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An Examination of the Effects of the America Reads Tutoring Program and Tutor Training on the Attitude and Academic Achievement of Urban At-Risk Minority Students

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**AN EXAMINATION OF THE EFFECTS OF THE
AMERICA READS TUTORING PROGRAM AND TUTOR
TRAINING ON THE ATTITUDE AND ACADEMIC ACHIEVEMENT
OF URBAN AT-RISK MINORITY STUDENTS**

by

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Old Dominion University in Partial Fulfillment of the
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ABSTRACT**AN EXAMINATION OF THE EFFECTS OF THE
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**Tami C. Al-Hazza
Old Dominion University, 2002
Director: Dr. Raymond F. Morgan**

The American educational system is struggling to identify methods of preventing early reading failure. Many schools are implementing tutoring intervention programs to supplement classroom instruction and to help meet the needs of struggling at-risk readers. Although there is substantial research on tutoring programs that employ professional teachers, there is a dearth of research on the effectiveness of non-professional volunteer tutoring programs.

The purpose of this study was to investigate the effectiveness of the America Reads tutoring program and tutor training on the reading achievement and reading attitude of urban, at-risk, K-3 minority students. The population sample was drawn from four inner-city urban schools of similar racial composition and academic achievement level. Two schools received America Reads tutoring services and two schools served as comparison schools.

Numerous standardized tests in place in the school system were used to gauge reading achievement and The Elementary Reading Attitude Survey was used to measure reading attitude. Six research questions were addressed: (1) Is there a significant difference in reading achievement between students who received America Reads

tutoring and a comparison group of similar students who did not receive America Reads tutoring? (2) Is there a difference between the reading scores of students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors? (3) Is there a change over the course of an academic year in the America Reads tutee's attitude in contrast to a comparison group? (4) Is there a relationship between the student's reading attitude and reading achievement? (5) Is there a difference in female and male students attitudes toward reading after participating in a tutoring intervention program? (6) Is there a difference in the strategies that moderately-trained and minimally-trained tutors implement in their tutoring sessions?

One-way between groups analysis of covariance, multivariate analysis of covariance, and Pearson Product Moment correlations were employed. Results indicated that: (1) the tutored group achieved significantly higher mean scores on five of the ten reading achievement tests; (2) only a significant negative correlation in grade three was found between reading attitude and reading achievement; (3) there were no significant changes in participants reading attitudes; (4) there were no significant differences in female and male attitudes toward reading; (5) there were some differences in strategies that moderately-trained tutors implemented in their tutoring sessions compared to minimally-trained tutors; (6) that reading tutoring intervention programs that employ non-professional tutors can have a significant impact upon tutee reading achievement.

I would like to dedicate this dissertation to my family, who without their support, this would not have been possible. First to my mother, Virginia, who inspired me to believe in myself and taught me a love of reading. Second to my husband, Hazza, who encouraged me and made many sacrifices so that I could achieve this work. And last to my daughter, Latifah, who wanted mommy to succeed and always understood when I was busy writing and couldn't do fun things.

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CHAPTER I

INTRODUCTION

Reading is considered one of the most critical factors in school success (Moss, Schwartz, Obeidahhah & Greene, 2001). “No other skill taught and learned by school children is more important than reading. It is the gateway to all other knowledge” (United States Department of Education, p.1). Educators tend to agree that the most crucial stage for literacy development begins at home, years before the child enters school (Barton, 1994; Cuevas, 1999; McChesney, 1996). Literacy-rich environments that foster development include activities such as; reading to a child (Barton, 1994), playing literacy games (Barton, 1994; Wells, 1986), and engaging in meaningful verbal exchanges (Goodman, 1984). This type of home environment is crucial to the child’s future development and subsequent academic achievement (Stevenson, Lee & Schweingruber, 1999). Unfortunately, not all children grow up in this type of environment. Children without adequate literacy preparation begin school behind and are considered “at-risk” for school failure. At-risk can be defined as “those conditions and behaviors that limit or have the potential to limit learners’ academic achievement, socialization, and physical and mental health” (Manning & Baruth, 2000, p.2). In this study, the term “at-risk” denotes the presence of environmental or individual risk factors that are linked with potential reading failure.

