

A STUDY OF THE IMPACT OF CROSS-AGE TUTORING ON AN ELEMENTARY  
SPANISH DISTANCE EDUCATION PROGRAM

by

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The purpose of this study was to explore the impact of and potential factors associated with utilizing high-school-aged students as on-site tutors to assist elementary students in a Spanish distance education program. The study focused on the qualitative and quantitative exploration of the participants' affective attitudes toward learning Spanish, mode of instruction, high school tutors, and Spanish culture. To document the achievement, attitudes, and motivation of the elementary and high school students, a combination of quantitative and qualitative data was collected through five methods: student questionnaires, self-assessment, prochievement interview, journal entries, and final exam.

The distance education foreign language program randomly divided fifth-grade classrooms into two equal groups. One-half was exposed to the high school tutors and the other half was not. Thirty-six fifth-grade elementary students participated in this study; nineteen were tutored students and seventeen were nontutored students. Three high school seniors served as tutors. The findings indicated that the presence of cross-age tutors in a distance education setting does not seem to make a difference in either attitude or achievement. Although the tutors provided useful assistance and benefits in terms of motivation and increased interest in learning a foreign language, the most important finding in this study is that learning occurred in both the tutored and nontutored Spanish distance education classroom.

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## **1.0 INTRODUCTION TO THE STUDY**

### **1.1 INTRODUCTION**

Distance education, supported by cross-age tutoring, presents a new way to introduce human interactions into foreign language classrooms that otherwise would not be available. Although the number of distance education technologies is increasing at a tremendous rate, not many researchers in this area have explored the new roles of teacher, site facilitator, and students in the distance learning process. Distance education and the use of technology—when combined with foreign language education—present unique pedagogical issues. Questions emerge as to whether the use of cross-age tutors personalizes and has a positive influence on language instruction in the video-conferencing environment.

In Chapter One, an overall introduction to the study is provided, and relevant background information is presented. A statement of the problem and an overview of the purpose of the study follow the introduction. The research questions underlying the study are then presented, and key terms associated with the study are defined. Following this, the theoretical framework providing the conceptual foundation for the study is presented. Chapter One concludes by addressing the scope, limitations, and significance of the study.

## **1.2 RELEVANT BACKGROUND INFORMATION**

While distance education is often presented as a relatively new educational mode, it has actually been in existence since the nineteenth century. It began as correspondence learning and continued into the twentieth century, transformed by radio and television (Cohen, 1999). As the century progressed, distance education further developed into the forms of extended education, open education, and distance learning (McIsaac and Blocher, 1998). Distance education has evolved from the use of primarily print-based materials into a worldwide movement utilizing various technologies, including teleconferencing, electronic mail, web-based instruction, chat rooms, satellite television, computer networks, and virtual classrooms.

### **1.2.1 Defining Distance Education**

As distance education has continued to evolve in the last several decades, a number of efforts have been made to define it conceptually. According to Willis (1992), distance education represents the organizational framework and process for providing instruction at a distance. Similarly, as suggested by Zhang (1998, p. 1), “distance education is the process that creates and provides access to learning when time and distance separate the source of information and the learners.” Wheat (1998) indicated that distance education, in defying time and space, helps to create a “virtual schoolhouse” and/or a “classroom without walls.” As further delineated by Coutts (1996), distance education takes place when a teacher and student(s) are physically separated, and technology is used to bridge the instructional gap. According to the American Council of Education (1999), distance learning activities are designed to fit the specific context for learning; nature of the subject matter; intended learning outcomes, needs, and goals of the

learner; learner's environment; and instructional technologies and methods. Clark (2001) noted that the terms "virtual high school" and "virtual school" have become “buzzwords” most frequently utilized in relation to any K-12 learning activity or program that uses the Internet or other technologies. Clark concluded that, while numerous definitions of these terms exist, a concise definition of a “virtual school” is an educational organization that offers K-12 courses through Internet- or Web-based methods.

### **1.2.2 Expanding Learning Opportunities**

Several reasons have been suggested to explain the degree to which distance education has found acceptance within the United States. According to Tam (2000), distance education has provided a means to dispel the barrier of distance in terms of learners’ access to education, as well as to open access to those who are willing to avail themselves of the opportunities education affords them. Distance education has been helpful in derailing obstacles to some degree for those limited by location, finance, time, and resources. Additionally, as explained by Dede (1990), distance education has been welcomed because it provides opportunities to meet the needs of those students who may have “unusual learning needs” or “unusual emotional problems,” who need to take atypical courses, or who have visual learning styles (p.3). Dede went on to say that distance education also provides a means for educational institutions to overcome inadequacies in local resources for meeting learners’ needs.

Clark (2001) reported that evidence suggests distance learning is an increasing trend within K-12 grades. Clark suggested that distance education was an opportunity formerly found primarily in higher education and high school settings, but courses are now being offered at the

junior high and middle school grade level. This continues a trend noted in a previous study toward online instruction throughout K-12 and not just at the high school level (Clark, 2000).

### **1.2.3 Assessing the Effectiveness of Distance Education**

Ongoing efforts to assess the effectiveness of distance education are on the rise. The findings of these efforts help to clarify what is currently known about distance education and its utility for teachers and learners. It is important to note, however, that the vast majority of research has focused on adult learners. Some researchers have been interested in determining if distance education students learn as much as students receiving traditional face-to-face instruction. When comparing distance education to traditional face-to-face instruction, it appears that teaching and studying at a distance can be as effective as traditional instruction when the method and technologies used are appropriate to the instructional tasks, there is student-to-student interaction, and there is timely teacher-to-student feedback (Youngs and Green, 2001; Moore and Thompson, 1990; Verduin and Clark, 1991).

There have been efforts to determine the degree to which instructional design (e.g., live or taped lessons) and teacher practices influence student achievement. Overall, the findings of such research suggest that instructional design has little effect on student achievement as long as the delivery technology is appropriate to the content being offered and all participants have access to the same technology (Wilkes and Burnham, 1991). As Wilkes and Burnham suggested, good distance teaching practices are fundamentally identical to good traditional teaching practices. The factors that influence good instruction may be, in general, universal across different environments and populations. Additionally, as noted by Schlosser and Anderson (1994) and Egan, et al. (1991), distance education and its technologies require extensive planning



and preparation. Learners benefit significantly from a well-designed syllabus and presentation outlines (Egan, et al., 1991). According to the researchers, structured note taking, using tools such as interactive study guides, and utilizing visuals and graphics as part of the syllabus and presentation outlines contribute to student understanding of the course. However, these visuals must be tailored to the characteristics of the medium and the students.

As further emphasized by Egan, et al. (1991), teachers must be properly trained both in the use of equipment and in those techniques proven effective in the distance education environment. Learners also benefit more from the courses when the instructor seems comfortable with the technology, maintains eye contact with the camera, repeats questions, and possesses a sense of humor (Egan, et al., 1991).

Some research efforts have led to the conclusion that achievement on various tests administered by course instructors tends to be higher for distance education as opposed to traditional students (Souder, 1993). But, other studies have shown no significant differences in grades for distance education students versus traditional students (Freeman 1995; Mortensen 1995; McKissack 1997). In addition, no significant difference in positive attitudes toward course material has been found between distance and traditional education (Martin and Rainey, 1993). Egan, et al. (1991), reported that conventional instruction is perceived to be better organized and more clearly presented than distance education. In conjunction with this, it was found that the organization and reflection needed to teach effectively at a distance often improves an instructor's traditional teaching (Egan, et al., 1991).

Research has also focused on the degree to which the distance between instructor and learner impacts student learning. Many students learning through distance education require support and guidance to make the most of their distance learning experiences (Threlkeld and

Brzoska, 1994), a conclusion also suggested by my study. This support typically takes the form of some combination of student-instructor and student-student interaction. On the basis of this research, findings indicate that distance education students value and require timely feedback regarding course assignments, exams, and projects (Egan, et al., 1991). As indicated by Threlkeld and Brzoska (1994), learners benefit significantly from their involvement in small learning groups in the context of distance education. These groups provide support and encouragement along with extra feedback on course assignments. In addition, learners are more motivated if they are in frequent contact with the instructor; therefore, more structured contact could be utilized as a motivational tool (Coldeway, et al., 1980). Findings also indicate that the utilization of on-site facilitators who develop a personal rapport with students and are familiar with equipment and other course materials increase student satisfaction with courses (Burge and Howard, 1990).

#### **1.2.4 Tutoring**

In the traditional classroom, tutoring has been determined to be an effective means for responding to the challenge of distance between the teacher and student. Research has demonstrated how both the students and teacher can benefit from in-school assistance in which peers assume the formal role of tutor, with the use of peer tutors recognized as a solution to the instructional challenge of distance (Youngs and Green, 2001). Webb (1987) delineated the advantages of cross-age tutoring as providing an opportunity to learn in a nonthreatening environment, immediate feedback and clarification of information, and improvement of attitudes and self-esteem for both the tutor and tutee. In addition, tutoring allows more flexibility for the teacher.

Cross-age tutors (i.e., the tutor is older than the tutee) can provide an opportunity to personalize instruction for a distance education class and provide support to the teacher who is unable to be physically present. These tutors redefine the role of the classroom teacher by facilitating learning through the powerful influence of peer relationships (Webb, 1987).

Tutoring is an effective way to help a student continuously perform at his/her maximum academic potential. In a traditional classroom setting, it is not possible for teachers to tailor teaching methods to suit the needs of each individual student. For this reason, students who have unique learning styles often do not get the attention required to learn most effectively. Tutors, however, can work with the individual student to assess the student's strengths and weaknesses before deciding on the best course of action. A tutor who is familiar with a student's patterns of thinking and learning style will be able to design a lesson plan with the appropriate pace and content to suit these needs, creating a personalized learning strategy to improve the student's performance. Additionally, one-on-one tutoring allows a student to ask questions he/she would not ordinarily ask in a classroom setting due to various reasons (time constraints, shyness, etc.) and hence allows a more proactive role in the learning process. In other cases, when a student lacks certain fundamental skills, it also becomes difficult for him/her to ask for help in the classroom due to anxiety over being perceived as "slow." Tutors can help a student identify academic areas needing remedial work, thus building up a student's confidence.

Although distance education and tutoring are of interest to researchers, there have been few studies linking these two topics. My study provides this link, as well as documentation for the use of tutors in distance education.

### **1.3 THE PURPOSE OF THE STUDY**

The purpose of this study was to document and evaluate the use of high school on-site tutors in assisting elementary students in a Spanish distance education program. Through documentation of a practicing distance learning project where high school students who have successfully completed Spanish IV tutored elementary students learning Spanish, this study assessed the value of incorporating peer tutoring assistance to support this learning environment. The study focused on the attitudes and motivation of the cross-age tutors and the elementary students and investigated the achievement of the fifth-grade students who were introduced to Spanish.

### **1.4 RESEARCH QUESTIONS**

This study focused on two major concerns. First, how did the participants perceive distance education as a tool for learning Spanish? Second, did the tutors' role have an impact on the distance education setting? Based on these concerns, the following eight specific research questions were posed. Questions One, Two, and Four centered on the elementary students' attitudes toward distance education. Question Three pertained to the high school tutors' attitudes toward using distance education to teach Spanish. Question Five focused on the elementary students' self-assessment of Spanish knowledge and whether or not it changed throughout the study. Question Six had to do with the perceived impact the presence of cross-age tutors had on the distance education classroom. Question Seven concentrated on the elementary students' achievement on a written test consisting of the curriculum material that was introduced. The final

question profiled the language learners who participated in the prochievement interview. The eight research questions are listed below:

1. What were the elementary students' attitudes toward using distance education to learn Spanish?
2. Was there a difference in the elementary students' attitudes toward learning Spanish in the two distinct learning environments (i.e., one in which cross-age tutors were used and one in which no tutors were used)?
3. What were the high school tutors' attitudes toward using distance education to teach Spanish to elementary students?
4. To what degree, if any, did the attitudes of the elementary students learning Spanish through distance education change as they progressed through the program?
5. To what degree, if any, did the self-assessments of Spanish language skills and cultural knowledge of distance education elementary students change as they progressed through the program?
6. How did elementary students and high school tutors perceive the tutors' role and responsibilities in a distance education setting?
7. What was the difference in the achievement, as measured by a written test, of those who participated in the study with a tutor and those without a tutor?
8. By examining the students who participated in the prochievement interview, what were the profiles of these language learners with regard to the student questionnaire, self-assessment, and final exam?

## 1.5 DEFINITION OF KEY TERMS

A clear definition of the following terms is necessary for overall understanding of the study. The key terms used within the literature are defined herein and how they are applied in this study is clarified. The terms are as follows:

- Distance education or distance learning: These terms are applied interchangeably. The characteristics of both terms are the separation of the teacher and the student in space and/or time and the noncontiguous communication between student and learner mediated by some form of technology or print (Sherry, 1995).
- Peer tutoring: Peer tutoring represents a learning situation in which a person provides instructional assistance to another person. The tutor is the “expert” and the tutee is the “novice.” The term “peer tutoring” is used loosely and may also be referred to as cross-age tutoring and same-age tutoring. Cross-age tutors are students in higher grade levels who work with younger students. This study, where high school students assisted elementary students, refers to peer tutoring as cross-age tutoring.

## 1.6 THEORETICAL FRAMEWORK

In this section, the theoretical framework providing a foundation for the study is delineated. Conceptualizations from two theoretical frameworks are relevant to the study. First, a conceptualization of motivation theory is discussed. This is followed by a discussion of attitude theory, as explicated by Mantle-Bromley (1995).

### **1.6.1 Motivation Theory**

The pioneering work of Robert Gardner and Wallace Lambert (1959) launched psychological variables, attitude, and motivation to the forefront of research in language learning. Several researchers have been influenced by their groundbreaking work regarding the importance of motivation in second-language learning (e.g., Bacon and Finneman, 1990; Tremblay and Gardner, 1995; Mantle-Bromley, 1995; Shaaban and Ghaith, 2000).

Gardner (1985) established a model of motivation in second-language learning called the socio-educational model. This model is concerned with the role of various individual differences in the learning of an L2. In the model, two classes of variables—integrativeness and attitudes toward the learning situation—contribute to the learner’s level of motivation, and these three classes of variables form what is referred to as integrative motivation. The Attitude/Motivation Test Battery (AMTB) was developed by Gardner (1985) to assess various individual difference variables based on the socio-educational model. Gardner’s approach, as outlined above, has influenced many studies in L2 motivation. Although it is clear that Gardner’s theory has made a large contribution to this area, many studies calling for reconceptualization of motivation have emerged and are discussed in Chapter Two (e.g., Bacon and Finneman, 1990; Tremblay and Gardner, 1995; Mantle-Bromley, 1995; Shaaban and Ghaith, 2000).

### **1.6.2 Attitude Theory**

Mantle-Bromley (1995, p. 373) wrote, “What is termed *attitude* refers to affect and is evaluative, emotional reaction (i.e., the degree of like, or dislike associated with attitudinal object).” Attitudes include three components: affect, cognition, and behavior. The affective component

deals with feelings toward an attitudinal object. Attitudes toward the teacher, class, language, and culture are believed to be significantly related to students' language achievement. The second component, cognition, refers to beliefs that a person has about the attitudinal object. When referring to language learning, the attitudinal object may be the target language, teacher, or the class. Mantle-Bromley argued that students' beliefs about the nature of language learning may constitute a barrier that could affect their language-related attitudes. The final component, behavior, deals with the intentions or actions related to attitudinal objects. One example given by Mantle-Bromley is that students may continue or discontinue their language study, which could ultimately have an impact on their foreign language achievement. Each attitudinal component is equally valuable and encompasses the students' overall attitude toward the language and culture.

## **1.7 THE SCOPE OF THE STUDY**

My study focused on the qualitative and quantitative exploration of the affective attitudes of elementary students toward learning Spanish, mode of instruction, high school tutors, and Spanish culture. The overall objective of the study was to explore the impact of and potential factors associated with the role of high-school-aged students as on-site tutors in assisting elementary students in a Spanish distance education program.



## **1.8 THE LIMITATIONS OF THE STUDY**

The limitations associated with this study included issues associated with the generalizability of the study findings. The sample was limited to the study of fifth-grade students who participated in a Spanish distance education program and high school seniors who assumed the role of tutors with these fifth graders, all of whom attended suburban public school in Pittsburgh, Pennsylvania. In order to increase the generalizability of the findings to those students who may be similar to those who participated in the study, the study sample is described in detail within the reported findings. Another limitation of the study dealt with the fact that collecting data on elementary children is complicated because of their limited skills and limited ability to elaborate on information. Therefore, it was difficult to make a clear statement regarding the reliability and validity of the findings. Lastly, this study was limited by its time frame. The data interpreted were from the second semester of the school year, approximately two months in total.

## **1.9 THE SIGNIFICANCE OF THE STUDY**

This study attempted to establish theoretical and pedagogical factors for cross-age tutoring in a distance education classroom. The results indicated that there are some benefits to incorporating peer tutoring in a distance education setting teaching a foreign language. It seems that cross-age tutors may provide cognitive benefits, as well as promote affective and social benefit, in distance education. In particular, tutors increased the students' interest in learning Spanish.

This study was undertaken to inform researchers and educators regarding the effects of cross-age tutors, specifically on a Spanish distance learning classroom. The results of the study

may also be helpful in clarifying for researchers and educators the benefits that cross-age tutors offer. Because this study incorporated the use of cross-age tutors in a distance education foreign language classroom, the findings of the study may also help to show whether cross-age tutors are useful and practical within the general distance learning setting and the specific foreign language distance learning setting.

This study may also contribute information to professional foreign language teacher organizations such as the American Council on the Teaching of Foreign Languages (ACFTL) and Modern Language Association (MLA), teachers and teachers-in-training, policy decision-makers, technology staff, and faculty on how distance education classes can provide—with the use of cross-age tutors—adequate interaction and language use opportunities that are normally only observed in a traditional classroom setting. In addition, the study may provide information to curriculum planners about the possibility of implementing a foreign language program in elementary schools that otherwise could not employ an elementary foreign language teacher due to limited resources. Finally, this study promotes an innovation for research in foreign language education.

## **1.10 CHAPTER SUMMARY**

Within this introductory chapter, I have provided an overall introduction to the study, including a review of relevant background information that focused on distance education and its development over time. In addition, information was provided on the effectiveness of distance education and the challenges associated with it, as well as on tutoring and the use of distance education in foreign language classes. Chapter Two, a literature review, is provided for relevance to the study.

Subsequently, the research methodology used in the study is addressed in Chapter Three. Chapter Four presents the findings of the study. In Chapter Five, conclusions and recommendations based on the results of the study are offered.

## **2.0 LITERATURE REVIEW**

### **2.1 THE PURPOSE OF THE LITERATURE REVIEW**

Within Chapter Two, current and seminal literature relevant to the study is reviewed. Initially, information on motivation and attitude as they relate to foreign language education is discussed, followed by an overview of current findings on tutoring. Trends in foreign language education are then delineated, and a review is provided of current information on distance education. Finally, this chapter concludes with a discussion of the research that has been associated with tutoring and distance education.

### **2.2 MOTIVATION AND ATTITUDE**

Learner motivation is an important factor in the effectiveness of a foreign language program. It is a major component in a student's willingness to continue in a program or participate in further language learning experiences. A student's personal perception of the appeal of learning a language is linked to the student's level of motivation, which research has shown to be a predictor of achievement in academic settings (Dornyei, 1994; Gardner and Lambert, 1972). The groundbreaking work of Gardner and Lambert (1959) brought attitude and motivation to the forefront in language learning research. These researchers proposed that second language

achievement was not only related to language aptitude but also to motivation. Since then, a considerable amount of research on this subject has continued to expand upon their early works.

It is important to understand how motivation is deemed essential to language learning and language achievement. Gardner (1985) defined motivation as “the combination of effort plus desire to achieve the goals of learning the language plus favourable attitudes toward learning the language. That is, motivation to learn a second language is seen as referring to the extent to which the individual works or strives to learn the language because of a desire to do so and the satisfaction experience in this activity” (p. 10). Gardner (1985) went on to state that “attitude and motivation are important because they determine the extent to which individuals will actively involve themselves in learning the language” (p. 56). Gardner and Lambert (1972) clarified that motivation comes from attitudes; therefore, they used the terms “attitudes” and “motivation” jointly.

