using computers as an instructional tool?
Conditions
• Unsupportive staff (Colleagues)
• Supportive staff – (tech Coordinator)
• Online classes
• After school workshops
• Institutes
Consequences
• Professional development for language teachers using computers as an instructional tool is limited.


Strategies
• Use Excel and Word for record keeping and lesson planning
• Teacher as facilitator of learning - (project base & levels on language instruction - software)
• Students exposed to language & culture (use of the Internet - E-pals)
Phenomena
How have computers impacted instructional strategies in the language classroom?
Conditions
• Record keeping & lesson plan
• Internet – email, e-pals, & digital photography
• Software language programs - different levels of instruction
• Internet- cultural awareness
Consequences
Students engaged in various language learning activities/projects.
• Facilitates teacher record-keeping and lesson planning responsibilities