Over the past several decades, there has been growing concern about students reading achievement. The reading achievement of American schoolchildren, especially minorities and at-risk students and the methods or programs which should be employed

to raise that achievement level have sparked much controversy in recent years (Berlinger & Biddle, 1995; Bloom, 1987; Bracey, 2000; Elley, 1992; Hirsch, 1988; Morris, Shaw & Perney, 1990; Wasik, 1998a.). This concern first was expressed in the 1960's when congress passed The Elementary and Secondary Education Act. This act targeted disadvantaged students and created intervention programs such as Head Start and Title I (Plunkett, 1985; Vinovskis, 1999). Despite controversial findings from these programs (Plunkett, 1985; Ziegler & Styfco, 2000), Head Start was popular with educators and the American public, laying the groundwork for current intervention programs.

At the present time, there are numerous reading intervention programs in use in America. Among these are Reading Recovery, Howard Street Tutoring, and Success for All. The latest government sponsored program is the America Reads Program. The America Reads Challenge Act of 1997 was proposed in response to concern over literacy among American schoolchildren. President Clinton responded to the concern among educators and the public by announcing his campaign for literacy, "The America Reads Challenge"(Clinton, 1996; Edmondson, 1998). This was Clinton's effort to help every child read well and independently by the end of third grade, his administration's initiative to combat the literacy problem in our schools and society.

President Clinton's ultimate goal with regard to the America Reads program was to mobilize an army of a million volunteers to go into the school system and tutor children in reading. The package included \$2.75 billion to recruit reading specialists and to train one million volunteers under a five-year plan (Manzo, 1997). The America Reads proposal stated:

The America Reads Challenge Act will help mobilize AmeriCorps members, skilled reading specialists, and trained volunteer reading tutors to ensure that every student can read independently and well by the end of 3rd grade. The Act sets forth the first comprehensive, nationwide effort to create after-school, summer, and weekend tutoring in reading. The America Reads Challenge Act is a five-year, \$2.75 billion commitment to local communities and organizations, as well as national and regional efforts (America Reads Challenge, 1997, p. 3).

America Reads guidelines specify that partnerships be formed between at least two organizations or agencies, such as universities, libraries, schools, or youth service groups. Legislation also specifies that tutors be trained, tutors support programs already in school, areas receiving tutors have a high percentage of low-income families and that parents be involved in the reading process. Seventy percent of the funding is to be allocated to states under the Title I formula and thirty percent allocated based on effectiveness of the program (Wasik, 1998b.).

One of the main proposals for bringing tutors into the school is through federal work-study grants awarded to eligible students on university campuses. The government promised reimbursement of a quarter of the salary for college work-study students who participated in the America Reads Program (Lederman, 1997).

This new government proposal created much debate among educators on the effectiveness of tutoring intervention programs and the amount of training required when

using non-professional volunteers as tutors. Wasik (1998b) indicates that there is little evidence on the effectiveness of tutoring programs that use volunteers.

Cohen, Kulik and Kulik (1982) conducted a meta-analysis of sixty-five independent tutoring programs and reported statistically significant effects for ten of the thirty-three programs that reported on reading achievement. Sensebaugh (1988) stated that nearly all tutoring programs are effective for three out of four students. Chambers, Abrami, Massue & Morrison (1998), McCarthy, Newby & Recht (1995), Morris, Shaw & Perney (1990), Pinnell, Fried, Estice (1990) and Wasik and Slavin (1993) all reported positive academic achievement of students who participated in reading tutoring programs. Other researchers, Ritter (2000), Juel (1996) and Dromsky & Gambrell (2001) reported that participants in reading tutoring programs did not achieve significantly better results when compared with a normed or control group.