The work of Gardner and Lambert (1972) is considered to be the key research on the effect of attitude and motivation in second language development. Using a socio-educational model of motivation, Gardner and Lambert proposed that two forms of motivation drive foreign language learners—integrative and instrumental. Integrative motivation is defined as a learner’s objective to identify with the culture of the language being studied. Learners who have integrative motivation reflect personal interest in the target language, people, and culture being studied. Instrumental motivation is considered to be present when a learner’s purpose for acquiring a foreign language is practical, such as obtaining employment, traveling, or passing a test. By contrast, learners who have instrumental motivation are likely to show little interest in the language or people who speak the language they are studying. It has been suggested that

integrative motivation is more likely associated with foreign language acquisition than instrumental motivation.

Using Gardner's and Lambert's conceptualization of integrative and instrumental motivation, Shaaban and Ghaith (2000) investigated the motivation of university-bound Lebanese students to learn English as a foreign language (EFL). Their findings suggested that, if students demonstrate integrative orientation toward the foreign language and culture, work intensely, have a positive outlook toward learning outcomes, and develop the sense that program objectives are attainable, they will develop the needed motivation to gain knowledge of the language. Their results also showed that learners do not view instrumental motivation as a factor that will lead them to exert more effort and develop the needed expectations and ability for learning EFL. Lastly, their results suggested that low-proficiency students and females have a tendency to be more willing to exert effort in learning English. These groups are also more likely to perceive the goals of learning English as more appealing than their male and higher-proficiency counterparts.

Bacon and Finneman (1990) recognized that a major area of second language acquisition research is the role played by learner variables (for example, motivation) in the process of learning a second language. In this study, a set of reliable learner beliefs (or factors) associated with language learning strategies for first-year university Spanish students was identified. The study supported the importance of attending to students' affective needs and general language learning strategies when interacting with authentic input. The results implied that motivation plays a role in strategy choice.

Saito and Samimy (1996) examined the roles of affective variables—in particular language learner anxiety—of students studying Japanese. The researchers were interested in

investigating potentially predictive variables for students' performance. In addition, their research focused on the role of anxiety related to students' performance at the beginning, intermediate, and advanced levels. Results indicated that foreign language anxiety can have a negative impact on a learner's performance. It is clear that, in order to help learners reduce their anxiety, teachers need to become aware of students' affective needs and respond to them accordingly.

Donato, Tucker, Wudthayagorn, and Igarashi (2000) conducted a longitudinal study to document and evaluate Japanese Foreign Language in Elementary School (FLES) students' achievement and attitudes. Six variables were investigated: proachievement interview, years in the program, parental support, students' self-assessments, students' attitudes, and gender. Significant correlations were summarized as follows. First, the students who assessed themselves positively performed better on the interview than students who assessed themselves negatively. Second, the students with positive attitudes toward the Japanese language performed better during the interview. Third, students who had participated longer in the program had more positive attitudes than the others. Fourth, the students who assessed themselves positively also reported that they had positive attitudes toward Japanese. The students who assessed themselves poorly reported a more negative attitude toward their learning experience. These findings support the ability of students to accurately assess themselves and their attitudinal awareness.

As in the previous study, Wudthayagorn (2000) investigated the attitudes and patterns of attitudinal development of elementary school students who participated in a Japanese FLES program. The following results were observed. First, there were no significant differences between the attitudes of each student measured at the beginning and those measured at the end of the semester. Second, older students were more positive toward the Japanese people and culture

than younger students. Third, the older students' affective attitudes and behavioral attitudes increased positively. From observing and conducting interviews, it was reported that students who had positive attitudes tended to show enthusiasm for learning Japanese and planned to continue studying the language.

The research cited above indicates both generalized and language-learning-specific gains for participating students. In summary, studies of motivation reveal that it is essential to examine the students' beliefs and reasons for wanting to learn a foreign language. As research studies suggest, both attitude and motivation are found to play a key role in language achievement.

### **2.3 TUTORING**

Research indicates that tutoring is one of the most successful instructional tools implemented in schools today, serving to strengthen both academic and social skills. Tutoring, more commonly referred to as peer tutoring, serves as an all-purpose term for any age group, provided that the tutoring is student to student (Rekrut, 1994). In particular, cross-age tutoring refers to students who differ in age or grade by several years (Foster-Harrison, 1997; Gaustad, 1993; Thomas, 1993). Regardless of the terms used to define tutoring, this teaching method ordinarily involves a more skilled student (or tutor) teaching a lower achieving child (or tutee). The references regarding tutoring made in this dissertation will refer to what is defined as cross age.

As identified within the literature, there are many benefits for both the tutor and tutee. Tutoring develops the academic and the affective together, with children learning positive attitudes, values, and skills through peer interaction. With this interaction, they become skilled at sharing, helping, comforting, and empathizing with others (Thomas, 1993).



An important dimension of tutoring is modeling. Tutors often reinforce their own knowledge and skills, which in turn helps them to explain the subject matter to others and also helps them to better understand it themselves. The role of tutor develops in the individual a sense of responsibility for reinforcing the material covered in the lesson and building self-confidence and self-esteem (Webb, 1987).

A study that investigated peer tutoring in inner-city secondary schools, conducted by Carol Fitz-Gibbon (1980), reported that cross-age tutoring is more promising than same age. Fitz-Gibbon suggested that a two- to four-year age difference between tutor and tutee was preferable. Sharpley and Sharpley (1981) also stated that many supporters of peer tutoring claim it has a better chance of long-term success because a minimum differential of two years decreases the chance of resentment or personality clashes.

There are reciprocal benefits for students taking part in a tutoring program. Both cognitive and affective gains are reported for the tutor and tutee. Many of the research articles on peer tutoring have concentrated more on predicting and explaining the effect on tutors than on examining the effect on tutees. However, research on the efficacy of peer tutoring to improve the tutors' performance indicates that tutors learn by reviewing, find meaningful use for the subject matter, and are able to fill in gaps in their own education (Goodlad and Hirst, 1990). Also, Goodlad and Hirst suggested that, once students find a meaningful use for their knowledge, they assimilate readily and their interest in the subject matter increases. Therefore, a tutor's motivation and attitude toward the subject area improves.

Research has also been conducted to determine factors that may influence the effectiveness of cross-age tutoring. Findings suggest that children have certain advantages over adults in teaching peers. For one, they may more easily understand tutees' problems because they are

cognitively closer. Allen and Feldman (1976) found that third and sixth graders were more accurate than experienced teachers in determining whether age mates understood lessons from nonverbal behavior. The fact that their "cognitive framework" is similar may also help peer tutors present subject matter in terms their tutees understand (Cohen, 1986). Cohen (1986) also explained that peer tutors could effectively model study skills, such as concentrating on the material, organizing work habits, and asking questions. Cohen noted that similarities between model and learner increase the influence of modeling. Therefore, as explained by the researcher, a child may more easily identify with a student relatively close in age, particularly one of the same ethnic or social backgrounds, than with an adult. Cohen further explained that higher status also promotes the effect of modeling. Cross-age tutoring takes advantage of the higher status present in the age difference while still retaining considerable similarity.

According to Lippitt (1976), tutors who have struggled academically may be more patient and understanding than those who have not. Gaustad (1993) noted that empathy may contribute significantly to low achievers' effectiveness as cross-age tutors. Having experienced similar problems, as explained by Gaustad, the cross-age tutor is often able to "pick up" on that which teachers may have missed in their work with the tutee.

Gaustad (1993) believed there was evidence to suggest that peer and cross-age tutoring appear to frequently improve the overall school atmosphere. Often, competition between students is reduced as a more supportive classroom environment is created. As further noted by Gaustad, in such a supportive classroom environment, there appears to be increased acceptance amongst peers and classmates with less derogatory behaviors displayed toward other students.

A number of potential problems can emerge in peer or cross-age tutoring (Gaustad, 1992). The author noted that the simple placement of two students together will not lead to

successful tutoring. Gaustad pointed out that, if tutors are untrained, when faced with challenges, they more likely will resort to the utilization of threats of punishment or derogatory and insulting feedback toward the tutee. Therefore, Gaustad emphasized that training was needed to master the tutorial and communication skills necessary for effective tutoring.

Youngs and Green (2001) also supported using trained class peers across all three levels (elementary, intermediate, and advanced) of language learning in all seven languages at Carnegie Mellon University. The quantitative and qualitative results indicated that the peer writing assistant program was beneficial.

Gaustad (1992) indicated that problems might occur when peer tutors do not completely understand the materials being taught within the tutoring situation. Therefore, it becomes important to assess tutor comprehension prior to assigning him/her to the tutor role. While Gaustad stressed that a tutor need not be an excellent student, she suggested it is critical that tutors have a firm understanding of the materials being taught. Consequently, it is necessary to carefully select and effectively train tutors to ensure success and avoid potential problems

Another potential challenge associated with peer tutoring, as identified by Gaustad (1992), emerges when tutees perceive themselves as less capable than tutors and resist being tutored. According to the author, this problem is less likely to present itself when tutoring is recognized as a normal, accepted part of school life.

## **2.4 ELEMENTARY GRADE LEVEL FOREIGN LANGUAGE EDUCATION**

There are many advantages that come with the ability to communicate with individuals of different language communities and understanding and appreciating their media, literature, and

other cultural, scientific, and artistic accomplishments. As evidenced within the literature, research has documented that studying a language other than one's native tongue can enhance problem-solving skills, creativity, and general cognitive development and may even aid in sharpening native language skills. Research conducted by Cooper (1987) and the College Entrance Examination Board (1992) has been cited frequently for having found significant, positive correlations between high verbal SAT scores and extended (four years or more) foreign language study. As a consequence of such findings, there has been a growing interest in the importance of foreign language education at the elementary and secondary school levels.

According to Rhodes and Branaman (1999), a survey conducted in 1997 by The Center for Applied Linguistics (CAL) showed a nearly 10 percent increase in the number of elementary schools offering foreign language programs since 1987. Almost one-third of all responding elementary schools participating in the study reported that they offered some form of foreign language instruction (mostly Spanish), involving approximately 4 million elementary school students (out of a total of 27.1 million).

Rodes and Branaman (1999) demonstrated that, among the one-third of elementary schools offering foreign language study, the majority (79 percent) provided programs aimed at various kinds of introductory exposure to the language, while 21 percent offered programs having overall proficiency as one of the goals. Based on this finding, the authors concluded that this meant that only 7 percent of all elementary schools (increased from 3 percent in 1987) offered instruction in which the students were likely to attain a high level of fluency, as recommended in the national standards goals.

Rhodes and Branaman (1999) reported that, as in 1987, almost all secondary schools in 1997 with foreign language programs offered standard classes that included listening, speaking,

reading, writing, and culture. There was a significant increase in the percentage of advanced placement classes offered (i.e., 16 percent of secondary schools, up from 12 percent in 1987). Language classes for native speakers also increased significantly over this time period (from 4 percent in 1987 to 7 percent in 1997). The authors reported that these increases showed a modest trend to offer more advanced levels of instruction aimed at producing students competent in a second language and culture. However, it is difficult to generalize from the survey data about the overall proficiency goals of the majority of the programs. Because of the limited number of hours per week of instruction and the small number of schools offering conversation classes (4 percent) or regular subjects taught in other languages (2 percent), it was hypothesized by Rhodes and Branaman that most of the secondary school programs did not have students attaining a high level of proficiency.

The results of the CAL study as reported by Rhodes and Branaman (1999) also indicated that Spanish and French continued to be the most common languages of instruction in elementary schools. The results suggested that Spanish instruction has increased significantly from 68 percent of schools in 1987 to 79 percent in 1997, while French instruction has decreased. Of the elementary schools offering foreign language instruction, 41 percent taught French in 1987 vs. 27 percent in 1997, a statistically significant decrease. According to Rhodes and Branaman, all other languages remained stable or decreased during the two study time periods except for four, including Spanish for Spanish Speakers (up to 8 percent from 1 percent), Japanese (up to 3 percent from 0 percent), Italian (up to 2 percent from less than 1 percent), and Sign Language (up to 2 percent from less than 1 percent).

Rhodes and Branaman (1999) indicated that the vast majority of elementary schools that had foreign language programs in 1997 taught language classes during the regular school day

(92 percent in 1997 vs. 89 percent in 1987). More than three-quarters of the elementary schools offered classes for the entire school year. Those schools which did not offer classes for the whole year offered classes anywhere from 2 to 20 weeks. In regard to funding, as was the case in 1987, Rhodes and Branaman reported that the majority of elementary school language programs used regular school funds for salaries, materials, and expenses incurred by foreign language teachers.

According to Rhodes and Branaman (1999), most of the elementary schools teaching foreign language reported having an established foreign language curriculum or set of guidelines for their program (70 percent in 1997 vs. 64 percent in 1987). The curricula tended to be developed by teachers at the school.

The findings of the CAL study suggested that the three most popular types of materials for teaching foreign language at the elementary level were teacher-made materials, audio-visual materials, and commercially published textbooks/workbooks (94, 94, and 85 percent of elementary schools with foreign language programs, respectively). According to Rhodes and Branaman (1999), all of these materials were used more frequently at the elementary level in significant numbers than a decade ago. Additionally, literature and materials from the target culture were used by approximately 7 in 10 elementary schools with a foreign language program in 1997. Computer-based instructional materials were used by a significantly greater percentage of elementary schools in the current survey as compared to the 1987 survey (41 percent in 1997 vs. 14 percent in 1987).

When considering the circumstances of foreign language teachers, as reported by Rhodes and Branaman (1999), the average number of foreign language teachers in both public and private elementary schools with language programs was two. Nearly one-half (46 percent) of responding elementary schools reported that one or more of their foreign language teachers was a

native speaker of the language being taught (44 percent public; 48 percent private). The researchers reported that only 19 percent of the responding elementary schools reported that all of their teachers were certified for foreign language teaching at the elementary level. As explained by Rhodes and Branaman, these results reflected the lack of available teacher training and certification programs geared toward the elementary foreign language teacher. Also, according to the researchers, many states do not yet require licensure or endorsement for elementary school foreign language teachers. However, Rhodes and Branaman reported that staff development and in-service teacher training has increased significantly in the past decade. In 1997, over two-thirds (67 percent) of elementary schools that offered foreign language classes reported that their language teachers had participated in staff development or in-service training during the past year compared to only one-half (53 percent) in 1987.

Findings from the CAL study suggested that a wide range of strategies for assessing students' language proficiency are used at the elementary school level. According to Rhodes and Branaman (1999), the top three assessments, in order of those most used, were selected-response tests (e.g., multiple choice or matching); short-answer tests; and student presentations or demonstrations. In addition, the following assessment strategies were used most: authentic activities, oral proficiency interviews, translation exercises, student portfolios, and student self-assessments.

In regard to trends in elementary foreign language education and adherence to standards, Rhodes and Branaman (1999) reported that a total of 37 percent of elementary school respondents indicated that teachers in their schools were aware of the Standards for Foreign Language Learning: Preparing for the 21<sup>st</sup> Century (1999) and/or state standards. Over one-half of the elementary schools that were aware of standards noted that their school's foreign language

curricula had changed due to this awareness.

Rhodes and Branaman (1999) found that the most frequently identified problems in foreign language education in elementary schools continued to be funding shortages, inadequate in-service training, and inadequate sequencing from elementary to secondary schools. In 1987, a shortage of teachers was considered to be a major problem among respondents. In 1997, the ratio of teachers to students remained an area of concern.

## **2.5 DISTANCE EDUCATION**

While the label “distance learning” or “distance education” could be applied to any circumstance where students are learning at isolated sites, the term is generally limited to teaching via satellite or other long-distance telecommunication technology (Clifford, 1990). Unlike a traditional classroom where the teacher directly interacts with students, distance education teachers do not have direct physical contact but communication is provided via technology. Interaction between the teacher and student is still necessary in the distance education system but takes many forms, including audio and video, and is not exclusively limited to teacher-student interaction. Distance learning represents the connectivity the students feel with the distance teacher, local teacher, aides, facilitators, and their peers (Sherry, 1995).

While research suggests there is increasing diversity in the course content being taught via distance education, of particular interest for this study is the fact that the number of foreign language programs using distance learning is growing (Clifford, 1990). According to Clifford, distance learning technologies continue to present many new options for teaching foreign languages that further expand the range of instructional techniques in the same way that language



labs, television, and computers have augmented the standard classroom. However, Clifford also pointed out that, while the lack of immediate two-way interaction that characterizes many distance education programs seems contrary to the aims of foreign language teaching, efforts directed towards dealing with this challenge could enable distance technologies to support the goals of foreign language pedagogy. The author explained that instructional strategies encouraging student-teacher and student-student dialogue and learner autonomy in distance learning situations must be incorporated into instruction.

In addition, distance education, as it has continued to evolve, can be used to provide interactive or noninteractive learning opportunities for students. Interactive learning can be synchronic, asynchronous, or a combination of the two. According to Cohen (1999), synchronic learning is where “the teacher and students perform interactively at the same time on the same subject and in every learning action they perform” as in the traditional classroom (p. 222). In asynchronous learning, “the teacher and students interact but do not deal with the same topic at the same time” (Cohen, 1999, p. 222). Noninteractive learning is mainly represented by the World Wide Web, where the media transfers the knowledge to the learner.

How can distance learning provide the interaction necessary for developing foreign language skills? According to Clifford (1990), the success of distance learning in developing students’ foreign language skills depends on the ability of the instructional program to provide the interaction needed for developing second language skills, such as learning in face-to-face settings. Barker (1986) was very critical of the shift away from live and interactive foreign language instruction: “no matter how well produced the videotaped lesson may be, lack of a teacher (to interact with) greatly reduces the effectiveness of the teaching approach” (p. 11). In addition, a distance learning classroom does not provide an atmosphere where the students

respond freely and spontaneously to comments and questions. Instead, they interacted infrequently with the teacher (Barker, 1986).

Although a substantial amount of research demonstrates that there is no significant difference in achievement levels between distance and traditional learners, there is a considerable variance in student attitudes and satisfaction levels (Johnstone, 1991). This fact deserves attention, since the students' overall learning experience, not simply outcomes, is important.

Understanding the varying backgrounds and needs of a learner are important, but motivation and learning characteristics—and how these elements might influence student attitudes and satisfaction—need to be taken into consideration. Learner satisfaction is an important factor in the effectiveness of a distance learning program. Satisfaction with the learning environment is a major component in the student's willingness to continue in a program or participate in further distance learning experiences (Chute, Thompson, and Hancock, 1999). Therefore, a student's personal perception of the appeal of learning by this mode of instruction is linked to the student's level of motivation, which research has shown to be a predictor of achievement in academic settings.

The Indiana University of Pennsylvania Spanish Distance Education Project: Final Report (1998), conducted by Glisan, Dudt, and Howe investigated some foreign language educators' concerns regarding distance education. The report summarized the feasibility of distance education and, more specifically, the use of video-conferencing technology to deliver Spanish simultaneously to two geographically separated elementary classes. The three criteria used for evaluation (student assessment results, comments on attitude surveys, and National Council of State Supervisors of Foreign Language [NCSSFL] program guidelines) provide evidence to indicate that it is feasible to use video-conferencing technology to teach Spanish to

students at two different sites. The data from this project indicated that some learning does occur and that students respond positively to this type of learning experience.

Kubota (1999) examined American high school students learning Japanese via satellite. The study investigated the nature of learning experiences, level of students' motivation and attitude toward Japanese speakers and learning the language, level of language skill development, and student-teacher interaction during the once-a-week telephone dialogue and broadcast lessons. The findings showed that students maintained their levels of motivation and positive attitudes and demonstrated improvement in language skills, although learning was restricted due to technical, instructional, and administrative limitations.

Without exception, effective distance education programs begin with careful planning and a focused understanding of course requirements and student needs. Appropriate technology can only be selected once these elements are understood in detail. There is no mystery to the way effective distance education programs develop. They do not happen spontaneously; they evolve through the hard work and dedicated efforts of many individuals. In fact, successful distance education programs rely on the consistent and integrated efforts of students, teachers, facilitators, support staff, and administrators.

In summary, although technology plays a key role in the delivery of distance education, educators must remain focused on instructional outcomes and not the delivery technology. The key to effective distance education is focusing on the needs of the learners, requirements of the content, and constraints faced by the teacher and the technology.

## 2.6 TUTORING AND DISTANCE EDUCATION

Little research has been conducted on the use of tutors in the context of distance education, but researchers believe that tutorial support enhances the learning experience of students who enroll in a distance learning program (Burge, et al., 1991; Lawton, 1997; Naylor, et al., 1990; Valcke, et al., 1991). While questions have continued to emerge as to whether the format associated with distance education provides adequate opportunities for genuine dialogue and social interaction (identified as vital elements in the learning process), the potential role that tutors can play has been increasingly stressed (Hobaugh, 1997). Discussions within the literature regarding tutoring and distance education frequently emphasize the need for research into interactivity (McNabb, 1994; Wagner, 1997). As defined by Wagner (1994; 1997), interactive distance education involves communication between learners and their class tutors. Wagner (1997) stated that “distance learning practitioners—particularly instructors and program administrators—seem to view interactivity as the defining attribute of contemporary distance learning experience” (p. 19). Critics of distance education often stress that interactivity appears to be a critical missing component of distance education because classes lack the face-to-face interaction found within the traditional classroom. Alternatively, distance education supporters argue that contemporary distance education classes provide effective interactive learning experiences (Wagner, 1997). Simonson (1995) argued that educators must strive “...to make the experience of the distance learner as complete, satisfying, and acceptable as that of the local learner” (p. 12). According to Wagner (1997), interactivity in distance education is as good as or even better than the social interaction available within the traditional classroom.

While there have been a number of studies evaluating interactivity and the use of tutors in distance education, most of the studies have been conducted in relation to higher education

classes. In spite of this, a review will be provided of the studies to further facilitate an understanding of the potential role of tutors within elementary distance education classes.

Mason (1991) studied interactivity in a distance education class at the Open University in Great Britain. Findings from the study suggested that tutors play a major role in directing class discussions. They were found to influence the discussion process by encouraging new topics, sharing new material, and redirecting conversation patterns. The overall results suggested that student interactions with tutors were helpful in fostering learning by integrating personal experience into their class discussions and gaining insights (e.g., how others think) from other students. The study did raise concerns that student interactions did not promote critical thinking opportunities to seriously examine course themes. Student discussion contributions were examined and organized into the following six categories of interactions:

1. Use of personal experience related to course themes
2. Reference to appropriate material outside the course package
3. Comments on others' opinions, both students and tutors
4. Introduction of new issues for discussion
5. Students posing questions for the group
6. Tutors acting as facilitators (Mason, 1991, p. 168).

Horn (1994) and McNabb (1994) discussed research studies on interactivity and raised questions about the quality and quantity of dialogue in distance education classes. The researchers suggested that genuine interactivity between tutor and student can be hindered by an assortment of educational problems. Students can be confused about the quality of their work when they have trouble contacting their teachers about their assignments and their classes lack specific academic standards. Both Horn and McKnabb emphasized the

importance of ongoing research directed towards developing a further understanding of the human dimension of distance education.

Burge (1994) investigated two on-line graduate education classes using in-depth interviews with 21 masters of education students and their 2 instructors. The tutors participating in the study were adult instructors. The results of the study suggested that a number of competencies are necessary for tutors to be effective. The first tutor competency identified was the ability of the tutor to manage class discussions, allowing for and encouraging creativity, reflective thinking, and self-directed learning. Secondly, tutors should be able to assist with monitoring and maintaining focused class discussions, moving at a good pace, and providing constructive feedback. In fact, as the findings suggested, tutors should aid in reducing negative learning experiences by censuring the remarks of those who interfere with the class dialogue. Additionally, study participants expected that tutors play a vital role in assisting students. Burge (1994) concluded that tutors should provide support by “giving fast and relevant technical help, sending timely and individualized content-related messages and feedback, with, if possible, summaries of discussion and guidance about resources, and offering affective support (welcome, encourage, show empathy, role model support-giving)” (p. 30-31).

Burge's (1994) research also highlighted the interviewees' positive and negative experiences with peer interaction. Students enjoyed having others help them, sharing critical feedback, and observing a diversity of perspectives during their on-line course. Study participants also cited having problems with other students during their group work and class discussions. Students expressed disappointment with fellow students who were not timely and relevant in their message postings. The affective and psychological dimension of distance education was an important part of their overall learning process. Students demonstrated a real

need to make genuine connections with their peers and tutors.

Hallett and Cummings (1997) studied a small computer-mediated undergraduate course in educational psychology. The class utilized a Web-based environment that was created to promote authentic and interactive learning experiences. The instructor found that interactivity among students was a very illusive goal. Students did not post additional on-line comments beyond the required assignments because the work was not graded. Students had a negative view toward posting messages because they felt lost in cyberspace. The absence of visual cues and immediate instructor and tutor responses to their comments played a role in their negative perspectives. The researchers concluded that the study helped to reveal that achieving interactivity was a complex educational process influenced by a variety of learning factors.

While the above studies were focused on higher education distance education experiences, the results help to emphasize that the role of the tutor in a distance learning environment is challenging. It is often difficult for the tutor to incorporate both teaching and facilitatory aspects such as support and guidance (Lawton, 1997). Valcke, et al. (1991), recognized the difficulty of tutorial support. For the student-tutor relationship to be a success, they suggested that the tutee having a friendly experience with his/her tutor makes a significant contribution.

Burge, et al. (1991), questioned distance education students about the function of the tutor. A total of 1,040 students were sent a questionnaire, with a response rate of 43 percent achieved. It was reported that the lack of tutor contact was a problem for 30 percent of the students, and 67 percent of the students indicated that tutors were of moderate help to them. Of the sample, 48 percent wanted to have more contact with their tutors. As shown by these findings, many students desired more contact with their tutors, leading the authors of the study to suggest that more interaction would improve the student-tutor relationship. The “new style” tutor

proposed would bring new definitions to the concepts of achievement and affiliation, dialogue, and delivery. The tutor could “become a warm proactive figure in the learner’s landscape, and not just a shadowy entity” (p.55). The minimal research conducted linking tutoring and distance education suggests that there is a need to prepare tutors to adapt to such a role.

In regard to the issues surrounding distance education and tutoring in a foreign language, there is much to be investigated by foreign language educators, curriculum planners, policy decision-makers, and technology facilitators. Based on the existing research in this field and also in tutoring, there are important issues that need to be researched further, such as defining the tutors’ role and responsibilities and how they enhance the students’ learning. Communication between these two groups seems to be the critical component.

## **2.7 CHAPTER SUMMARY**

In this literature review, I have explored the existing research to explain attitudes and motivation, tutoring, elementary students learning a foreign language, and distance education. As this review of research indicates, there is a need to offer distance education students a supportive learning environment in order to enhance their learning experience. Tutoring is an effective method of instruction that provides cognitive and affective benefits for both the tutor and tutee. Tutoring can impact students’ feelings of success in the classroom, belief of usefulness, and purpose of learning a foreign language. Finally, it offers class enjoyment when working with a partner or tutor. Tutoring is a key ingredient in providing the necessary interaction for developing skills in a foreign language classroom. This review of literature supports my conclusion that incorporating



cross-age tutors to teach elementary students Spanish in a distance education environment provides several benefits.

### **3.0 METHOD**

Chapters One and Two established a rationale for this study through the introduction and literature review. I will now turn to the research methodology. The quantitative and qualitative study that I performed represented an effort to explore and document the attitudes and motivation of elementary and high school Spanish students participating in a distance education program. It also examined how cross-age tutors influence distance education as a mode of instruction.

First, the research questions are reviewed. This is followed by a description of the research site and study participants. Next, the research design selected for the study is discussed. After this discussion, the research methodology used within the study is presented, including sampling, procedure, measures and instrumentation, pilot study, data collection, and data analysis. The chapter concludes with a summary.

#### **3.1 RESEARCH QUESTIONS**

The research questions underlying the study were as follows:

1. What were the elementary students' attitudes toward using distance education to learn Spanish?
2. Was there a difference in the elementary students' attitudes toward learning Spanish in the two distinct distance learning environments (i.e., one in which cross-age tutors were

used and one in which no tutors were used)?

3. What were the high school tutors' attitudes toward using distance education to teach Spanish to elementary students?
4. To what degree, if any, did the attitudes of the elementary students learning Spanish through distance education change as they progressed through the program?
5. To what degree, if any, did the self-assessments of Spanish language skills and cultural knowledge of distance education elementary students change as they progressed through the program?
6. How did elementary students and high school tutors perceive the tutors' role and responsibilities in a distance education setting?
7. What was the difference in the achievement, as measured by a written test, of those who participated in the study with a tutor and those without a tutor?
8. By examining the students who participated in the prochievement interview, what were the profiles of these language learners with regard to the student questionnaire, self-assessment, and prochievement interview?

### **3.2 RESEARCH SETTING**

The study was conducted in a public education school district situated on the outskirts of Pittsburgh, Pennsylvania. The district consisted of approximately 2,500 students, with one high school, one middle school, and three elementary schools. Both the high school and the middle

school were on the same property. The elementary schools were in close proximity, ranging from within one to six miles of the secondary schools.

Within the research setting, the foreign language program offered was broadcast from a school television studio. The lessons were 20 minutes in length, and each school received two lessons per week. The high school students who served as tutors registered for Elementary Spanish, received a grade, and assisted the teacher in lesson planning and implementation. The elementary settings used by the foreign language program varied from school to school, although the schools used in the study provided typical classroom settings. All of the settings were equipped with at least one television, video-conferencing equipment, and a whiteboard.

### **3.3 PARTICIPANTS**

For the purposes of the study, there were two groups of study participants—the high school cross-age tutors and the elementary students learning Spanish. There were three high school students participating in this study who facilitated the lessons. Student selection for participation was based on two criteria. Tutors must have completed at least Spanish IV with a grade of B or higher and also demonstrated an interest and commitment to the program. The other participants, approximately 30 fifth-grade students, attended two of the three elementary schools in the district. The elementary students who participated voluntarily agreed to attend this class and had never taken a Spanish class before. Although they would not be given a grade, the elementary principals insisted on attendance for the students who signed up.

### 3.4 RESEARCH DESIGN

The research design used in the study was selected on the basis of the overall purpose of the study. Since it represented both a qualitative and quantitative effort to explore and document elementary and high school students' attitudes and experiences in a foreign language distance education program, a correlational research design was used. To explore students' attitudes, the correlational research design was implemented via the use of questionnaires and interviews. Zechmeister, Zechmeister, and Shaughnessy (1997) explained that the implementation of a correlational research design permits the researcher to explore and discover relationships among a large number of variables within a study. In correlational research, they stated that the main purpose was to establish whether factors were related and, if so, establish the direction of the observed relationship.

For the purposes of this study, the distance education foreign language program randomly divided both fifth-grade classrooms into two equal groups. One-half was exposed to the high school tutors and the other half was not. Although the elementary students in the two distinct groups (with a tutor vs. without a tutor) would be taught at different times, each group would receive the same lesson and same amount of time. The difference in the study conditions was fundamentally one of the presence of or lack of cross-age tutors.

Survey research represents a general approach to be used when a correlational research design is implemented (Zechmeister, et al., 1997). It is the method of gathering data from respondents thought to be representative of some population using an instrument composed of both closed and open-ended questions. It is one of the most dominant forms of data collection in the social sciences, providing for efficient collection of data over broad populations, and is

amenable to self-administration or administration in person, by telephone, via mail, and over the Internet.

In addition to survey research, this study incorporated student journal reflections. Reflection, as defined by Killion and Todnem (1991), is “the practice or act of analyzing our actions, decisions, or products by focusing on our process of achieving them” (p.15). Reflection also involves the confirmation, addition, or transformation of ways of interpreting experience (Mezirow, 1991). As part of their work with the elementary Spanish distance education program, the three high school students completed journal reflections every two weeks based on the lessons and their experiences as cross-age tutors. Students were asked to write at least one paragraph on the following:

- Their overall reflections on the lessons. Beginning with an open-ended approach encouraged the tutors to acknowledge a range of feelings and thoughts, including any negative ones, which, if left unexplored, could get in the way of their learning experience.
- Any new issues that emerged. Unexpected issues do emerge in learning experiences. These issues can lead to confusion, intriguing questions, or new areas of interest.
- What they did well. The learner must be aware of what he/she is doing well so that these capabilities can be preserved, nurtured, and built upon.
- What they are feeling. As a part of helping the high school students become insightful learners, exploring their feelings could help them assess their perspectives on the program.
- Suggestions. These ideas helped to refine the program.

### **3.4.1 Sample**

The population of interest for the study was high school and fifth-grade students attending a suburban school district outside of Pittsburgh, Pennsylvania. For the purposes of the study, nonprobability sampling was used. According to Trochim (2001), the difference between nonprobability and probability sampling is that nonprobability sampling does not involve random selection and probability sampling does. Trochim explained that, in applied social research, there may be circumstances where it is not feasible, practical, or theoretically sensible to do random sampling.

Purposive Sampling. Following the recommendations of Trochim, as a form of nonprobability sampling, purposive sampling was used within the study. Purposive sampling occurs when one or more specific predefined groups are sought. For this study, the criteria established for inclusion within the purposive sample included that the study participants who served as tutors had completed Spanish IV, received a grade of a B or higher in the class, and demonstrated an interest and commitment to the program.

### **3.4.2 Procedure**

The procedure administered within the study consisted of a distance education elementary Spanish language program using cross-age tutors. Distance education classes in elementary Spanish were offered via video conferencing for a period of eight weeks, two days per week. The researcher served as the teacher for the program and trained the cross-age tutors in lesson content. The tutors served as facilitators to the students in the two groups designated as Groups A1 and A2. Groups B1 and B2 received the same lessons but without the presence of

tutors. In Groups A1 and A2, the tutors provided one-on-one assistance, group assistance, and the necessary materials for the class. Groups B1 and B2 only received assistance from the teacher via video conferencing. The teacher or teacher's aide present in the classroom distributed the materials for each lesson. This person did not provide any other assistance.

As stated above, the researcher also served as the teacher. Conducting research can be an important aspect in all teachers' professional lives. It provides a means for educators to learn from themselves, their students, and other teachers' findings. Hubbard and Power (1993) suggested that teachers should choose research by considering what interests or intrigues them in their own classroom. This is one of the reasons why I selected distance education and peer tutoring as the subject of my study. Currently, I have the opportunity to incorporate both areas into my teaching assignment. Hubbard and Power (1997) also advised teachers to expand the scope of study to include a group of students or an entire class, which this study did.

In addition, Hansen (1997) discussed some important forces that propel teacher researchers forward. First, she encouraged them to examine those parts of teaching that work well with students and then to share those experiences with other educators. By conducting research that tries to understand why certain techniques, classes, or strategies are successful and also understanding students' attitudes, it is possible for the teacher/researcher to make informed decisions. He/she can know what changes to make in instruction and how to evaluate the impact of these changes based on the knowledge gained from research.

### **3.4.3 Study Measures**

In order to gather both qualitative and quantitative information on students' attitudes and achievement regarding the distance education foreign language program offered within the study,



questionnaires, student self-assessments, reflection journal entries, prochievement interviews, and written final exam were utilized. In addition, these instruments were used to document and evaluate the use of video conferencing and high school students serving as cross-age tutors to teach Spanish to elementary students. Each of the measures that were used in the study is described in detail below.

The questionnaires, student assessments, and reflection journal entries used in the study were designed to measure the attitudes of the tutors and elementary students toward the elementary foreign language distance learning program, attitudes of the elementary students toward the tutors, elementary students' self-assessments of their language skills, and elementary students' and high school tutors' perceptions of the tutors' role and responsibilities in a distance education setting. A written test and prochievement interview were administered to measure the achievement of those elementary students who participated in the study, both with and without a tutor.

Questionnaires were administered to the elementary and high school students at the beginning, middle, and end of the program. The elementary students were assessed via pre-, mid-, and post-self-assessments of their language skills, and the written test and prochievement interviews were conducted at the end of the program. A certified teacher of Spanish conducted face-to-face interviews with two male and two female students from each school setting. The assessment procedure took place in a quiet room, and students were interviewed individually. In addition, the interviews were taped. Each interview session lasted approximately 10 to 15 minutes. A final measure in the study was the high school tutors' journal entries. Students were asked to reflect on the lessons with the assistance of guiding questions that helped provide a framework for them to expand on and assess the program.

As recommended by Cook and Campbell (1979), the use of these forms of repeated

measures occur and also allow for triangulation of the data, maintaining assurances of construct validity by providing multiple data collection sources. The multiplicity of sources utilized in the study provided some of the context and evidence from which conclusions were drawn about the effect of peer tutoring on learning a foreign language in a distance education setting.

Each of the measures that were used in the study will now be described in greater detail. A copy of these instruments is found in Appendices A through F.

### **3.4.3.1 Questionnaires**

To measure and obtain information on perceptions/attitudes and motivation of the elementary school students, an affective perception/attitudinal questionnaire (Appendix A) was used. The questionnaire was divided into four parts, consisting of a total of 20 items. A five-point scale was used to force students to make a choice. The four parts of the questionnaire consisted of a section in which items were designed to illicit information regarding feelings toward: (a) Spanish class, (b) the distance education program, and (c) the use of cross-age tutors. Also included at the end of the questionnaire were 2 open-ended questions intended to obtain additional information regarding the use of technology in the classroom and the elementary students' attitudes toward the presence of high school Spanish students within the classroom.

The attitude questionnaire (Appendix B) given to the high school students was similar to the one the elementary students completed. There were a total of 10 statements using a four-point scale and 3 open-ended questions. The statements were designed to illicit information regarding perceptions about tutoring and distance education. The open-ended questions were designed to obtain additional information regarding the use of technology and the high school students' attitudes toward the tutoring experience.

### **3.4.3.2 Self-Assessment**

The purpose of the self-assessment questionnaire (Appendix C) was to obtain information on the attitudes of the elementary students about their own Spanish language skills and cultural knowledge. The questionnaire was adapted from the self-assessment instruments used by Donato, Tucker, Wudthayagorn, and Igarashi (2000). The self-assessment consisted of 11 items with a four-point scale and 3 open-ended questions. For the first 11 items, the students were given a prompt in English such as “I can say ‘hello’ in Spanish,” and they were asked to select the most appropriate response from four choices (“Definitely yes,” “Probably yes,” “Sort of but not totally,” and “Not at all”). The 3 open-ended questions asked the students to list specific items to gather qualitative information on: (a) what the student knew best, (b) what he/she would like to/should know more about, and (c) whether he/she could talk about Spanish culture.

### **3.4.3.3 Prochievement Interviews**

In this study, the interviews were designed as prochievement interviews, which assessed students’ performance with forms and topics from the curriculum in purposeful and interactive tasks (Donato, Antonek, and Tucker, 1994; 1996). The prochievement interview (Appendix D) represented an interactive listening assessment adapted from the CAL Early Language Listening and Oral Proficiency Assessment, also known as ELLOPA (CAL, 2001). The ELLOPA, developed in 2000-2001, is an innovative language proficiency instrument which allows students to demonstrate their highest level of performance in oral proficiency, grammar, vocabulary, and listening comprehension. The ELLOPA also assesses a student’s communication strategies and cultural awareness.

To determine a rating profile of the student’s oral language proficiency, vocabulary, and cultural knowledge (Appendix E), the ELLOPA was modified. The students were not rated

*Junior Novice-Low, Junior Novice-Mid, Junior Novice-High, or Junior Intermediate-Low* but rather numerically in the above-mentioned categories using a four-point scale. The number value of one was equivalent to the ELLOPA rating of *Junior Novice-Low*, whereas four corresponded to *Junior Intermediate-Low*.