Research is also unclear about the amount of training that tutors require (Wasik & Slavin, 1993). There is much research on the effectiveness of tutoring programs that employ certified teachers such as Success for All (Chambers, Abrami, Massue & Morrison, 1998; CRESPAR, 1997; Slavin, Karweit & Wasik, 1992; Wasik & Slavin, 1993) and Reading Recovery (Department of Defense, 1998; Fass-Holmes & Ciriza, 1996; Huggins, 1999; Pinnell, Fried, Estice, 1990; Wasik & Slavin, 1993), however, there is less research on how much training is required when using nonprofessional tutors (Wasik & Slavin, 1993). Wasik (1997b) asserts that there is a dearth of research on the effectiveness of volunteers as reading tutors and on the amount of tutor training that is effective. She states, "It is important to note that there is no evidence to suggest that volunteer tutoring is not effective. But there is insufficient evidence that the programs

improve children's reading achievement, and even less evidence concerning what forms of volunteer tutoring programs are most likely to work" (Wasik, 1997, p. 24). Some researchers indicate gains in reading achievement when employing non-professional tutors (Fitzgerald, 2001; Gupta, Robinson & West, 2001; Morris, Shaw & Perney, 1990; Morris, 2001) other researchers question their effectiveness (Manzo & Sack, 1997; Short, 1997).

Another area in the literature that is controversial is the effect of tutoring on students' reading attitudes and the relationship between students' reading attitudes and reading achievement. Quinn & Jadav (1987) reviewed previous research on the relationship between reading attitude and reading achievement and found a small positive correlation, however, later findings from another research project by Quinn & Jadav (1987) indicated no relationship between reading attitude and reading achievement. In other research on reading intervention programs results indicated an improvement of students' reading attitudes after participation in a reading intervention program (Rains, 1993), however, other researchers have found significant improvement only in female participants' reading attitudes after participation in a reading intervention program (Potter, 1996; Thames & Reeves-Kazelskis, 1992). The contradictory findings of these studies indicate a need for further research into the effect of tutoring on reading attitudes and the relationship of attitude toward reading and reading achievement, specifically focusing on differences between males and females.

Purpose of the Study

Although children have been learning to read for centuries, only recently have countries expected their population to be 100% literate (Snow, Burns & Griffin, 1998). A student who has not acquired basic reading skills by grade three is unlikely to graduate from high school (Loyd, 1978). A generation ago this was not as important as it is today because there were many unskilled jobs available; now reading is an essential skill required in all jobs. Today, to be employable, a high school graduate must be able to read sophisticated technology manuals for equipment use and maintenance and to solve complex problems in the workforce (Murnane & Levy, 1993). Today's technological society creates a need for higher literacy (Moss, Swartz, Obeidahhad & Green, 2001). Those who do not acquire this literacy do not acquire good jobs, creating a widening gap in society. Costs to society are high in terms of future unemployment, lower productivity and mental health services (Snow, Burns & Griffin, 1998).

In order for the U.S. to remain competitive in the global market, it is essential that we have an educated population. Currently, research indicates that there is a growing number of at-risk students in the public school system. Many of these at-risk students are minorities and children from disadvantaged backgrounds. The educational literature suggests that many at-risk students require additional instructional services to succeed in school (Nardini & Antes, 1991; Wasik & Slavin, 1993). Wasik & Slavin (1993) indicate, along with other researchers, that tutoring is one type of intervention proven to increase at-risk student's academic achievement and as a long-term dropout prevention strategy.

The America Reads Program is one of the latest government sponsored intervention programs introduced into the schools to help at-risk students improve

reading achievement. Although there has been a substantial investment of resources, there has been a dearth of research investigating the effectiveness of the America Reads' programs across the country (Wasik, 1997).