The purpose of the prochievement interview was to measure the students' ability to perform tasks using content learned in the classroom. The tasks that the students were asked to perform were related to the curriculum and presented in a game format. Following the natural development of language skills in children, the assessment focused primarily on the children's listening skills and secondarily on their speaking skills (Donato, Antonek, and Tucker, 1994; 1996).

The game-like activities were appropriate for most children who had been exposed to introductory Spanish. Donato (1998) advocated using a game-like approach instead of adult-like assessment activities. The topics covered included typical curriculum areas for elementary language classes: family members, colors, numbers, food, songs, alphabet, greetings, and introductions. Any language class that teaches a similar curriculum, regardless of program model (e.g., FLES, total and partial immersion, or two-way immersion), would find this assessment useful.

The interviewer/rater wound down the activities by asking a few easy questions at the students' established proficiency level so that they could respond successfully and leave the interview with a positive feeling. At the end of the interview, the students received a small reward for their participation. During a short break between interviews, the interviewer rated the students.

#### **3.4.3.4 Journal Entries**

The tutors wrote in a journal every two weeks, for a total of eight entries. Students were asked to reflect upon what they believed attributed to a lesson's success or failure, record classroom events, evaluate how the program progressed from Weeks 1 through 8, and make suggestions to refine the program (Appendix F).

#### **3.4.3.5 Pilot Study**

A seven-week pilot study was conducted during the spring 2002 semester. Two weekly, 20-minute Spanish sessions were conducted at two elementary school locations. The researcher was the teacher who presented the Spanish lessons using the video-conferencing equipment, while five high school students were present in the elementary classroom. The quantitative and qualitative results of the pilot study were helpful in making the decision regarding which instruments would be used and how the results would be analyzed for the study. These results indicated that more data needed to be collected from the cross-age tutors. As a result, the journal reflection entries were added. In addition, the results led to the conclusion that more research questions needed to be asked in order to analyze the data.

During the pilot study, the elementary students completed the self-assessment on the first and last days of the seven-week program. At the end of the program, an overwhelming majority of them completed the questionnaire and self-assessment stating that they had the ability to understand and say various items in Spanish that were introduced. Although the written responses were short, they were helpful in rewriting the open-ended questions for this study. The short responses indicated that writing prompts would be helpful. In addition, the tutors completed a questionnaire at the beginning and end of the program. The five tutors answered positively about their tutoring experience and the content that they were helpful in introducing.

Their one concern was regarding the video-conferencing equipment. It failed to work three times.

### 3.4.3.6 Data Collection

The researcher collected data from the end of March through the beginning of June 2004. This distance learning program included two weekly Spanish lessons that were 20 minutes each. The measures used in the study were administered at the beginning, middle, and end of the eight-week sessions. The remote site facilitator distributed the elementary student self-assessment at the end of Weeks 1, 4, and 8. The elementary student questionnaire was also distributed at the same time as the self-assessment questionnaire. The researcher orally administered the self-assessment and questionnaire through the video-conferencing system. The tutor questionnaire was distributed at the end of Weeks 1, 4, and 8, and the reflection journal entries were completed at the end of Weeks 2, 4, 6, and 8. The written test and prochievement interviews were conducted the last week of the session. The interview was conducted in a one-on-one, face-to-face manner by a trained interviewer. Two male and two female students from each treatment and control group were randomly selected for the prochievement interview.

To better understand the plan of study, the measures that were used and when they were administered are illustrated below. In addition, the research questions that this study addressed are listed below in relation to data analysis.

Length of Study	Ten weeks/two times per week
Elementary Student Questionnaire	Weeks 1, 4, and 8
Self-Assessment	Weeks 1, 4, and 8
Tutor Questionnaire	Weeks 1, 4, and 8
Prochievement Interview	Week 8
Tutor Journal Entries	Weeks 2, 4, 6, and 8

**Figure 1 The study measures and timeline for data collection**

**Table 1 Research Questions and Data Analysis**

<i>Research Questions</i>	<i>Variables Involved</i>	<i>Data Analysis</i>
1. What were the elementary students' attitudes toward using distance education to learn Spanish?	Descriptive Statistics Qualitative Excerpts – Thematic Analysis	
Data were from Appendix A: Part 2 and Open-Ended Question One.		
2. Was there a difference in the elementary students' attitudes toward learning Spanish in the two distinct distance learning environments (i.e., one in which cross-age tutors were used and one in which no tutors were used)?	Dependent - Attitudes Independent - Learning Environments	f-Test
Data were from Appendix A: Parts 1, 3, and 4 and Open-Ended Question Two.		
3. What were the high school tutors' attitudes toward using distance education to teach Spanish to elementary students?	Descriptive Statistics Qualitative Excerpts - Thematic Analysis	
Data were from Appendix B: Questions Five, Six, Nine, and Ten; all open-ended questions; and Appendix F.		
4. To what degree, if any, did attitudes of the elementary students learning Spanish through distance education change as they progressed through the program?	Dependent - Attitudes Independent - Instruction Over Time	Repeated Measures - ANOVA
Data were from all questions in Appendix A.		

Table 1 (continued)

Research Questions and Data Analysis

<i>Research Questions</i>	<i>Variables Involved</i>	<i>Data Analysis</i>
5. To what degree, if any, did the self-assessments of Spanish language skills and cultural knowledge of elementary distance education students change as they progressed through the program?	Dependent – Self-Assessments Independent - Instruction Over Time	Repeated Measures - ANOVA
Data were from all questions in Appendix C.		
6. How did elementary students and high school tutors perceive the tutors' role and responsibilities in a distance education setting?	Descriptive Statistics - Thematic Analysis	
Data were from Appendix A: Part 3; Appendix B; and Appendix F.		
7. What was the difference in the achievement, as measured by a written test, of those who participated in the study with a tutor and those without a tutor?	Dependent – Achievement Independent – Learning Environments (Tutor and Nontutor)	<i>t</i> -Test
Data were from Appendix D.		
8. By examining the students who participated in the proachievement interview, what were the profiles of these language learners with regard to the student questionnaire, self-assessment, and proachievement interview?	Descriptive Statistics - Narrative Summaries	
Data were from Appendices A, C, and D.		

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The above table details the analysis that took place with regard to research questions.

Coding the Data. In order to process and organize the data, a database was created using a computer database software program (SPSS). The scaled response format of the questionnaire items, self-assessment, and proachievement interview allowed for a number to be assigned to each



response given for each item. The numerical response provided by each respondent for every item was entered into the database during the data coding phase of the study. Data obtained from open-ended questions and journal entries were coded by recording the data for later analysis.

Explanation of Statistical Analysis. Research Questions One, Three, Six, and Eight were answered through the use of descriptive statistics. First, frequencies and percentages of participants choosing each response option were computed for all questionnaire items. In addition, means and standard deviations were computed for items that were presented in the format of a five-point scale (response options ranging from “Strongly Agree” to “Strongly Disagree”). Second, summary scores on the questionnaires, self-assessment, and prochievement interview were computed by summing responses to the individual items that were designed to measure these variables. To learn the elementary students overall level of attitude and achievement, as well as the cross-age tutors’ level of attitude, descriptive statistics (e.g., mean, median, mode, range, and standard deviation) were computed and examined. To see if the elementary students’ attitudes toward learning Spanish differed between the two learning environments (Question Two), a f-Test was used. Research Question Seven provided the answer for the difference in achievement, as measured by a written test, of those who participated in the study with a tutor and those without a tutor by using a *t*-test. Since Research Questions Four and Five analyzed the changes, if any, that occurred throughout the study, a repeated measures ANOVA was used to compare the scores.

Qualitative Analyses. In qualitative research, the procedures for recording information are an important aspect of data collection. Qualitative analysis requires the researcher to develop categories and patterns and make comparisons and contrasts (Marshall and Rossman, 1989). Qualitative documentation of these two groups was also gathered several times throughout the

study to construct a comprehensive understanding of the elementary students' and cross-age tutors' attitudes toward the distance education Spanish program. In addition to the quantitative measurements discussed above, student feedback was recorded through the used of open-ended questions and journal reflection entries. An effort was made to search for and identify themes emerging from the information provided by study participants for the purposes of analyzing data obtained from open-ended questions. The data were then organized and presented on the basis of identified themes.

### **3.5 CHAPTER SUMMARY**

In Chapter Three, the research methodology associated with the study was presented. Information was provided on the research setting and study participants, followed by a discussion of the research design selected for the study. The research methods and procedures used within the study were also addressed, including sampling, measures, pilot study, and data analysis.

## **4.0 RESULTS**

This chapter presents the attitude and achievement study results for students involved in a Spanish distance education program using high school students as cross-age tutors. Combinations of quantitative and qualitative data were collected through five methods: student questionnaires, self-assessment, prochievement interview, journal entries, and final exam.

Thirty-six elementary students participated in this study; nineteen from School A (tutored students) and seventeen from School B (nontutored students). Seventeen (47.2 percent) of the students were female and nineteen (52.8 percent) were male. The students' average age was 11.15 (SD = 0.68) years. Three high school seniors served as tutors in the study.

Data were analyzed to answer the research questions presented in Chapter One. In this chapter, these questions are reiterated and answered.

### **4.1 ANSWER TO RESEARCH QUESTION ONE**

Research Question One stated, "What were the elementary students' attitudes toward using distance education to learn Spanish?"

### 4.1.1 Quantitative results

The first research question examined students' attitudes towards distance education to learn Spanish. The first section of the Elementary Students' Questionnaire was comprised of 20 nominal data questions intended to gather information on participants' affective responses in four subscales. Each subscale consisted of five statements. The four attitudinal subscales were: 1) feelings toward Spanish class, 2) feelings toward using distance education equipment to learn Spanish, 3) feelings toward the high school students, and 4) feelings toward learning Spanish.

Below is a sample of one attitudinal question from each subscale that was asked on the Elementary Students' Questionnaire:

1. I think Spanish class is interesting.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

2. It is easy to interact with the teacher using the equipment.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

3. I look forward to going to class because the high school students are such good helpers.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

4. Spanish is easy to learn.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

Students circled one of the four choices given, assigning “1” to Strongly Disagree, “2” to Disagree, “3” to Agree, and “4” to Strongly Agree. These four attitude subscales were calculated by averaging the five items for that subscale at the beginning (Week 1), middle (Week 4), and end of the study (Week 8). Table 2 presents the means and standard deviations on the four attitude subscales at three time periods.

**Table 2 Means and Standard Deviations on the Four Attitude Subscales by Three Time Periods**

<b>Attitude Score</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>M</b>	<b>SD</b>
Week 1 Subscale 1	36	1.80	3.60	2.77	0.47
Week 1 Subscale 2	36	1.80	3.80	2.85	0.56
Week 1 Subscale 3	36	2.60	3.80	3.15	0.33
Week 1 Subscale 4	36	1.20	3.80	2.63	0.60
Week 4 Subscale 1	36	1.60	3.60	2.67	0.54
Week 4 Subscale 2	36	1.80	3.40	2.77	0.51
Week 4 Subscale 3	36	2.40	3.80	3.10	0.36
Week 4 Subscale 4	36	1.20	3.80	2.60	0.62
Week 8 Subscale 1	36	1.00	3.40	2.52	0.59
Week 8 Subscale 2	36	1.00	3.80	2.62	0.60
Week 8 Subscale 3	36	1.00	4.00	3.02	0.52
Week 8 Subscale 4	36	1.00	3.80	2.57	0.62

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df=1,34

\*1) feelings toward Spanish class, 2) feelings toward using distance education equipment to learn Spanish, 3) feelings toward the high school students, and 4) feelings toward learning Spanish.

The mean raw score on each subscale of the questionnaire at the beginning, middle, and end of the study was not significantly different. The results revealed that, among Grade 5 students, there was no significant difference between attitudes at the beginning and end of the study. More specifically, the mean scores of Subscale 1 investigating the students’ feelings toward the Spanish class were not significantly different—Week 1 (M = 2.77, SD = 0.47); Week 4 (M = 2.67, S = 0.54); and Week 8 (M = 2.52, SD = 0.59). The nonsignificant mean

differences between Weeks 1, 4, and 8 suggested that the students' feelings toward the Spanish class did not change throughout the study. The minimal mean score differences when evaluating the students' feelings toward using distance education equipment to learn Spanish also indicated no change from the beginning to the end of the study—Week 1 ( $M = 2.85$ ,  $SD = 0.56$ ); Week 4 ( $M = 2.77$ ,  $SD = 0.51$ ); and Week 8 ( $M = 2.62$ ,  $SD = 0.60$ ). When examining the elementary students' feelings toward the high school students, the results did not indicate a significant difference—Week 1 ( $M = 3.15$ ,  $SD = 0.33$ ); Week 4 ( $M = 3.10$ ,  $SD = 0.36$ ); and Week 8 ( $M = 3.02$ ,  $SD = 0.52$ ). Therefore, the elementary students' feelings remained the same toward the high school tutors from the beginning to the end of the study. Following the same pattern as above, the final subscale revealed that the student's feelings toward learning Spanish from the beginning ( $M = 2.63$ ,  $SD = 0.60$ ); middle ( $M = 2.60$ ,  $SD = 0.62$ ); and end ( $M = 2.57$ ,  $SD = 0.62$ ) of the study were also not different.

#### **4.1.2 Qualitative results**

To construct a comprehensive understanding of the elementary students' attitudes toward distance education, documentation of the students' open-ended written responses was gathered throughout the study. The student questionnaire was given three times (beginning, middle, and end of the study). The most common questionnaire response used by both schools (tutor and nontutor) was that it was fun to use the distance education technology; 14 of the 36 participants (39 percent) wrote that they liked this aspect of the Spanish program. Some of the most common positive responses were the following: "It's cool" (33 percent), "It's different" (24 percent), and "It's good that the teacher can see face to face" (19 percent). The negative responses most frequently used by both schools were: "It's sometimes hard to hear the teacher" (11 percent), "It

doesn't work all the time" (8 percent), and "It's hard for the teacher to see us all at once" (8 percent). As the percentages demonstrate, the students responded more positively than negatively. The students seemed to enjoy the distance education feature of the elementary Spanish program.

## 4.2 ANSWER TO RESEARCH QUESTION TWO

Research Question Two asked, "Was there a difference in the elementary students' attitudes toward learning Spanish in the two distinct distance learning environments (i.e., one in which cross-age tutors were used and one in which no tutors were used)?"

The second research question examined differences on the four attitude subscales by learning environment (tutor vs. nontutor). As noted above, the four attitudinal subscales were: 1) feelings toward Spanish class, 2) feelings toward using distance education equipment to learn Spanish, 3) feelings toward the high school students, and 4) feelings toward learning Spanish. A MANOVA and four ANOVAs were conducted by learning environment at the beginning, middle, and end of the eight-week study.

The MANOVA on the four subscales at Week 1 by learning environment was not statistically significant,  $F(3, 31) = 1.16, ns$ . Table 3 shows the four ANOVAs by learning environment; there were no statistical differences found. Table 3 also shows the means and standard deviations.

Thus, there was not a statistical difference in the elementary students' attitudes toward learning Spanish in the two distinct distance learning environments (i.e., one in which cross-age tutors were used and one in which no tutors were used). The elementary students' feelings toward

Spanish class, using distance education equipment to learn Spanish, the high school students, and learning Spanish in both environments were similar throughout the study.

**Table 3 Four ANOVAs by Learning Environment, Means, and Standard Deviations at Week 1**

<b>Subscore</b>	<b>F</b>	<b>School</b>	<b>M</b>	<b>SD</b>	<b>N</b>
Subscale 1	0.58	School A	2.84	0.49	17
		School B	2.72	0.45	19
Subscale 2	0.74	School A	2.76	0.61	17
		School B	2.93	0.51	19
Subscale 3	2.24	School A	3.24	0.32	17
		School B	3.07	0.33	19
Subscale 4	0.63	School A	2.72	0.67	17
		School B	2.56	0.53	19

*Note:*  $df=1, 34$ .

The mean and standard deviation scores revealed that, on Subscale 1 which examined the elementary students' feelings toward Spanish class, both the nontutored ( $M = 2.72$ ,  $SD = 0.45$ ) and tutored students ( $M = 2.84$ ,  $SD = 0.49$ ) responded positively. These scores indicated that both groups "Agree" on the questionnaire when given the following choices: "Strongly Disagree," "Disagree," "Agree," and "Strongly Agree." The same was true when measuring their feelings toward using distance education equipment to learn Spanish (Subscale 2)—nontutored students ( $M = 2.93$ ,  $SD = 0.51$ ) and tutored students ( $M = 2.76$ ,  $SD = 0.61$ )—and their feelings toward learning Spanish (Subscale 4)—nontutored students ( $M = 2.56$ ,  $SD = 0.53$ ) and tutored students ( $M = 2.72$ ,  $SD = 0.67$ ). The mean scores for Subscale 3 measuring the elementary students' feelings toward the high school students were slightly higher, indicating that both groups enjoyed the high school students in the classroom during instruction. The results for the nontutored students ( $M = 3.07$ ,  $SD = 0.33$ ) and tutored students ( $M = 3.24$ ,  $SD = 0.32$ ) still corresponded with "Agree."



The MANOVA on the four subscales at the middle of the study (Week 4) by learning environment was not statistically significant [ $F(3, 31) = 1.62, ns$ ]. Table 4 shows the four ANOVAs by learning environment, where there was a statistical difference on Subscale 3 by environment; School A students had higher scores than School B students. No other differences were found. Table 4 also shows the means and standard deviations.

**Table 4 Four ANOVAs by Learning Environment, Means, and Standard Deviations at Week 4**

<b>Subscore</b>	<b>F</b>	<b>School</b>	<b>M</b>	<b>SD</b>	<b>N</b>
Subscale 1	3.07	School A	2.84	0.49	17
		School B	2.53	0.56	19
Subscale 2	0.00	School A	2.76	0.61	17
		School B	2.77	0.42	19
Subscale 3	5.10*	School A	3.24	0.32	17
		School B	2.98	0.36	19
Subscale 4	1.16	School A	2.72	0.67	17
		School B	2.49	0.57	19

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*Note:*  $df = 1, 34$ . \* $p < 0.05$ .

The MANOVA on the four subscales at various times by learning environment was not statistically significant,  $F(3, 31) = 0.88, ns$ . The mean and standard deviation scores on the four subscales remained consistent with Week 1. The elementary students' responses still corresponded with "Agree" on the questionnaire measuring their feelings toward Spanish class, using distance education equipment to learn Spanish, the high school students, and learning Spanish. Table 5 shows the four ANOVAs by learning environment, where no statistical differences were found. Table 5 also shows the means and standard deviations.

**Table 5 Four ANOVAs by Learning Environment, Means, and Standard Deviations at Week 8**

<b>Subscore</b>	<b>F</b>	<b>School</b>	<b>M</b>	<b>SD</b>	<b>N</b>
Subscale 1	0.09	School A	2.55	0.64	17
		School B	2.49	0.56	19
Subscale 2	0.25	School A	2.56	0.75	17
		School B	2.66	0.43	19
Subscale 3	2.25	School A	3.15	0.68	17
		School B	2.89	0.30	19
Subscale 4	0.13	School A	2.61	0.77	17
		School B	2.54	0.47	19

Following the same pattern as Weeks 1 and 4, the data on the final week of the study also reflected a positive response to each of the four subscales for both the tutored and nontutored groups. Throughout the study, the mean and standard deviation scores indicated that both groups responded favorably toward how and what they were learning in the distance education Spanish class involving high school students.

### **4.3 ANSWER TO RESEARCH QUESTION THREE**

Research Question Three asked, “What were the high school tutors’ attitudes toward using distance education to teach Spanish to elementary students?” Data were examined both quantitatively and qualitatively.

### 4.3.1 Quantitative data

Each tutor answered the same ten questions, and the answers were averaged for each of the three times the questionnaire was administered. Table 6 presents the means and standard deviations of their attitudes.

**Table 6 Means and Standard Deviations of the Three Cross-Age Tutors' Attitudes Across Time**

<b>Week</b>	<b>N</b>	<b>M</b>	<b>SD</b>
1	3	3.40	0.26
4	3	3.57	0.32
8	3	3.53	0.38
Total	9	3.50	0.29

The tutors were given a questionnaire three times throughout the study (beginning, middle, and end). The 10 questions asked (Appendix B) averaged a response of either “Agree or Strongly Agree” to all questions each time the questionnaire was given—Week 1 (M = 3.40, SD = 0.26); Week 4 (M = 3.57, SD = 0.32); and Week 8 (M = 3.53, SD = 0.38).

In sum, the tutors enjoyed tutoring and believed that tutoring the elementary students was a rewarding experience. According to the tutors, the content and how it was taught was effective. Their responses agreed that they were an important element to the success of this Spanish program. Their responses also concurred that, during this study, distance education provided the interaction necessary for developing foreign language skills and was an effective form of teaching.

### 4.3.2 Qualitative data

In addition to the quantifiable questions, the questionnaire also asked 3 open-ended questions. One of the questions solicited responses from students regarding what they liked or disliked about using the technology. The first time the questionnaire was administered, the three tutors' opinions were more negative than positive. Tutor A wrote, "The fact that it doesn't work sometimes gets irritating but the different things you can do with it (use a transparency projector) adds to the lesson."

Tutor B also had a mixed reaction, saying, "I think that using the technology is effective and fun. However, sometimes the equipment won't work and can be frustrating. I think, however, that using the technology is what makes this long distance learning work and able to happen."

Finally, Tutor C stated, "Sometimes it can get a little hectic because the teacher can't hear all the kids or see them when they raise their hands so the kids tend to get a little loud when trying to get her attention."

Halfway through the study, the tutors again responded to this question. And, again, the tutors responded with mixed reviews. Tutor A replied with a mixed reaction, "I like that we get to interact with the teacher on real time but it can be frustrating if the equipment doesn't work. We have to get to the schools early just to make sure we can get the equipment in working order. Sometimes a technology person has to help us." Tutor B thought that, "Using the technology is fun and interesting although, I feel that it is sometimes difficult to use. It's hard to get the TV or the VCR to work some times, and it can be very frustrating." Tutor C agreed, saying, "Sometimes the technology can be an inhibitor when it comes to easy communication between the students and teacher and tutors and teacher. But the concept of using the technology for

distance learning is interesting and positive.” Thus, at the midpoint of the study, all tutors liked the concept of using technology to teach elementary students Spanish but had some negative reactions toward using the distance education equipment.

At the end of the study, the tutors responded for the third time to this same question regarding technology. Following the pattern of the first and second times, their responses were both positive and negative. Tutor A supported her previous views by responding, “The distance education class is something different to offer the elementary schools. The technology is great, when it works without a glitch. At times, it takes some effort to get the machines in working order. That’s the only downfall to using the technology.” Tutor B agreed with Tutor A’s statement that the technology was different than the typical classroom. She wrote, “I like using the technology because it’s different and fun. However, it can be difficult at times to use.” Tutor C’s opinion was more positive than at the beginning of the study. She stated, “I like that distance learning is a unique experience that the students won’t forget.”

In addition to sharing their views on technology, the tutors also wrote their reactions to the lessons and overall opinion of the elementary Spanish class they were enrolled in during their senior year of high school. Tutor A reacted positively: “I feel that the distance education part of the class was effective. It was a positive experience that was a joy to be a part of. It was always pleasurable to see the kids get so excited when they knew the answer. When I would see some of them outside of the school setting, they would say “hola!” They would introduce me to their friends/family and tell them their Spanish name. They used what they learned in an everyday setting. That makes me feel so good and reassured that this class was beneficial to elementary students. Hopefully they will choose Spanish in high school since they got exposure so early.”

Tutor B also replied positively, saying, “I feel that the long-distance Spanish program was very effective. The kids learned a lot and had a great time. I feel that this class aids in the kid’s future when they choose which language to take and gives them some background. I feel that this class was great!” Tutor C concurred with the other tutors’ positive responses, concluding, “Teaching these kids Spanish was a highlight of my senior year. It was so exciting to see the students in action, learning another language. The distance learning part was a unique experience that the kids seemed to enjoy. It was an effective way of teaching students across the school district. I know that it was effective because I witnessed the students speaking Spanish throughout the lessons and they had fun doing it!”

Thus, the tutors’ responses to open-ended questions about technology and using distance education to teach Spanish were mostly positive. Their attitudes toward using distance education to teach Spanish to elementary students focused on several factors. Positive responses focused on the distance education Spanish class and the technology as “different,” “fun,” “interesting,” “unique,” and “effective.” In addition, they felt the class was beneficial to the elementary students. Their negative reactions centered on the equipment not working, which contributed to the tutors’ frustration. Positive responses far outnumbered negative responses from the tutors.

#### 4.4 ANSWER TO RESEARCH QUESTION FOUR

Research Question Four asked, “To what degree, if any, did the attitudes of the elementary students learning Spanish through distance education change as they progress through the program?”

The fourth research question examined the differences between the four attitudes across time. A doubly multivariate, repeated-measures ANOVA was conducted. Overall, there was no significant change in the four attitudes across time,  $F(8, 28) = 1.23, ns$ . However, there was a difference in Attitude Subscale 1 that measured the elementary students’ feelings toward Spanish class [f across time,  $F(1, 34) = 5.68, p < 0.05$ ]. Posthoc analyses revealed that attitudes in Week 1 were higher than in Week 8 (Table 7). Attitude Subscale 2 examined the elementary students’ feelings toward using distance education equipment to learn Spanish across time [ $F(1, 35) = 5.94, p < 0.05$ ]. Posthoc analyses reveal that attitudes in Week 1 were higher than in Week 8 (Table 7). There was no difference in the elementary students’ feelings toward the high school students [Attitude Subscale 3,  $F(1, 35) = 1.83$ ] or in their feelings toward learning Spanish [Attitude Subscale 4,  $F(1, 35) = 0.34, ns$ ].

**Table 7 Means and Standard Deviations in Four Subscales Across Time: Attitudes of the Elementary Students Learning Spanish Through Distance Education**

	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>
Subscale 1	2.77	0.47	2.67	0.54	2.52	0.59
Subscale 2	2.85	0.56	2.77	0.51	2.62	0.60
Subscale 3	3.15	0.33	3.10	0.36	3.02	0.52
Subscale 4	2.63	0.60	2.60	0.62	2.57	0.62

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$p < 0.05$ .

The 20 questions that were asked on the Elementary Students Questionnaire averaged a response of “Agree” to all questions each time the questionnaire was given, with a mean score

range of 2.52 to 3.15. In sum, there was no significant change in the four attitudes across time in either the tutored or nontutored distance education classrooms.

#### 4.5 ANSWER TO RESEARCH QUESTION FIVE

Research Question Five asked, “To what degree, if any, did the self-assessments of Spanish language skills and cultural knowledge of distance education elementary students change as they progressed through the program?”

This research question examined differences in self-assessment totals across time (Weeks 1, 4, and 8). A self-assessment composite score was calculated by summing the 11 questions in the instrument. A repeated-measures ANOVA did not reveal differences [ $F(2, 33) = 0.96, ns$ ]. Table 8 illustrates that the mean scores were similar to each other.

**Table 8 Means and Standard Deviations in Elementary Students’ Self-Assessments by Time**

<b>Time</b>	<b>M</b>	<b>SD</b>	<b>N</b>
Week 1	28.51	5.48	36
Week 4	27.54	4.26	36
Week 8	27.80	7.19	36

The results indicated that the elementary students throughout the study consistently scored the same when asked to rate themselves on statements such as, “I can understand the names of lots of things in Spanish (for example, classroom objects, colors, and numbers).” In rating themselves, they were given four choices: “Definitely Yes,” “Probably Yes,” “Sort Of But Not Totally,” or “Not At All.” In summary, the students with tutors assessed their Spanish language skills and cultural knowledge similarly to the students without tutors.



#### 4.6 ANSWER TO RESEARCH QUESTION SIX

Research Question Six stated, “How did elementary students and high school tutors perceive the tutors’ role and responsibilities in a distance education setting?”

The sixth research question examined students’ and tutors’ perceptions of tutors’ roles. The elementary students were asked, “What do you think of having high school students in the classroom?” (Appendix A) three times during the study (beginning, middle, and end). These students’ perceptions of the tutors’ role were all positive in nature. The only neutral response, given by 2 of the 36 participants (6 percent), was that the high school students were “ok” to have in the classroom. The students described the tutors with such adjectives as “helpful” (28 percent), “cool” (14 percent), and “fun” (9 percent). Furthermore, 17 percent of the elementary students also thought of the tutors as a “role model.” Some students viewed the tutors as great to have in class because they weren’t adults. They also stated that the tutors did help keep control but focused on them being helpful in teaching the lesson. The most frequent response used each of the three times when asked was that the tutors were “fun” to have in class.

In general, tutors agreed that they played a positive role in the classroom setting. In agreement with the elementary students’ opinion of the tutors, the high school tutors also viewed themselves as a positive part of the Spanish distance education classroom. They were asked at the beginning, middle, and end of the study (Appendix B), “What is the most beneficial part of the tutoring program?” At the beginning of the study, the three tutors focused on making Spanish “fun” and “rewarding.” Tutor A wrote, “The most beneficial part of this program is seeing the children learn Spanish. They enjoy it a lot, and it’s so rewarding knowing that you are helping them gain more knowledge.” When asked a second time, the tutors still focused on how rewarding tutoring was for them. Tutor A replied, “The most beneficial part is that we get to

interact with the younger students and they get to have lessons designed by other students to make it fun.” At the end of the study, the tutors still centered on their experience as being “fun” and “rewarding.” Tutor C thought that the most beneficial part of the tutoring program was “being able to work with the elementary school kids. They are so full of energy and eager to learn that every day is a new (usually fun) experience. Plus, I believe that this a truly positive experience when it comes to them pursuing Spanish in high school.” In summary, each tutor believed that interaction was a beneficial part of the elementary Spanish program.

While the tutors felt that they were a positive influence on the elementary school students, their responses varied with regard to exactly what their roles entailed. The final question on the tutors’ questionnaire asked, “How would you describe your role and the responsibilities of being a tutor?” When asked the first time, the tutors focused on helping the students learn. Tutor B wrote, “My role, I feel, is to help the children learn. As the teacher teaches the lesson over the television, I feel that it is my responsibility to make sure they understand, and most importantly have fun while they are learning.” Tutor C added, “You are the one that the kids are able to see face-to-face and thus you are the one they depend on to answer questions on things that the teacher explains. You are also the one who administers and regulates the more hands-on activities such as games and handouts. You also develop a friendship and peer relationship with the kids.”

In the middle of the study, Tutor A responded to this question: “We have to know what the lesson involves and have fun doing it. The elementary students ask us questions to clarify things. We take care of the ‘clerical’ things also.” When asked for a third and final time, the focus remained on interacting with the elementary students and assisting the teacher. Tutor B described her role in this way: “My role is to assist the teacher by traveling to the schools to help

the students learn through the technology. I am there to make sure things run smoothly. Without the role of the tutor, it would be very difficult to have such a successful Spanish distance learning program.” Tutor A wrote in her journal, “This teaching experience was very memorable. The students learned so much. I think that it was beneficial for us (the tutors) to help plan the lessons. It gave us some feeling of ownership and even pride! The key to these successful lessons was making them fun. The games and other fun activities made learning a pleasant experience.”

Overall, the responses from both groups questioned revealed an overwhelmingly positive perception as it related to the high school tutors’ roles and responsibilities in this study. Their roles varied from clerical to classroom facilitators necessary to assure the success of the program.

#### **4.7 ANSWER TO RESEARCH QUESTION SEVEN**

Research Question Seven posed, “What was the difference in the achievement, as measured by a written test, of those who participated in the study with a tutor and those without a tutor?”

This research question assessed differences in achievement between students with and without a tutor. There were 38 items on the final written exam assessing the elementary students’ Spanish knowledge on material taught during the eight-week study, such as colors, classroom objects, months, days of the week, and cultural questions. A t-test was conducted on final exam scores by school. The t-test was not statistically significant,  $t(34) = -0.74$ , ns; School B ( $M = 22.89$ ,  $SD = 5.41$ ) had approximately the same scores as School A ( $M = 24.12$ ,  $SD = 4.34$ ).

The results revealed that the nontutored students scored as well as the tutored students on the written final exam. Thus, tutoring appeared to have had no affect on student performance.

#### **4.8 ANSWER TO RESEARCH QUESTION EIGHT**

Research Question Eight stated, “By examining the students who participated in the prochievement interview, what were the profiles of these language learners, with regard to the student questionnaire, self-assessment, and final exam?”

Research Question Eight examined the profiles of students with regard to their prochievement interview, student questionnaire, self-assessment, and final exam to create an in-depth look at their attitudes and achievement throughout the study. Due to time and resource constraints, profiles were created for only eight students. Four students from each of the two schools were chosen for their demographic similarities (e.g., gender and language ability). Table 9 presents the means ratings on the prochievement interview, as well as the means of each student’s scores on the student questionnaire, self-assessment, and final exam.

**Table 9 Scores on Prochievement, Attitudes Questionnaire, Self-Assessments, and Final Exam for Male/Female and High/Low Achievers Per School**

	School A				School B			
	Brianna	Brandon	Ryan	Lauryn	Eric	Sarah	John	Elizabeth
<i>Type Achiever</i>	High	High	Low	Low	High	High	Low	Low
<i>Prochievement</i>								
Oral	2	2	2	1	2	1	1	1
Vocabulary	2	2	1	2	2	1	2	1
Cultural	1,2,3,4	1,2,4	1,2	1,2,4	1,2,3,4	1,2	1,2,4	2
<i>Attitude Subscores</i>								
Week 1 Attitude 1	3.6	2.6	2	2.6	2.6	3	2.2	2.8
Week 1 Attitude 2	3.4	2.2	2.6	2	2.2	3.4	2	3.2
Week 1 Attitude 3	3.8	3.4	2.8	3	2.8	3.2	2.8	3.4
Week 1 Attitude 4	3.8	2.2	1.2	2.6	3	2.2	2.2	2.8
Week 4 Attitude 1	3.6	2.6	2	2.6	3	2.6	2	1.8
Week 4 Attitude 2	3.4	2.2	2.6	2	3	3.4	2.4	2.4
Week 4 Attitude 3	3.8	3.4	2.8	3	3	2.8	2.4	3
Week 4 Attitude 4	3.8	2.2	1.2	2.6	3	2.8	2.2	2
Week 8 Attitude 1	1	3.2	1.6	2	3.2	2.6	1.6	1.8
Week 8 Attitude 2	1	2	3	2	3	3.2	2.4	2
Week 8 Attitude 3	1	3.6	2.8	2.6	3	3.2	2.6	3
Week 8 Attitude 4	1	2.4	1	2.8	2.8	2.8	2.4	2
<i>Self-Assessment</i>								
Week 1	26	32	30	32	21	37	30	37
Week 4	26	30	25	29	15	33	25	33
Week 8	23	33	24	31	16	29	27	41
<i>Final Exam*</i>								
I - Colors	11/11	8/11	6/11	5/11	9/11	7/11	6/11	7/11
II - Class Objects	8/10	8/10	7/10	6/10	8/10	8/10	6/10	6/10
III - Months	5/5	5/5	3/5	5/5	5/5	5/5	3/5	5/5
IV - Days	7/7	7/7	5/7	5/7	7/7	7/7	5/7	4/7
V - Culture	4/5	4/5	2/5	4/5	3/5	4/5	2/5	3/5

\*Correct answers/possible answers

In the above table, the prochievement scores, student questionnaires (attitudinal sub-scores), self-assessment, and final exam of four students (two high achievers and two low achievers) from both schools were investigated. The scores of these eight students were examined to see if the results from Weeks 1 through 8 varied greatly on these four specific instruments. In addition, a comparison between the low and high achievers was studied. The following sections summarize the specific results from each subsection of the profiles, which included prochievement interviews, attitude subscores, self assessments, and final exam.

Prochievement interviews. The prochievement interview consisted of oral, vocabulary, and cultural components. In the oral component, three tutored students received a rating of “1” and one tutored student received a rating of “2.” One nontutored student achieved a rating of “1” and three received a rating of “2.” A rating of “1” indicated a student “produces isolated words and/or high frequency expressions.” A rating of 2 indicated that a student “uses a limited number of isolated words, two to three word phrases, and/or longer memorized expressions within predictable topic areas...may attempt to create sentences, but is not successful...uses gestures or native language to expand meaning when attempting to create with language...Long pauses are common.”

In the vocabulary portion of the interview, two tutored students received a rating of “1” and two students received a rating of “2.” For the nontutored students, one received a rating of “1” and three students received a rating of “2.” A rating of “1” indicated the student “uses words in very specific topic areas in predictable contexts. May use a few memorized, high frequency expressions.” A rating of 2 indicated that a student “uses specific words in a limited number of topic areas, high-frequency expressions, and other memorized expressions. Frequently searches for words.”

In the cultural portion of the interview, students received multiple ratings. For the four tutored students, three received a rating of “1,” all received a rating of “2,” one received a rating of “3,” and two received a rating of “4.” For the nontutored students, all received ratings of “1” and “2,” one received a rating of “3,” and three received ratings of “4.” A rating of “1” indicated the students “can sing a song in the target language” and “can distinguish objects that are typically found in the culture of the target language from objects typically found in U.S. culture.” A rating of “2” indicated the students “can talk in English about some holidays and customs found in the culture of the target language.” A rating of “3” indicated the student “uses some gestures and body language from the target language culture.” A rating of “4” indicated the student “uses some culturally appropriate vocabulary and idiomatic expressions in the target language.”

Attitude subscores. The students’ questionnaire ratings were given a numerical rating of “1” to “4,” with an equivalent of “Strongly Disagree” assigned “1,” “Disagree” ”2,” “Agree” “3,” and “Strongly Agree” “4.” Of the eight students selected to answer Research Question Eight, the scores remained relatively the same on each of the four sections of the questionnaire, with the exception of two students (Table 8). Elizabeth, a low achiever from School B, rated higher the first time she answered the questionnaire compared to the second and third time. Her scores decreased from the beginning of the study to the middle and then stayed the same for the final time. At the beginning, she responded using “Strongly Agree” or “Agree” for most of the questions and, for Weeks 4 and 8, she answered frequently with “Agree” and “Disagree.” Brianna, a high-achiever from School A, answered exactly the same from Weeks 1 to 4. Her responses decreased dramatically from Weeks 4 to 8. In the middle of the study, she answered only by using “Strongly Agree” or “Agree.” Her final responses at the end of the study were all

“Strongly Disagree.” Her feelings toward Spanish class (Part 1), using distance education equipment to learn Spanish (Part 2), the high school students (Part 3), and learning Spanish (Part 4) shifted to negative by the end of the study.

Self-assessments. The self-assessment scores did not increase each time the self-assessment was given. In School B, for the high-achiever Eric, his self-assessment decreased from Weeks 1 to 4 and also from Weeks 1 to 8. Ultimately, the School B self-assessment scores decreased during the study, with the exception of Elizabeth. This pattern was also seen in School A. The only increase in self-assessment throughout all three times was high-achiever Brandon.

Final exam. The final exam (Appendix F) was a paper and pencil test containing five subjects that the students were taught during the study. The students were asked to label the pictures with the logical colors from a word bank (i.e., elephant would represent the color grey, in Spanish, “gris”); label the classroom object pictures with the Spanish words provided; match each picture with the appropriate month (i.e., a picture of Santa represented December, in Spanish, “diciembre”); match each day in English to the Spanish word; and, finally, circle true or false for questions pertaining to culture (i.e., Mexico’s flag is green, white, and red and has a cactus on it).

Table 10 presents the scores of the four low achievers and four high achievers. Schools A and B were equally divided, with two low achievers and two high achievers each. The low achievers scored the worst on all five subjects tested.