Research indicates that it is more effective to implement intervention early to prevent reading problems than to try to correct reading problems in later grades (Wasik & Slavin, 1993). In recent years, school districts have become more willing to adopt intervention programs to help their struggling readers (Wasik & Slavin, 1993). What separates tutoring programs from other types of interventions is the one-on-one contact that students have with the tutors. This one-to-one contact gives students the opportunity to receive individualized instruction that meets their specific needs.

The purpose of this study was to investigate and describe the effects of the America Reads tutoring program on the tutors and tutees. The study examined the influence of the America Reads Tutoring program upon the reading achievement and reading attitudes of urban at-risk K – 3 grade students participating in the America Reads program with a comparison group of students at two similar urban schools not receiving America Reads tutoring services. Standardized test scores were used as pre-test data to determine the control and tutored group's equivalency at the beginning of the study and as post-test data to determine the effectiveness of the tutoring intervention program. In addition, the study investigated whether the type of tutor, moderately-trained, i.e., receiving an additional 12 hours of reading strategy training, or minimally-trained, i.e. receiving only the initial 3 hours of training, made a difference in the types of reading strategies tutors implemented in the tutoring sessions and did that result in differences in tutee's reading achievement.

Significance of the Study

Functional literacy in the United States is declining. Twenty-five percent of all 17-year olds attending public schools are unable to read simple popular magazines (Slavin, 1989) and in 1999, five out of every one hundred students enrolled in high school in October dropped out by the end of the school year (National Center For Educational Statistics, 2001). Reading and academic difficulties are one of the primary reasons given for leaving school (Garcia, 1991). Due to the growing number of students experiencing difficulty, educators are trying to find effective methods to assist these students. Data is needed on which programs are most beneficial to helping at-risk students improve reading achievement. The America Reads program is one such effort. This study is an attempt to provide educators with an indication of the reading gains that at-risk students could make following this type of tutoring intervention.

In an effort to control expenses and meet budgetary requirements, educators are searching for tutoring programs that can be used with non-professional volunteers. However, the literature is unclear as to how much training is requisite for tutors. This study attempted to increase our understanding of the effects of minimally-trained volunteer non-professional tutors versus moderately-trained non-professional tutors on the reading achievement of students as gauged by standardized tests.

Currently, there is a limited amount of empirical research on the effects of the America Reads programs. In an effort to improve the America Reads Tutoring Program at Old Dominion University and, henceforth, better to serve the schools involved with the program, research was requisite on the efficacy of the program, the amount of tutor training and specific tutoring strategies that are effective for this population of students.

This study will add to the knowledge base on the effectiveness of tutoring programs that use non-professional volunteers as reading tutors.

Relationship to Urban Education

Urban areas are described as areas that have large numbers of students receiving free or reduced lunch in school, have large numbers of minorities or non-native speaking population, and have disproportionately large numbers of individuals living below the poverty level (Lippman, Burns and McArthus, 1996). Urban residents are also more likely to be exposed to street crime and gang activity. This type of environment raises issues of health and safety concerns.

The America Reads Program was designed and intended for urban areas with large populations of students with low academic achievement. Urban students are often in need of additional instructional programs to help raise reading achievement and offset negative environmental factors. Many urban schools, supported by a low-tax base, are unable to afford reading intervention tutoring programs that employ certified teachers, relying instead on programs that use volunteers. There is currently a need for research on the effectiveness of tutoring programs that use non-professional tutors that can serve the burgeoning needs of at-risk students in urban school districts.

Research Questions

There were a number of questions that formed the basis for this study. First, research on tutoring programs is ambiguous concerning the results that can be expected from non-professional tutoring interventions. Results from previous research are unclear on the relationship between attitude and academic achievement. However, there is some evidence to suggest that reading intervention programs have a positive effect on female

participants attitudes. This study attempted to investigate the relationship of reading attitudes to reading achievement and the effect the America Reads program has on participant's reading attitudes and their reading achievement. Specifically, there are five questions that provided the basis for this research:

1. Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?
2. Is there a difference in the achievement scores of students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors?
3. Is there a relationship between the students' reading attitude and reading achievement?
4. Is there a change over the course of an academic year in the America Reads tutees' attitude as measured by the Elementary Reading Attitude Survey as compared to non-tutees?
5. Is there a difference in the reading attitudes of female students and male students after participating in the America Reads program?
6. Is there a difference in the reading strategies that moderately-trained and minimally-trained tutors implement in their tutoring sessions?