**Table 10 Elementary Students' Final Exam Mean/Standard Deviation Scores by Group/Test Section**

	<b>Low Achievers</b>		<b>High Achievers</b>	
	Mean	Standard	Mean	Standard
Colors	6.00	0.82	8.75	1.71
Classroom Objects	6.25	0.50	8.00	0.00
Months	4.00	1.15	5.00	0.00
Days	4.75	0.50	7.00	0.00
Cultural Statements	2.75	0.96	3.75	0.50

Table 11 represents the means and standard deviation scores of Schools A and B. There was no significant difference in the mean scores, with only one standard deviation outlier, the color section of School A (2.65) compared to School B (1.26). In sum, of the five categories, the tutored school outperformed the nontutored school only in the section testing colors. It is possible the tutored school enjoyed the lesson involving colors more than the nontutored school, which would explain why they scored much higher.

**Table 11 Elementary Students' Final Exam Mean/Standard Deviation Scores by School/Test Section**

	<b>School A</b>		<b>School B</b>	
	Mean	Standard Deviation	Mean	Standard Deviation
Colors	7.50	2.65	7.25	1.26
Classroom Objects	7.25	0.96	7.00	1.15
Months	4.50	1.00	4.50	1.00
Days	6.00	1.15	5.75	1.50
Cultural Statements	3.50	1.00	3.00	0.82

Table 12 combines the scores of all eight students. Students were asked to label 11 colors, label 10 classroom objects, match 5 months, match all 7 days, and answer 5 cultural items. The students scored the lowest when asked to label the colors in a picture (7.38/11.00).

Overall, there were no significant differences between the tutored and nontutored students on the final exam.

**Table 12 Elementary Students' Final Exam Overall Mean and Standard Deviation Scores by Test Section**

	Overall Scores	
	Mean	Standard Deviation
Colors	7.38	1.92
Classroom Objects	7.13	0.99
Months	4.50	0.93
Days	5.88	1.25
Cultural Statements	3.25	0.89

The mean scores indicated that the participants performed more accurately (90 percent) on the month section than the other four sections. The students also performed well on matching the Spanish days of the week with the English meaning, answering with 84 percent accuracy. The students did not score high when labeling colors (67 percent) and classroom objects (71 percent) or providing true or false answers to cultural statements (65 percent) discussed in class.

Individual student profiles. In addition to examining the four instruments separately, I thought it would be valuable to examine the similarities and differences between scores for each individual student. The four students in each school were divided into two categories (high and low achievers based on their knowledge and language ability at the beginning of the study). Profiles were created for one male and one female in each group.

Both the male and female high achievers in School A (tutored school) generally scored higher on all four instruments when compared to the low achievers. When the students were given the prochievement interview, the high achievers scored a “2” in oral language proficiency. They were able to use a limited number of isolated words and/or longer memorized expressions

within a predictable topic area. Only the male low achiever was able to accomplish this. The vocabulary section of the prochievement interview indicated that both high achievers used specific words in a limited number of topic areas, high frequency expressions, and other memorized expressions. Only the female low achiever was able to perform as well as the high achievers. The same situation occurred when investigating the students' cultural awareness. Only the female low achiever was able to use some culturally appropriate vocabulary and idiomatic expressions in Spanish. All four students were able to sing a song in Spanish and talk in English about some holidays and customs.

Interestingly enough, the prochievement interviews in School B (nontutored school) had many similarities to School A. The high achievers scored higher than or equal to the low achievers in this school. The high achievers also scored a "2" and only the male low achiever was able to do so in the oral section. This was also the case in the vocabulary portion. Only the female low achiever scored a "2," as did both high achievers in School B. When examining the cultural section, the male low achiever scored the lowest. He was not able to use some culturally appropriate and idiomatic expressions in Spanish. Thus, even the highest score by the low achievers in both schools did not exceed the high achievers' scores in any category of the prochievement interview. This finding solidified the belief that student achievement on earlier measures predicted a student's performance on the final exam. In Chapter Five, the student profiles will be discussed in greater detail.

Similarly to the prochievement interviews discussed above, the final exams given at the end of the study indicated that the high achievers in both schools scored better than the low achievers. There were five categories introduced during the study that were tested on the final exam: colors, classroom objects, months, days of the week, and cultural statements/beliefs. The

high achievers scored higher in three of the five categories—colors, classroom objects, and days of the week. Even though some high achievers scored the same as some of the low achievers on the months and culture categories, the high achievers never scored worse than the low achievers. The low achievers scored significantly lower in culture. Two of the four low achievers only answered 40 percent of the questions/statements correctly. These findings suggested that the high achievers always outperformed the low achievers on the final exam.

The final two instruments used to evaluate the elementary students were the attitude questionnaire and self-assessment. The students rated themselves throughout the study—Weeks 1, 4, and 8. Their attitudes and their own ideas of achievement measured at the beginning were compared at the middle and end of the study to see how greatly they varied.

To measure and obtain information on perceptions/attitudes and motivation of the elementary school students, an affective perception/attitudinal questionnaire containing four parts was given in the beginning, middle, and end of the study. The students' questionnaires surveyed their attitudes toward Spanish class, using distance education equipment to learn Spanish, the high school students, and learning Spanish. There were 20 items and a four-point scale was used ("Strongly Agree," 1 point; "Disagree," 2 points; "Agree," 3 points; and "Strongly Agree," 4 points).

Examining the data in Table 9, seven of the eight students profiled did not show a significant increase or decrease in their attitudes throughout the study. The exception was the female high achiever in School B. Her attitude from the beginning to the middle of the study did not change significantly, but her final attitudes in the four categories all decreased to a "Strongly Disagree."

#### 4.8.1 Qualitative results

Students answered two open-ended questions regarding what they liked or disliked about using the technology and how they felt about having the high school students in the classroom. They had the opportunity to write their responses to these questions three times (beginning, middle, and end of the study). The most common questionnaire response of the eight students profiled in both schools (tutor and nontutor) was that it was fun to use the distance education technology. Another positive response was that the distance education aspect of the class was cool. Students liked that they were able to interact with the teacher face to face. Although they responded more positively than negatively, there were a few unfavorable comments. Students were frustrated when the distance education equipment would not work. Overall, however, they seemed to enjoy the distance education feature of the elementary Spanish program.

The tutored school responded more favorably to having high school students in the classroom than the nontutored school. They commented on how helpful they were to have in the class and that they made the class more fun. As the research on cross-age tutoring states, the high school students were role models to the younger students. The nontutored students did not write about them being role models, but they wrote that they made the class more interesting. The qualitative responses did not change from the beginning to the end of the study. These qualitative and quantitative results were not surprising since the tutors did not assist the elementary students in the nontutored school in the same manner as the tutored school. When the tutors were present in the nontutored classroom, they only turned on the distance education equipment and passed out the material necessary for the lesson. Their duties were minimal. When they were in the tutored classroom, they assisted the lesson by answering questions, providing feedback, and actively participating in the lesson in addition to what they did in the nontutored classroom. As a

result of these responses, I have concluded that distance education was complementary to learning Spanish and peer tutoring was beneficial to the students.

Two quantitative anomalies also occurred with the self-assessments. The purpose of the self-assessment questionnaire was to obtain information on the attitudes of the elementary students about their own Spanish language skills and cultural knowledge. The self-assessment consisted of 11 items with a four-point scale, such as “I can say hello in Spanish.” Students were asked to select the most appropriate response from four choices—“Definitely yes,” “Probably yes,” “Sort of but not totally,” and “Not at all.” Six of the eight profiled students were able to predict reasonably well on the self-assessment. The scores on the final exam and prochievement interview did not correlate for these two students. The male high achiever in School B rated himself low on the self-assessment when in fact he scored well above average on the final exam and prochievement interview. The female low achiever in the same school rated herself much higher on the self-assessment than her results indicated on the final exam. As mentioned in the prochievement interview section, she performed better than expected for a low achiever in the nontutored school. Her scores on the prochievement interview were comparable to the other seven students profiled. In Chapter 5, I will speculate as to why this may have occurred.

Self-assessment qualitative results. Students were asked three open-ended questions on the self-assessment that they answered at the beginning, middle, and end of the study. Many of the eight students responded differently when asked over time what they knew best in Spanish. Six of the eight students profiled responded that they knew numbers best when asked at the beginning. At the end of the study, only two students still said that numbers were what they knew best. They wrote numbers on all three self-assessments. On the final self-assessment, three

thought they knew the days of the week best, while one wrote Cinco de Mayo. Two students' responses changed each time they were asked.

An overwhelming response to the question of what they thought they still needed to learn so that they could understand and speak Spanish better was more vocabulary. They expressed interest in talking more but did not know the Spanish word(s). They were able to express their thoughts in English. This was apparent in the final question asking if they could talk about culture. Each of the eight students was able to list at list four examples of food. The most common example of a holiday was the Mexican holiday, Cinco de Mayo. There were only two comments on a story and high achievers wrote them both.

The themes that emerged showed a richer picture of the distance education Spanish program than just the quantitative data alone. The students were able to personalize their responses and feelings toward the technology and high school tutors.

In sum, the scores on the prochievement interview, student questionnaire, self-assessment, and final exam of these eight students were presented. Although there were some differences examined between the low and high achievers, the scores did not demonstrate a significant difference between School A (tutored students) and School B (nontutored students). And, although the quantitative data provided useful for drawing conclusions, the qualitative data personalized the students' attitudes and achievement in regard to the distance education Spanish class.

## 4.9 CHAPTER SUMMARY

The results of this study can be summarized in the following manner. First, we have seen that significant differences between elementary students' attitudes at the beginning, middle, and end of the study were not found. Also, there were no significant differences between the attitudes of each student in either environment (tutor or nontutor). Second, similar to the results of the elementary students' attitudes, achievement in both environments measured over time was not statistically significant. Data were collected from all elementary students using a questionnaire, self-assessment, and final exam. A prochievement interview was also used to collect data from four of these participants in each environment. Third, the quantitative results remained the same, indicating no statistical significance in either the attitude or achievement of the fifth graders. Finally, the overall qualitative responses from both the tutors and elementary student groups questioned revealed positive reactions. The quantitative results were not supportive of the tutor environment (School A) rating higher than the nontutor environment on all forms of assessment (School B), but all participants seemed to enjoy the Spanish distance education class.



## **5.0 DISCUSSION AND CONCLUSION**

This study was initiated to examine how the use of video-conferencing technology, in conjunction with high school students as cross-age tutors, could be beneficial in teaching elementary students Spanish in a distance education setting. A combination of qualitative and quantitative instruments—such as questionnaires, self-assessments, journal entries, prochievement interviews, and written examinations—were used to obtain information pertaining to the impact of cross-age tutors working within a distance education setting. The data and literature analysis on the use of tutors and distance education to teach a foreign language presented in this study offers some basic conclusions related to the attitudes and achievement parameters of participating students. The results of this study lead to several suggestions for pedagogy and further research.

### **5.1 SUMMARY OF FINDINGS**

This dissertation has provided an inquiry into the benefits of utilizing cross-age tutors to teach an introductory Spanish class to elementary students via video-conferencing distance education technology. The research data for this dissertation were collected from a suburban school district outside of Pittsburgh, Pennsylvania, during spring 2004. The findings are somewhat limited in terms of generalizability to other school districts due to the narrow confines of

the study (i.e., student sample, duration, etc.). The elementary participants for the study were selected on the basis of availability. All students in fifth grade were offered the opportunity to enroll in the elementary Spanish class. Participating students had no prior knowledge of Spanish. Those involved in the study were separated into two groups (tutored and nontutored). The three high school tutors who participated were selected based on their commitment to the Spanish program and successful completion of Spanish IV.

Study data were collected through the use of survey instruments, such as elementary students' and high school tutors' questionnaires and tutors' journal entries. These were designed to address the participants' attitudes toward Spanish and the high school tutors who assisted with each lesson. A final exam and prochievement interview measured the elementary students' language achievement. The findings of this study indicated that a majority of the students enjoyed the class, regardless of the presence of tutors. In addition, by the end of the eight-week study, each elementary student was able to retain some material from each section of the final examination, indicating learning had taken place.

This study also explored the high school tutors' attitudes toward using distance education to teach Spanish to elementary students. The results indicated that they enjoyed tutoring using this mode of instruction and believed it was a rewarding experience. According to the tutors' comments, the content and how it was taught were effective. Their responses indicated that they felt they were an important element in the success of this Spanish program. Their responses also supported the idea that, during this study, distance education provided the interaction necessary for developing foreign language skills and was an effective form of teaching. The results of this study suggest that other disciplines should explore more deeply the use of tutors in a distance education setting as a way to increase the interaction necessary for

learning to occur.

### High School Students as Cross-Age Tutors: Role and Responsibilities, Benefits, and Perspectives

Interactivity is a critical component that is oftentimes lacking in a distance education environment. Unlike the traditional classroom, distance education usually does not provide the opportunity for face-to-face interaction. Many researchers question whether the teaching format associated with distance learning provides authentic conversations and social interaction, which are important aspects of learning. Tutoring, which addresses this idea of interactivity, is a largely unexplored element of distance education. In addition, the use of tutors in a distance education classroom requires a repertoire of appropriate interpersonal and pedagogical skills. However, Hobaugh (1977) determined that a tutor in this type of classroom can improve learning and provide the cognitive and affective benefits that are at times missing in a distance education setting. This type of facilitator can impact the tutees' feelings of success as well as belief in the usefulness and purpose of learning a foreign language.

As found in my study, once the tutors are selected, it is important to provide training so they will understand what is expected of them. This training should include interpersonal skills, such as how to help without revealing the answers, ways to give encouragement, and using positive statements to reinforce learning. They also need management skills, where they are shown what materials to have for the lesson and how to interact effectively with the tutees. Content skills for preparing lesson activities are also required in advance (Rekrut, 1994).

As orchestrated throughout this study, it is important to allow the tutors as well as the tutees to evaluate how the sessions are going from time to time. Peer tutoring is an effective way to develop positive attitudes toward participants and the program. Fostering an experience that is both engaging and educational increases the level of involvement and satisfaction for all

participants.

In my study, the high school tutors selected were successful in learning Spanish and had completed Spanish IV. They demonstrated the content knowledge required to focus on what the elementary students needed to comprehend during the lessons. And, while the elementary Spanish program focused on content knowledge, interpersonal skills were also important. The tutors and I incorporated games and many forms of visual aids to convey the importance of modeling for elementary students as one of the factors contributing to academic success (including interaction, motivation, and even organizational and time management skills).

The various activities incorporated throughout this study allowed the building of rapport among the tutors and tutees. In the beginning of the program, the tutors used basic Spanish introductory skills to become more familiar with one another and ease into the learning of a foreign language. First, tutees needed to become familiar with both a new learning environment and also being taught by students only a few years older than they. Topics such as their friends, family, birth date, favorite foods, and sports were presented to allow students to test the use of their new language skills while discussing familiar topics of interest. It was evident that, when the elementary students were comfortable talking about familiar subjects, they were more engaged. This permitted the tutors to become more comfortable in their role.

Tutors' Role and Responsibilities. While preparing lessons, the high school tutors were attentive to the need to be both informative and age appropriate. During the month that we planned the lessons prior to launching the elementary program, the tutors took into consideration what a typical elementary student enjoyed and how the material was to be presented. Each lesson included a game, song, or hands-on activity. Both the high school students and I believed that these activities would make learning Spanish more appealing to an elementary student. Our

thinking was confirmed throughout the course of this study.

The responses of the high school students in this study reflected the findings of previous research. They wrote that they considered themselves role models. They also commented in their journals that their interaction with the elementary students allowed for personalization and was a beneficial part of the program. In general, the tutors agreed that they played a positive role in the classroom setting. They also viewed themselves as a positive component of the Spanish distance education classroom, which was in line with the elementary students' opinion of the tutors. They were asked at the beginning, middle, and end of the study (Appendix B), "What is the most beneficial part of the tutoring program?" The results revealed that the tutors enjoyed tutoring and believed that tutoring the elementary students was a rewarding experience. According to the tutors, the content and how it was taught were effective. They saw themselves as an important element to the success of this Spanish program. They also agreed that distance education provided the interaction necessary for developing foreign language skills and was an effective form of teaching. The tutors' positive responses provide evidence of the benefits of tutors in a distance education environment.

The tutors personally shaped their own role, and this was described in their journals. Underlying themes and an explanation of their perceptions were identified in the open-ended questions and journal entries. The elementary students thought that a key ingredient in the program was the tutors' helpfulness, while the tutors agreed that an enjoyable lesson was an important factor. An underlying theme that the elementary students revealed as "cool" was the fact that these "role models" were not adults. Additionally, the tutors liked the opportunity to "be responsible." For instance, they had to prepare the lessons, arrive at the elementary school on time, set up video-conferencing equipment, distribute learning materials, and monitor students'

learning. The high school students who participated in this study were able to witness first hand the elementary students' positive attitudes toward learning Spanish and their exposure to a new form of technology. The tutors were hopeful that this Spanish distance education experience would encourage the elementary students to study a language in the future. To summarize, the tutors believed that they were valuable, not only in the clerical sense, but also in providing hands-on interaction that the teacher was not able to provide due to the mode of instruction chosen for this study.

Interwoven with the positive aspects of tutoring were some negative aspects, such as frustration because the distance education equipment did not always function properly throughout the study. As a result, the tutors were forced to take on the responsibility of teaching lessons without the guidance and interaction made possible by the use of the distance education media. Although the tutors thought the equipment offered an innovative form of instruction, the negative aspect of using the equipment as a teaching tool was recognized and commented on by both the tutors and elementary students. Collectively, they commented on the difficulty of hearing the teacher, having to speak loudly if not seated near a microphone, and inability to interact with the students as a teacher typically would due to the visual requirements of the distance education equipment. The tutors believed overall that the technology could potentially be an inhibitor when it came to easy communication between the students and teacher and also between the tutors and teacher. Therefore, a valuable finding of this study relevant to distance education was the importance of functioning equipment, especially if the tutors were to be effective. But, despite the problems inherent in using technology, it was still primarily viewed as interesting and positive.

The final question on the tutors' questionnaire asked how the high school students would describe their role and the responsibilities of being a tutor. When asked the first time, the tutors were focused on helping the students learn. At the mid point of the study, the tutors had shifted focus to their own knowledge of the lesson content, clerical responsibilities, and desire to enjoy their tutoring experience. When asked for the third and final time, the focus was on interacting with the elementary students and assisting the teacher. All aspects of their role were deemed vital to ensuring the success of the program.

The results of this study suggest that school districts should, when possible, include older learners to assist in teaching younger students. These tutors can serve as positive role models and provide assistance during lessons, such as clarification, feedback, and praise. Additionally, elementary students feel less intimidated asking questions of a student tutor, rather than a teacher.

In my study, the tutors were able to design and implement interesting Spanish lessons for the elementary students and provide a supportive and friendly learning environment. The tutors' comments reinforced the idea that tutoring is beneficial and that the personal "teaching" experience is rewarding. The fact that they remained positive throughout the course of this project also reinforced this positive view of tutoring. It should be noted that a school district might make a tutoring program more appealing to students if they are offered community service credit or a grade for their participation in such a program.

Benefits. There were reciprocal benefits for tutors taking part in this cross-age tutoring program. Many of the research articles on peer tutoring have concentrated on predicting and explaining the effect on tutors rather than examining the effect on tutees (Burge, et al., 1991; Lawton, 1997; Naylor, et al., 1990; Valcke, et al., 1991). Research on the efficacy of peer tutor-

ing for improving the tutor's performance indicates that tutors learn by reviewing, finding meaningful use for the subject matter, and being able to fill in gaps in their own education (Goodlad and Hirst, 1990). Goodlad and Hirst also suggested that, once students find a meaningful use for their knowledge, it becomes more interesting to them. They assimilate readily, they said, and their motivation and attitude toward the subject area improves. The tutors in my study wrote in their journals that their Spanish speaking skills and cultural knowledge increased because of this experience. One of the tutors stated that she may want to major in elementary education because of her positive experience with the fifth graders. Collectively, their positive comments and enthusiasm toward Spanish supported the reciprocal benefits of a Spanish distance education program that incorporates the use of tutors.

Another aspect of using high school students as tutors was their motivation to learn Spanish and pass that knowledge on to the elementary students. The three tutors sincerely wanted to be a part of the process of teaching the fifth grade students Spanish. As the researcher and teacher, I was able to experience first hand the tutors' enjoyment in helping and carrying out the lessons. One tutor wrote in her journal that, "Just seeing the kids get so excited about learning Spanish makes me want to learn more about the language. I want to know more, especially about the culture. There are so many countries that speak Spanish and each country is so different." Another tutor wrote, "The students really enjoyed the cultural lessons. I was surprised how many questions that they had about the Aztec and Mayans. This makes me want to continue my Spanish while in college." The lessons sparked the interest of the high school students, and their excitement toward Spanish culture was demonstrated when they decided to incorporate additional realia in the lessons. This enthusiasm and motivation to learn Spanish was infectious to the elementary students.



Research has been conducted to determine the factors that may influence the effectiveness of incorporating cross-age tutors in a classroom. Findings suggest that children have certain advantages over adults in teaching peers. They may more easily understand tutees' problems because they are cognitively similar. The fact that their "cognitive framework" is similar may also help peer tutors present subject matter in terms their tutees understand (Cohen, 1986). Cohen also explained that peer tutors could effectively model study skills such as concentrating on the material, organizing work habits, and asking questions.

In my study, the tutors and elementary students established a daily working relationship. However, the change from a working relationship to one of friendship became more noticeable as the study progressed. The tutors commented that they would see some of the fifth graders outside of the school setting, giving them the opportunity to interact. This enthusiasm for opportunities to interact was not revealed in the study's results but was obvious to parents, principals, and other community members.

Tutors' Perspectives. The perspectives of the tutors were apparent in their journal entries. At the beginning, one tutor asked, "What if I don't know the answer to something that the elementary student asks me?" The tutors worried that they would appear "stupid" and "unprepared" to teach the lesson. Because of these concerns, which could result in a negative experience for both tutors and tutees, it was determined that training was crucial to the success of any tutoring program. Specific training and support from the tutee teacher helps tutors apply general tutoring skills to specific situations that will occur within the classroom. It is also important for the tutors to know that the tutee teacher is there to support them. There are tremendous benefits for students when the tutee teacher takes an active role with the tutors.

During one of our Friday planning sessions, the three tutors and I discussed the prepared-

ness issue. Although only one had written about this, all three were concerned about the possibility of not being able to answer all of the questions that they might be asked. I told them that, as teachers, we do not always know everything, and it is acceptable to say “I do not know” to the students. I asked them if they thought I knew everything there was to know about the Spanish language and culture. They thought about it and responded, “Well, probably not everything.” Although it was flattering to think they thought I knew almost everything, I assured them that still I have many things to learn. They seemed relieved to discover that it was acceptable to tell a student that they did not know the answer and would try to find it for them.

The high school students demonstrated their knowledge of and enthusiasm for Spanish while planning and facilitating the lessons. The curriculum encompassed introductory Spanish vocabulary and phrases, along with cultural information. During our one-month lesson planning before the program began, the tutors researched and familiarized themselves with celebrations and historical facts to facilitate the cultural lessons. Although they had already learned much of the material that we planned to teach, it was necessary for them to feel comfortable with the material and how to present it. As the program progressed, they became more comfortable as the on-site resource. The elementary students started to ask the tutors their questions instead of thinking of the teacher as the only source of information. This indicated that the eight-week program helped to foster tutor and elementary student interaction

At a time when school districts are seeking innovative and effective means to improve students’ academic achievement, the utilization of cross-age tutoring offers widespread implications for the classroom. Many studies have provided evidence that peer tutoring has a positive impact on the learning process, but I believe more research must still be done. Peer tutoring does offer reciprocal benefits for the tutor and the students who are being tutored. This is especially

true with distance education classrooms. Tutoring is also able to work within budget and time constraints that school districts often face. It provides more teaching resources and opportunities, such as one-on-one interactions, within those constraints.

In sum, there are numerous benefits associated with tutoring. As with any other school program, it is important to note that no two programs are alike. Student, school, and community dynamics all contribute to the uniqueness of any given program. The tutors in my study were able to provide more individual attention and the language used was generally “cool.” Thus, the tutors were viewed as positive role models and provided enrichment. The tutors gained a sense of pride and accomplishment for having helped the elementary students. They felt a new or increased sense of responsibility and awareness for what teachers must do to transmit knowledge to students. Also, the tutors were able to provide more praise, feedback, and encouragement than if only the distance education teacher had been teaching the lessons. Finally, I received personal gratification from seeing the rewards reaped by both the tutors and tutees.

#### Elementary Students’ Achievement and Attitudes

Few studies have attempted to pinpoint students’ achievement and attitudes in a distance education setting (Burge, 1994). By looking at the elementary students’ attitudes and achievement in my study, we can better understand how tutors and distance education influenced the two distinct learning environments (tutored and nontutored).

Achievement. The self-assessment, proachievement interview, and final examination indicated no statistical differences in the elementary students’ achievement in either environment (tutored vs. nontutored) or over a period of time. This was comparable to the assessment results of the elementary students’ attitudes, where the achievement in both environments measured over time was not statistically significant.

The elementary students' achievement was determined through self-assessments of Spanish language skills and cultural knowledge. The elementary students were also examined to determine if they made progress in learning Spanish (Weeks 1, 4, and 8). The results did not reveal differences. They also indicated that all elementary students throughout the study consistently scored the same when asked to rate themselves on statements such as, "I can understand the names of lots of things in Spanish (for example, classroom objects, colors, and numbers)." In summary, the students with tutors assessed their Spanish language skills and cultural knowledge similarly to the students without tutors.

This study examined the difference in achievement, as measured by a written test, of those who participated in the study with a tutor and those without a tutor. Again, the results were not significantly different. They revealed that the nontutored students scored as well as the tutored students on the written exam.

Based on these findings, it can be concluded that, although tutors do offer distinct benefits, the elementary students enrolled in the Spanish distance education program—following the curricular model of this study—were not at a disadvantage in any way from those who had classroom interaction with the high school tutors. Students in both environments performed equally well. Before this study began, I assumed that the students who were exposed to tutors would perform better and have a more positive attitude. Because the nontutored students performed as well as the tutored students and also had a positive attitude toward the elementary Spanish class, I believe that a school district using distance education without tutors would not be at a disadvantage. The elementary students in a nontutored distance learning classroom would still enjoy the introductory Spanish class and learn the material as well as a distance education classroom with tutors. Although the tutors were helpful to the teacher, a distance education class-

room without the assistance of peer tutors can still be viewed as effective and not in a negative light. A school district that is unable to provide tutors to assist in a distance education class should not be discouraged. The achievement results of the nontutored students illustrate that learning can occur even when the certified teacher is the only source of information.

Attitudes. My final conclusion relates to the participants' attitudes toward using distance education to learn Spanish, attitudes toward learning Spanish in the two distinct distance learning environments, and the change in attitudes as the program progressed. Similar to Wudthayagorn's (2000) quantitative findings discussed in Chapter Two, this study also revealed no significant differences between the attitudes of fifth graders measured at the beginning and those measured at the end of the semester. Additionally, there were no significant differences between the attitudes of the elementary school students in either environment (tutored or nontutored).

To examine the elementary students' attitudes toward using distance education to learn Spanish, a questionnaire was used. Each subscale on the student questionnaire consisted of five statements. The four attitudinal subscales were: 1) feelings toward Spanish class, 2) feelings toward using distance education equipment to learn Spanish, 3) feelings toward the high school students, and 4) feelings toward learning Spanish. The mean score on each subscale of the questionnaire at the beginning, middle, and end of the study was not significantly different. For Subscale 1, which measured the students' feelings toward Spanish class, students' feelings remained unchanged throughout the study. The minimal mean score differences when evaluating the students' feelings toward using distance education equipment to learn Spanish also indicated no change from the beginning to the end of the study. Additionally, when examining the elementary students' feelings toward the high school students, the results did not indicate a significant difference between Weeks 1, 4, and 8. Following the same pattern as above, the final

subscale revealed that the student's feelings toward learning Spanish from the beginning, middle, and end of the study did not change.

In general, the findings on students' attitudes indicated that the elementary students appeared to be consistently satisfied with their distance education Spanish experience. One might have expected that the elementary students would be apprehensive about learning Spanish without a teacher in the classroom and that they would not be responsive to a lesson taught on television. Throughout the study, however, their attitudes never declined but rather remained positive toward Spanish class, using distance education equipment to learn Spanish, and the high school students.

Because the students who were not exposed to the high school tutors still were satisfied with the program, school districts which are not able to utilize tutors to provide a distance education class should still consider this mode of instruction beneficial. School districts without tutorial resources can include a subject that is not offered in the curriculum through the use of video technology and anticipate positive attitudes for those who participate.

An additional area investigated in my study was the degree to which the attitudes of the elementary distance education students changed as they progressed through the program. I examined the differences on the four attitudes stated above across time. It is worth noting that, although not significantly different on Attitude Subscale 1—which measured the elementary students' feelings toward Spanish class—the attitude scores of the elementary students were higher at the beginning than at the end of the study. Conversely, Attitude Subscale 2—examining the elementary students' feelings toward using distance education equipment to learn Spanish—revealed a decrease as the study continued. There was no difference in the elementary students' feelings toward the high school students (Attitude Subscale 3) or in their feelings toward learning

Spanish (Attitude Subscale 4). In spite of the differences noted, there was no statistically significant change on the four attitudes across time. In summary, although student attitudes were not significantly different from the beginning to the end of the study, a closer look at the responses indicated that enjoyment for learning Spanish increased while their positive feelings toward technology decreased.

A decrease in positive feelings toward using distance education equipment to learn the language at the end of the study may have been a result of the novelty and excitement with the equipment at the beginning of the program. As with anything new, the beginning of the eight-week session was filled with curiosity and excitement. From Weeks 1 to 8, however, students were able to predict instructional routines and what events would take place, thus removing the innovative nature of the project and, in turn, their curiosity.

My study also brought to light both the elementary students' and high school tutors' perceptions of the tutors' role and responsibilities in a distance education setting. The elementary students were asked, "What do you think of having high school students in the classroom?" (Appendix A) three times during the study (beginning, middle, and end). These students' perceptions of the tutors' role were all positive in nature. The students described the tutors with adjectives such as "helpful," "cool," and "fun." Furthermore, many of the elementary students also thought of the tutors as a "role model." Some students viewed the tutors as great to have in class because they were not adults. They also stated that the tutors helped keep control but were also supportive in teaching the lesson. The most frequent response used each of the three times the question was asked was that the tutors were "fun" to have in class. Comments by both the elementary and high school students positively expressed satisfaction with incorporating tutors into this Spanish program. The tutors demonstrated enthusiasm and enjoyment toward teaching

Spanish to the elementary students, and they were well accepted by both the teacher and elementary students.

## **5.2 CURRICULAR CONCERNS**

The results of this study provide insight into what is necessary to implement distance learning technology in two settings. Despite audio and visual difficulties, the elementary and high school students in this study expressed a positive reaction to this instructional experience. The fact that a majority of students said they would repeat this experience indicated that distance learning provides an alternative way of teaching a foreign language to beginning language learners.

Some preexisting guidelines for starting a foreign language distance education program in the elementary schools would have provided a better understanding of how to plan and implement this type of program with fewer difficulties. At the beginning of the program, some lessons were mediocre because of the technological aspect of distance learning. For example, the equipment at the high school or one of the elementary schools did not always function properly. Even a solid lesson in a traditional teacher-directed classroom might be a failure when technology is involved. A few times throughout the study, I found it difficult to communicate and teach the lesson effectively when I could not see the entire class all at once. It also became less personal when presenting a lesson utilizing a television monitor as a visual aid. Additionally, some of the same subject material that I teach to my high school Spanish classes was introduced to the elementary students. But, the subject matter needed to be presented in such a way that a fifth grader understood it and was able to relate it to what they already knew. This was sometimes



overlooked when planning the lessons. What I could do in ten minutes with a Spanish I class might take more than one lesson with the elementary students.

The data that I gathered from the questionnaires, self-assessment, interviews, journal entries, and final examinations indicated a number of advantages to distance learning that support its effectiveness. Important benefits uncovered by this research include collaborative learning, expanded learning and interaction opportunities, and convenience.

### **5.3 RECOMMENDATIONS FOR PRACTICE**

If researchers decide to expand upon this study, I would suggest that more qualitative instruments be used to gain a better understanding of which benefits cross-age tutors offer to a foreign language distance education classroom. I would also suggest that further research focus on the affective reactions of children toward innovative programs.

In a time when standards-based education has taken on a greater role, it is imperative for educators to provide learning for every student. This is the basis of President George W. Bush's Elementary and Secondary Education Act (ESEA), renamed "No Child Left Behind" (NCLB) in 2001. It established commendable goals—high standards, accountability for all, and the belief that all children can learn, regardless of their background or ability. Although foreign language learning is a stated goal of President Bush, it has not yet reached that level of importance locally. At the same time, the emphasis on NCLB subjects (such as reading, mathematics, and writing) detracts from the time allotted to subjects such as foreign language. These limitations, however, can be addressed through the application of distance learning, which provides opportunities for students to learn in circumstances where staff and curriculum are limited (Wohlert, 1989).

Students who might not otherwise be exposed to a subject now have an opportunity for study. In the case of foreign language, distance learning offers more opportunities to include activities directly relevant to the subject area than in a traditional classroom setting. It also provides the opportunity for exposure to less commonly used languages (i.e., Japanese, Arabic, etc.). With a greater emphasis in recent years on providing language learning opportunities to even younger children and the increased comfort level of these children with technology, distance learning can provide the best of both worlds. And, by utilizing cross-age tutors in the remote classroom, the familiarity of face-to-face interaction can be maintained.

Standardized testing such as that required under NCLB does not capture students' affective reactions in the same way that prochievement interviews, journal entries, and open-ended questions do. Therefore, my study also supports the idea that several instruments should be used to collect data. My findings, gathered through a variety of methods, illustrate that how students are taught can affect students' attitudes and achievement toward learning a foreign language, particularly in a distance education setting. These results can have implications for other disciplines but are truly relevant for the foreign language classroom, as it requires interactive and participatory learning. This could only have been learned through the use of multiple data collection techniques.

More research is also needed to determine the benefits of cross-age tutoring in a distance education setting. The emerging theme of the cross-age tutors as "responsible role models who are not adults" needs to be supported in a variety of settings. Due to the time constraints placed on the data collection, this study may not provide enough documentation on the attitudes and achievement of the participants. It is suggested that a year-long study be conducted to see if preliminary findings reach significance. Another recommendation would be to conduct a longitu-

dinal study to monitor the progress of participating students for several years to determine whether the gains they have made are retained.

In a future study, I would suggest that the tutors' role and responsibilities change to see if the outcomes vary. For example, each high school tutor could be responsible for developing an entire lesson on his/her own. Also, in implementing a tutorial program, soliciting and using feedback from participants can help determine how the program is meeting student needs and also to discover areas to build on and improve. In my study, parents and adults who monitored the elementary students were not asked to complete a questionnaire. I believe their insight could provide valuable information and should be solicited in future studies.

It would be beneficial to see whether the results of this study would change in differing distance learning environments. This study focused on fifth graders with high-school students serving as cross-age tutors. Variations for future studies could include middle school or high school students with college students as cross-age tutors. In addition, it would be helpful to know if other variations in the classroom environment might change the outcomes of the study. Such differences could include longer classes, classes that meet more or less often, more or fewer cross-age tutors, larger or smaller class sizes, and different ages of elementary school students.

As the previous Review of Literature indicated, both quantitative and qualitative research involving tutors in a distance education setting is minimal. Further research will provide answers regarding its effectiveness and how the use of tutors can support this form of instruction. A longitudinal study investigating tutors in a distance learning environment is strongly recommended. It would be beneficial to see if the results are different depending on the language taught or the age of the student. Teachers who are action researchers may use this study's data as a benchmark to reflect how elementary students and high school cross-age tutors evaluated and rated them-

selves in the areas of attitudes and achievement using various instruments. Distance learning for foreign languages is being increasingly used in this country. In the years ahead, many changes in how students are taught a foreign language may occur. Ultimately, it is the responsibility of future researchers to document this topic's continued evolution.

#### **5.4 FUTURE APPLICATIONS**

Distance learning could prove to be useful for a wide variety of programs where resources are limited and the number of students may not justify a traditional classroom setting. Utilizing cross-age tutors, although not essential to success, can make the experience more beneficial for both tutors and tutees.

##### Short-Term Proposal

A year before the program begins and after the first year, the following is recommended:

1. Create a committee as part of the school's regular committee structure. This committee would be responsible for informing and educating teachers about cross-age tutoring and planning discussion sessions. By making this work part of the school's existing committee structure, a school district can ensure that teachers will have time to collaborate.
2. Commit staff release time to the distance education program in order to give teachers more time to observe tutoring in action and meet with one another.
3. Share the good news about the positive effects of tutoring on tutee learning.
4. Increase the recognition, responsibility, and leadership of tutors. This includes encouraging and teaching all tutors to make their own lesson plans and take personal initiative

in their tutoring.

In the case of foreign language programs, the following elements need to be considered for taking the idea of distance learning a step further:

1. Linking the language learning experience with the community through the use of language fairs, competitions, parental involvement (perhaps a guest speaker), and other community members/resources. These outreach efforts will demonstrate to both the students and community that language learning is important and relevant.
2. Incorporating cultural activities (i.e., food, music, dance, and videos linking the language to the curriculum) into the program.
3. Providing activities for genuine communication. Have students interview visitors, write to pen pals, and use the Internet or e-mail to communicate with other learners and native speakers.
4. Comparing students' culture(s) to the new language's culture in order to gain an understanding of different value systems in the world. This also supports the American Council on the Teaching of Foreign Languages (ACTFL) 5 Cs of Culture, Communication, Communities, Comparisons, and Connections. The distance learning environment actually makes it easier to teach the National Foreign Language Standards because the teacher can utilize more ways to include activities under the 5 Cs than in a traditional classroom with textbook and chalkboard, especially in cases where local resources are limited.
5. Offering additional language options to students who could continue the same language in middle or high school or start a new one. Students would have the opportunity to learn multiple languages where, previously, they may not have had the opportunity to learn

any.

These recommendations, based on an evaluation of the elementary Spanish distance education program in this study, also have wider implications for building a cross-age tutoring program into one that is schoolwide and sustainable. The results of this study bring hope to a school district by providing some ideas on how to structure leadership of a cross-age tutoring program.

There are some factors to consider that can be both positive and negative in the application of a distance program. For example, the cost savings that can be realized from a distance education program is an obvious, well-known, practical advantage. But, it can also be seen as a threat to the job security of teachers. The fact that distance foreign language education is much cheaper than traditional classrooms should not make language teachers shy away from supporting it, however. If the program is implemented properly and results in a fun and valuable learning experience, more people could become interested in studying other languages. This would increase the demand for language teachers, especially for those who teach languages that are out of the mainstream.

Administration's Perspectives. Despite the promise and advantages to tutors in a distance education setting, the administration in my study expressed concern over necessary staffing, parental approval, and hidden costs associated with implementing a new program. The first issue was a concern because it is mandatory that a certified teacher be with the elementary students during instruction. Finding a teacher who was not already committed to another duty or responsible for class coverage during his/her noninstructional time was no easy task. In the teacher's contract, each teacher is allotted so much planning time, and it was necessary to have a teacher

be in the distance education classroom for 20 to 25 minutes twice a week. The administration solved this problem by appointing two teachers per elementary school for the duty.

The administration in both the elementary and high schools were committed to this Spanish program and realized that they needed parental support to make it successful. If the parents were not truly committed, it was bound to have a negative influence on the entire distance learning experience. The elementary principals invited me and the cross-age tutors to present the program to the parents during the Fall Open House. The students sampled a lesson, were given a handout that supported language learning at an early age, and were also given time to ask questions. A majority of the parents signed their child up for the program during the Open House. They were just as excited as the high school students, administrators, and I were to begin this endeavor.