The first question measured students reading scores of tests already in place in the school district. The results of the tests between the treatment group (students receiving America Reads Tutoring) and the comparison group (students at similar schools

who do not receive tutoring) were analyzed. The Phonological Awareness Literacy Screening (PALS), Standardized Test for Assessment in Reading (STAR) and the Test For Higher Standards yielded pre-intervention data to help determine if the two groups were equivalent.

The second question examined the achievement scores of students who were tutored by moderately-trained tutors compared with scores of students who were tutored by minimally-trained tutors. Minimally-trained tutors received three hours of initial training while moderately-trained tutors received the initial training plus twelve hours of ongoing training throughout the academic year.

The third question examined the student's reading attitude, as measured by the Elementary Reading Attitude Survey, and their achievement scores to determine if there was a relationship. This question was designed specifically to assess whether there was a relationship between reading attitudes and reading achievement in both groups of students on their reading achievement scores at the conclusion of the school year.

The fourth question examined the students' attitude, as measured by the Elementary Reading Attitude Survey, toward reading at the beginning of the school year before tutoring begins and at the end of the school year when tutoring ends. Data was examined to determine if a change in attitude occurred after participating in the America Reads tutoring program.

The fifth question examined the differences in female students' attitudes toward reading and male students' attitude toward reading. This question examined gender and reading attitude before tutoring and after participating in a reading tutoring program.

The sixth question examined tutors who were chosen randomly from the America Reads tutors to participate in comprehensive training throughout the academic year. The type of strategies that moderately-trained tutors and the non-trained tutors used in tutoring sessions were compared. This information was obtained by using tutor checklists and verified by observation.

Methodology

This research was quasi-experimental in design because students were purposefully selected to receive tutoring. Four schools located in poverty-stricken areas with the lowest reading achievement in the district participated in this study. A comparison group at two similar schools consisting of students who were in the lowest 20% in their class on reading achievement was chosen to compare reading achievement scores. All four schools that participated in this study were Professional Development Schools. Professional Development schools are schools that have formed a partnership with a University. The goals of this partnership include fostering and developing research projects, creating learning communities beneficial to all participants and holding meetings to share information with the community and to encourage public input (Kochan & Kunkel, 1998).

There were several instruments used to gauge reading achievement and reading attitudes employed in this study. Numerous researchers, Center, Wheldall, Freeman, Outhred, McNaught (1995); Huggins, (1999) and Slavin, et al. (1992) have used numerous reading tests with subscales to give a more accurate picture of various reading skills that might be affected by tutoring intervention. The Elementary Reading Attitude Survey was used to ascertain children's reading attitudes. The results from the Standards

of Learning (SOL) test, the Standardized Test for Assessment of Reading (STAR), the Test For Higher Standards and the Phonological Awareness Literacy Screening (PALS) test was used to measure progress in reading achievement.

The moderately-trained group of tutors consisted of a random selection of tutors who received the initial training plus ongoing training in reading theory, strategies and techniques. These tutors were trained every other week throughout the school year for training. The minimally-trained group of tutors received three hours of initial training that has previously been offered to America Reads Tutors.

All tutors were required to complete checklists (see Appendix A) that summarized each tutoring session. The checklists served as an implementation check to keep record of the tutor's types of strategies, number of times a strategy was used, and total time spent on various components of the reading process during tutoring sessions. The checklists consisted of a page of various activities that the tutor could use in tutoring sessions. The checklists were divided into alphabetic/phonic activities, pre-reading, during reading and post-reading activities plus writing, spelling, etc. These checklists also served to remind tutors of potential strategies to use with tutees and to verify which strategies the tutor used in the tutoring sessions. A comparison was made between strategies employed by minimally-trained tutors and the moderately-trained tutors to ascertain if there were any significant differences. In addition, a comparison was made to determine if there was a difference in the reading achievement of tutees that were tutored by moderately-trained tutors and those tutored by minimally-trained tutors.

Data Analysis

Data analysis was accomplished by employing one-way between-groups multivariate analysis of covariance (MANCOVA) to ascertain if there was a difference in tutored versus non-tutored students' achievement as measured by the PALS test. One-way between-groups analyses of covariance (ANCOVA) were performed on the posttest scores of the Test For Higher Standards, Standardized Test For Assessment in Reading (STAR) and the Standards of Learning test (SOL). The pretest on the PALS for grades kindergarten and grade one and the STAR and the Test For Higher Standards for grades two and three was used to determine if the treatment and control groups were equivalent. A one-way between-groups analysis of covariance (ANCOVA) was used on separate scales to determine if there are differences in achievement scores of students who were taught by moderately-trained tutors and by minimally-trained tutors. One-way between-groups multivariate analysis of covariance (MANOVA) was used to determine group differences on reading achievement tests that used several scales that tested the same construct. Descriptive statistics was used to describe the types of strategies that moderately-trained and minimally-trained tutors implemented in their tutoring sessions. A one-way between-groups analysis of covariance was employed to ascertain if there was a change in reading attitudes in students who participated in the America Reads program. A Pearson Product Moment Correlation was employed to determine if the student's reading attitude and reading achievement scores were related.

Definition of Terms

In this section, the following terms are defined to aid the reader in the comprehension of this research. Some definitions used in this section are specific to this research.

For this purpose of this study, the America Reads Tutoring Program is operationally defined as a university-run tutoring program that employs university work-study students to tutor students in grades K-3 in reading at two local schools with a high percentage of “at-risk” students.

In this study, urban population is operationally defined as, “comprising all territory, population, and housing units in urbanized areas and in places of 2,500 or more persons outside urbanized areas” (Census, 1990). Urban areas often have large numbers of individuals living below the poverty level, large numbers of non-native speaking and minority residents, and large numbers of students attending schools who receive free or reduced lunch (Lippman, Burns and McArthur, 1996).

For the purpose of this study, at-risk students, is defined as students who are more likely to experience failure in reading due to individual or environmental factors. There are many definitions for at-risk students (see Chapter II), however in this study at-risk refers to students whose reading achievement levels are considered to be at the bottom 20% of the class and at risk of falling further behind.

For the purpose of this study, tutor, is operationally defined as a university student who is employed by the America Reads program. The tutor in this research is an adult who tutors elementary students in reading in a one-to-one tutoring session.

For the purpose of this study, tutee is operationally defined as children in grades K-3 who were deemed in the lowest 20% of their class in reading achievement and were henceforth recommended to receive tutoring services.

For the purposes of this study, Standards of Learning (SOL's) is operationally defined as a Virginia State Mandated test that is administered once a year to students in grades 3 and 5.

Organization of This Study

Reading is the foundation upon which all other academic endeavors are based. Literacy development begins at home, years before the child enters school. Children who are immersed in print-rich environments where literacy is highly valued enter school ready to learn. Unfortunately, many children do not grow up in this type of environment and are behind their peers upon entry to school, these children often are labeled at-risk for school failure. These students often require additional instruction to prepare for literacy acquisition.