Start-up costs for such a program were also an initial concern, but they proved to be minimal because the distance education equipment had already been purchased by the school district. It had been sitting in storage for a few years. There was still concern from the administration, however, regarding hidden costs that might be involved. The high school principal allowed me to purchase any additional instructional materials needed, and the cost was minimal (less than \$200). It was also decided by the school board and the administration that the high school students would not receive payment for driving their cars to the elementary schools. The district solicitor warned of legal issues that might occur if the students received payment.

When I asked the administrators to comment on the Spanish distance education program and give advice to help improve it, they praised the school district for its commitment to the program. In addition, they believed that parental support was a key ingredient. They recognized the need for adequate personnel at both sites, as well as a reasonable operating budget. Because

of the positive comments from the students, parents and teachers, the elementary and high school principals asked the school board to continue the program the following year. This positive attitude from administration trickled down to the teachers and students who were involved. One elementary school principal summarized by saying, “Despite the cost, coordination, and training that was put into the implementation of the elementary Spanish distance education program, it has been so well received by many members of the community—students, parents, teachers, school board members, and the administration. Offering Spanish to every fifth grader has added some spice into their normal school day.” The other elementary principal commented that it was obvious that the students enjoyed learning Spanish because of their comments outside of the distance education classroom. This was apparent when they greeted him in Spanish and discussed what they learned with the regular education teacher.

The high school principal offered some advice for those school districts contemplating a foreign language distance education program. One of the major issues in implementing such a program was the amount of time necessary to design the curriculum and the time spent training the high school students to be effective tutors. Because language courses are often electives, he recognized the need for foreign language teachers to be creative and well prepared to attract students and maintain enrollment. He advised those administrators who may want to provide an elementary foreign language program to choose a teacher who is uplifting and willing to take risks. He commented that, “The first year of a new program can be very time consuming and full of ups and downs.” He also cautioned that the high school tutors who are to take part in the program need to be carefully selected. He acknowledged that the students selected not only need to have the academic but the social skills to interact with elementary students in order for all participants to have a positive learning experience.



The key to a positive distance education program is its implementation. Successful implementation includes the involvement and support of school administrators, buy-in from teachers, support from the parents/community, cultivated interest from students, and technology that works. This last factor is essential, as proven by my study results. In addition, if cross-age tutors are going to be utilized, proper cultivation and training are important aspects for a successful program.

## 5.5 CONCLUSION

This dissertation study was conceived as a direct result of my classroom experience with high school students learning Spanish and their desire to teach what they were learning. During the class scheduling period for the next academic year, some of the Spanish IV students spoke with me about offering a class that gave them an opportunity to teach Spanish. Although the school district offered Spanish V, not all of the students were interested in enrolling in this course. After petitioning the school board, the elementary Spanish distance education program was offered for the following year, and the high school students were encouraged to take this course as well as Spanish V. I speculated that these students would offer assistance in writing the curriculum and teaching elementary Spanish, since the school board decided this course would be offered using the new distance education equipment. It seemed that these high school students had the drive to make elementary Spanish a success, and their imagination allowed for this class to be offered to the elementary students in the district.

Having acted as both a teacher and researcher in the district, I can reflect on the design and outcomes of the study and how research and practice have influenced each other. Although a

teacher may notice a trend in the classroom, data can help guide decisions, especially in a district where active research is encouraged. If I had not agreed to teach this class and complete this research, I would not have been able to observe the positive relationship that developed between elementary and high school students in a distance education setting.

The most important finding in this study is that learning occurred in both the tutored and nontutored Spanish distance education classrooms, although the tutors provided useful assistance and benefits in terms of motivation and an increased interest in learning a foreign language. With this in mind and examining future research into effective methods of teaching, administrators and school districts can see more clearly the meaningful ways in which cross-age tutors are able to support a distance education classroom (although not required).

As stated earlier, important issues for administrators, faculty, and students should include getting an evaluation and commitment from the school district to integrate support personnel, offering upgraded distance education equipment, and providing long-term training of tutors and teachers. The intended result of investing in a distance education program, over time, will extend a school district's foreign language program benefits to both students and teachers, further distinguishing its academic programs, and possibly becoming a model of best practices in the field of education. In addition, students, parents, schools, and the community can take pride in the expanded world view and communication benefits that a foreign language program can provide. Even the smallest school in the most rural area can become part of the global society, better preparing all students for entry into the larger marketplace.

While it is hoped that this study will encourage other school districts to initiate their own early language programs utilizing distance education, I would caution that the decision to do so should not be made in haste. A successful program necessitates careful planning and support, as

well as a solid commitment from the administration, expertise of the staff, time, funding, and student interest. This successful implementation requires:

1. Research (find out what has been done and what needs to be done and the level of interest)
2. Understanding (present a detailed and well-thought-out plan to the administration, outlining procedures, costs, and goals)
3. Commitment (make sure that staff and administration will see the program through)
4. Data collection (utilize quantitative and qualitative methods to determine the success of the program and what adjustments may be needed)
5. Equipment inventory/maintenance (make sure that equipment works and can be expected to do so on a regular basis).

If cross-age tutors are to be used, it is important to ensure that they are trained in the course material and its implementation and prepared to take on the responsibilities of being a tutor.

The lessons learned here are applicable well beyond foreign language, making the idea even more appealing. Distance learning can apply to any course where student interest and resources may be limited (i.e., astronomy). A distance learning program, implemented correctly, can truly open up the world to all students, regardless of their circumstances. By following these simple steps—as illustrated in my own study—any school is capable of implementing a distance education program that can set it apart and prepare its students for success in the larger world.

**APPENDIX A**

**NAME:** .....

**SCHOOL:** .....

CHECK ONE:

..... Boy

..... Girl

**Elementary Students' Questionnaire**

**INSTRUCTIONS**

In this questionnaire, you will find several questions with which you may or may not agree. When answering the following questions, please circle one of the four answers that best indicates your feelings. Remember, there is no right or wrong answer.

→ One example is:

1. I like getting gifts on my birthday.

|-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

- Some people would circle *strongly agree*, if they really like getting gifts on their birthday like this:

|-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

- Others would circle *strongly disagree*, if they really hate getting gifts on their birthdays.
- Still, others would circle one of the answer choices between, depending on their feelings.

Now, we would like to know your feelings toward studying the Spanish language. Again, please remember that there is no right or wrong answer. Circle the answer that best describes your feelings.

**Part 1:** What are your feelings toward Spanish class?

1. I am happier in Spanish class than in any other classes.

Strongly Disagree	Disagree	Agree	Strongly Agree

2. I enjoy the activities in my Spanish class much more than those in other classes.

Strongly Disagree	Disagree	Agree	Strongly Agree

3. Spanish is one of my favorite classes.

Strongly Disagree	Disagree	Agree	Strongly Agree

4. Spanish is an important subject of the school (educational) program.

Strongly Disagree	Disagree	Agree	Strongly Agree

5. I think Spanish class is interesting.

|-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

**Part 2:** What are your feelings toward using distance education equipment to learn Spanish?

1. Learning Spanish with the use of the distance education equipment is fun.

|-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

2. The teacher is clear and understandable. I can hear what the teacher is saying.

|-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

3. It is easy to interact with the teacher using the equipment.

|-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

4. If I had a choice, I would prefer learning Spanish using the equipment rather than being taught face-to-face.

|-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

5. It is easy to pay attention in this class.

-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

**Part 3:** What are your feelings toward the high school students?

1. I really like the high school students.

-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

2. I look forward to going to class because the high school students are such good helpers.

-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

3. The high school students have a dynamic and interesting teaching style.

-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

4. The more I see the high school students, the better.

-----|-----|-----|-----|

Strongly Disagree      Disagree      Agree      Strongly Agree

5. The high school students help me learn Spanish.

Strongly Disagree	Disagree	Agree	Strongly Agree
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**Part 4:** What are your feelings toward learning Spanish?

1. I enjoy learning Spanish.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

2. I love learning Spanish.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

3. I plan to learn as much Spanish as possible.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

4. I find the study of Spanish is very interesting.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

5. Spanish is easy to learn.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------



Your opinion is important. Please answer the following questions.

1. What do you like or dislike about using the technology?

2. What do you think of having high school students in the classroom?

THANK YOU VERY MUCH!!!

## APPENDIX B

### Tutors' Questionnaire

#### INSTRUCTIONS

In this questionnaire, you will find several questions with which you may or may not agree. In answering the questions, please circle one of the four answers that best indicates your feelings. Remember, there is no right or wrong answer.

1. Tutoring the elementary students is a rewarding experience.

-----	-----	-----	-----
Strongly Disagree	Disagree	Agree	Strongly Agree

2. I enjoy tutoring the elementary students.

-----	-----	-----	-----
Strongly Disagree	Disagree	Agree	Strongly Agree

3. The tutors are helpful in implementing the lesson.

-----	-----	-----	-----
Strongly Disagree	Disagree	Agree	Strongly Agree

4. The content that is being introduced is useful to the elementary students.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

5. The teacher is clear and understandable. I can hear what she is saying.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

6. It is easy to interact with the teacher using the equipment.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

7. Interaction between the elementary students and tutor is very important.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

8. The tutors are an important element to the success of this Spanish program.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

9. Distance education can provide the interaction necessary for developing foreign language skills.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

10. Distance education is an effective form of teaching.

-----|-----|-----|-----|  
Strongly Disagree      Disagree      Agree      Strongly Agree

Your opinion is important. Please answer the following questions.

1. What do you like or dislike about using the technology?

2. What is the most beneficial part of the tutoring program?

3. How would you describe your role and the responsibilities of being a tutor?

THANK YOU VERY MUCH!!!

## APPENDIX C

### Spanish Self-Assessment

Name: \_\_\_\_\_

Check one: \_\_\_\_\_ Boy      \_\_\_\_\_ Girl

Age: \_\_\_\_\_ Years      \_\_\_\_\_ Months

\_\_\_\_\_ Check here if you have studied Spanish before this class.

### PART ONE

We would like to know what **YOU** think about your ability in Spanish. In **Part One**, please respond to the statements by *checking the answer that best describes what you think you can or cannot do in Spanish*. In **Part Two**, you should write your answers. There is no right or wrong way to respond to the statements and questions – just your own opinion of your ability to understand and say various things in Spanish.

1) I can say “**hello**” and tell someone my name **in Spanish**.

- \_\_\_\_\_ DEFINITELY YES
- \_\_\_\_\_ PROBABLY YES
- \_\_\_\_\_ SORT OF BUT NOT TOTALLY
- \_\_\_\_\_ NOT AT ALL

2) I can follow instructions in Spanish, for example “Sit down.” and “Be quiet.”

- \_\_\_\_\_ DEFINITELY YES
- \_\_\_\_\_ PROBABLY YES
- \_\_\_\_\_ SORT OF BUT NOT TOTALLY
- \_\_\_\_\_ NOT AT ALL

- 3) I **can understand** the names of lots of things **in Spanish** (for example, classroom objects, colors, and numbers).  
 \_\_\_\_\_ DEFINITELY YES  
 \_\_\_\_\_ PROBABLY YES  
 \_\_\_\_\_ SORT OF BUT NOT TOTALLY  
 \_\_\_\_\_ NOT AT ALL
- 4) I **can say** the names of lots of things **in Spanish** (for example, colors, numbers, and classroom objects).  
 \_\_\_\_\_ DEFINITELY YES  
 \_\_\_\_\_ PROBABLY YES  
 \_\_\_\_\_ SORT OF BUT NOT TOTALLY  
 \_\_\_\_\_ NOT AT ALL
- 5) I **can say in Spanish** the days of the week.  
 \_\_\_\_\_ DEFINITELY YES  
 \_\_\_\_\_ PROBABLY YES  
 \_\_\_\_\_ SORT OF BUT NOT TOTALLY  
 \_\_\_\_\_ NOT AT ALL
- 6) I feel **comfortable speaking** Spanish in class.  
 \_\_\_\_\_ DEFINITELY YES  
 \_\_\_\_\_ PROBABLY YES  
 \_\_\_\_\_ SORT OF BUT NOT TOTALLY  
 \_\_\_\_\_ NOT AT ALL
- 7) I **can talk about how I am feeling in Spanish**.  
 \_\_\_\_\_ DEFINITELY YES  
 \_\_\_\_\_ PROBABLY YES  
 \_\_\_\_\_ SORT OF BUT NOT TOTALLY  
 \_\_\_\_\_ NOT AT ALL
- 8) I **can ask questions in Spanish** to students (for example, *What* is your name?, *How* are you?, etc.)  
 \_\_\_\_\_ DEFINITELY YES  
 \_\_\_\_\_ PROBABLY YES  
 \_\_\_\_\_ SORT OF BUT NOT TOTALLY  
 \_\_\_\_\_ NOT AT ALL
- 9) I **can pronounce Spanish** the way my teacher has taught me.  
 \_\_\_\_\_ DEFINITELY YES  
 \_\_\_\_\_ PROBABLY YES  
 \_\_\_\_\_ SORT OF BUT NOT TOTALLY  
 \_\_\_\_\_ NOT AT ALL

10) I can understand a story when told to me in Spanish.

- DEFINITELY YES
- PROBABLY YES
- SORT OF BUT NOT TOTALLY
- NOT AT ALL

11) I can answer questions in Spanish (for example, What is your name? What day is it?, etc.)

- DEFINITELY YES
- PROBABLY YES
- SORT OF BUT NOT TOTALLY
- NOT AT ALL

## PART TWO

Please read the following questions and **write your responses**. There are no right or wrong responses. **Just tell us what you think!**

1) What do you think you know BEST in Spanish?

2) What do you think you still need to learn so that you can understand and speak Spanish better?

3) Can you talk about Spanish culture? Can you give a few examples of what you learned about their culture (For example, stories, food, and holidays)?

THANK YOU VERY MUCH!!!

## APPENDIX D

### Prochievement Interview

**Opening:** Greet the children and introduce yourself. The first game is called “Bolsa Mágica” or Magic Bag. Put the “activity page” in front of the children and point to the picture of the Magic Bag. As you go through the activities, use the activity page to help them keep track of where they are by pointing to the picture of each activity before you start it).

#### **Game 1: Magic Bag**

Ask the student what their name is in Spanish. Place the Magic Bag in front of them that contains several pictures. Ask the children to open the bag and put everything out on the table in English, if needed. She then asks the children to:

- A) **Point to different objects as she names them.** Then, ask the student to point to something green, yellow, brown, purple, red, orange, pink, grey, black, white, and blue.
- B) **Point to the different people** as you name them.
  - 1) **Point to the woman. Point to her dress. Ask: What color is it in Spanish? Point to her hair and ask the color.**
  - 2) **Point to the man. Point to his pants. Ask: What color is it in Spanish?**
  - 3) **Point to the boy. Point to his shirt. Ask: What color is it in Spanish?**
  - 4) **Point to the girl. Point to her dress. Ask: What color is it in Spanish?**

In English, thank the student and then tell him/her that they are going to play a game with all the objects and people. Show the students the classroom model and tell them that you are going to ask them to put some things in the classroom.

#### **Game 2: Come to my classroom!**

Ask them to point to the different classroom objects as you name them in Spanish (clock, pencil, pen, paper, marker, notebook, folder, and desk). If they do not know which is which, point to the correct object as you say it. Next, ask the student to pick up the various items, say the correct Spanish word and place it where it belongs in the classroom model.



### **Game 3: Let's Sing!**

Congratulate the student and tell them to count the items as he/she puts them back in the Magic Bag. Ask if they know any songs in Spanish. If he/she can't think of any, suggest a tune that the class has learned (La Cucaracha, alphabet or the birthday song). Sing it together!

### **Game 4: Talking about yourself!**

Thank the student for the song and then point to the picture of the Activity Page identifying Game 4. Explain to him/her that you want to get to know them better. Tell the student that he/she is to speak in Spanish as much as possible. The student picks out two pieces of paper from the Magic Bag. Each piece of paper has a question for him/her to answer.

In Spanish ask:

1. What is your name?
2. Can you spell your name in Spanish?
3. What is your favorite color?

### **Game 5: Accidental Mix-up**

This game focuses on culture. This game is conducted in English.

(Dump bags filled with culturally related items.) Explain that you accidentally dropped things on the floor and now you need to help sorting them out.

The following represents:

United States:

U.S. flag, picture of the Statue of Liberty,

Spanish-speaking country:

Book in Spanish, Mexican flag

both United States and a Spanish-speaking country:

baseball

As the student sorts the things out, tell him/her to sort them into three piles, one pile representing the United States, one representing a Spanish-speaking country and a pile representing both cultures. Ask the student about his/her choices. Also, ask if he/she knows of other things that may relate to the countries in question.

**Materials needed: Hands-on material for use with the students –**

1) Magic Bag with the following: man, woman, boy, girl, clock, pencil, pen, paper, marker, notebook, folder, desk, paper with a question on each, U.S. flag, a picture of the Statue of Liberty, a book in Spanish, Mexican flag, and baseball

2) Activity page

**Supplies for interviewer/rater:**

- 1) rating scale for rater
- 2) rating sheet for each student
- 3) name tag for interviewer/rater
- 4) stickers/pencils (or some small treat) to be given to the students for completing the activity
- 5) video camera and blank videotapes
- 6) tape recorder and blank cassette tapes

Adapted from The Center for Applied Linguistics “Cow Talk – Early Language Listening and Oral Proficiency Assessment (ELLOPA) Rating Profile” (2001)

## APPENDIX E

### Prochievement Interview Rating Scale 4-Point Scale

<p><b>Oral Language Proficiency</b></p>	<p>(1) Produces isolated words and/or high frequency expressions.</p> <p>May use a few memorized, high frequency expressions.</p>	<p>(2) Uses a limited number of isolated words, two to three word phrases, and/or longer memorized expressions within predictable topic areas.</p> <p>May attempt to create sentences, but is not successful. Uses gestures or native language to expand meaning when attempting to create with language. Long pauses are common.</p>	<p>(3) Uses high-frequency expressions and other memorized expressions with reasonable ease.</p> <p>Signs of originality are beginning to emerge.</p> <p>Creates some sentences successfully, but is unable to sustain sentence-level speech.</p>	<p>(4) Maintains simple conversations at the sentence level by creating with the language although in a reactive, limited manner.</p> <p>Handles a limited number of everyday social and academic interactions.</p>
<p><b>Vocabulary</b></p>	<p>(1) Uses words in very specific topic areas in predictable contexts.</p> <p>May use a few memorized, high frequency expressions.</p>	<p>(2) Uses specific words in a limited number of topic areas, high-frequency expressions, and other memorized expressions.</p> <p>Frequently searches for words.</p>	<p>(3) Uses vocabulary centering on basic objects, places, and family, adequate for minimally elaborating utterances in predictable topic areas.</p> <p>May use native language or gestures when attempting to create with</p>	<p>(4) Has basic vocabulary for making statements and asking questions to satisfy basic social and academic needs, but cannot elaborate or provide explanations.</p> <p>May use false cognates or resort to native language when attempting to communicate</p>

			language.	beyond the scope of familiar topics.  May use some common idiomatic expressions.
<b>Cultural Awareness</b>	(1) Can sing a song in the target language.  Can distinguish objects that are typically found in the culture of the target language from objects typically found in U.S. culture.	(2) Can talk in English about some holidays and customs found in the culture of the target language.	(3) Uses some gestures and body language from the target language culture.	(4) Use some culturally appropriate vocabulary and idiomatic expressions in the target language.

Adapted from The Center for Applied Linguistics “Cow Talk – Early Language Listening and Oral Proficiency Assessment (ELLOPA) Rating Profile” (2001)

## APPENDIX F

### Tutors' Reflection Journal Entries

Please read the following questions and write at least a paragraph for each. **Your opinions are important!**

My overall opinion and feelings regarding the lessons that we have taught in the last two week are:

Within these two weeks, the following went well:

I would like to tell you about something new that has emerged since I began as a cross-age tutor:

The elementary Spanish students are:

I have the following suggestions to make the program more successful:

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