Many educators are concerned about the literacy levels of American schoolchildren. As a possible solution to low literacy achievement, many educators are implementing tutoring programs to supplement regular classroom teaching. The America Reads Program is the latest government sponsored intervention introduced. At the present time, the educational research literature is unclear on several aspects of volunteer tutoring programs. This study examined several components related to tutoring that appeared to be unclear in the educational literature. Specifically, this study examined the effect of volunteer tutoring programs on the reading achievement of tutees, the relationship between reading attitude and reading achievement, changes in reading

attitude after participation in a reading program (examining female versus males), and if the amount of tutor training has an effect on tutee achievement.

Chapter II presents current and emerging models of reading, literacy needs and literacy providers, and effects of training and tutor strategies on the reading attitudes and achievement of tutees. The literature review then focuses on the assessment of literacy deficits. Also included are the factors that effect reading performance and the methods that tutoring programs use to address these factors. Finally, Chapter II closes with stating the hypotheses for the study.

In Chapter III, the Rational and Design of the study is discussed followed by the Research Questions. All participants in the study are described along with an in-depth description of instruments employed in this study. The chapter concludes with a discussion of data analysis procedures and possible limitations.

Chapter IV presents detailed analysis of the results of the study. Each research question is addressed in detail, data analysis explained and tables and graphic representation of the results depicted.

Chapter V discusses the results along with a discussion of possible explanation for the findings from this study. Conclusions and implications of this study are presented along with suggestions for future research.

CHAPTER II

Concern Over Literacy Statistics

Reading is the foundation upon which all other academic endeavors are based (Moss, Schwartz, Obeidahhah & Greene, 2001; Slavin & Karweit, 1992; Madden, Slavin, Karweit, Dolan & Wasik, 1993). The ability to read is an essential ingredient for future advancement in social, academic and economic development (Snow, Burns & Griffin, 1998). Slavin, Karweit, Wasik, Madden & Dolan (1994) report that a student's reading achievement at the end of third grade is related strongly to later high school graduation. Unfortunately, the American school system does not appear to be meeting the needs of all children. Research over the past several decades has indicated an alarmingly low level of literacy among America's population. In the 1980's, the National Commission on Excellence in Education was created to examine educational quality in the United States (The National Commission on Excellence in Education, 1984). The ensuing report, *A Nation At Risk* (1984), indicated that functional illiteracy among 17-year olds was approximately 13% and as high as 40% for minorities (The National Commission on Excellence in Education, 1984). More than a decade later, the literacy problem still remains and most recently was called to educators attention by the report from the 1998 National Assessment of Educational Progress (NAEP) which indicated that 32% of fourth graders were reading below the basic level. Central cities reported even lower results with 45% of fourth grade students reading below the basic level (Donahue, Voelkl, Campbell & Mazzeo, 1999). In response to this concern, educational organizations have developed various types of remedial reading programs to compensate for students literacy deficits.

Current & Emerging Models of Reading

Perhaps there are no educational issues of a more pressing or pragmatic nature than those surrounding literacy (Alexander, 1998). Reading literacy is defined as “the ability to understand and use those written language forms required by society and or valued by the individual” (Elley, 1992, p.3). Reading is quintessential in many spheres of one’s life such as; acquiring necessary information, reading for pleasure, reading to one’s children and grandchildren and continuing lifelong learning (Moss, Swartz, Obeidahhah, & Green, 2001).

To understand reading and guide educators in developing effective practices, theorists and educators have developed models of reading. Models of reading attempt to explain how the human brain processes (decodes) and comprehends written language (McCormick, 1995). There are three main categories of models to describe this process; bottom-up, top-down, and interactive (Vacca, Vacca & Gove, 1995).

The bottom-up model of reading is a skill driven (Alexander, 1998) or data-driven (Vacca, Vacca & Gove, 1995) approach to reading. The emphasis of this approach is on the text and the reader deriving meaning from accurate processing of words (Gunning, 2000). Readers begin by learning the names of the letters of the alphabet, then the corresponding sounds. The reading process is broken down into isolated skills (Gunning, 2000). Decoding and comprehension compete for the reader’s attention; therefore, the reader must process graphophonemic information quickly to attend to comprehension (Vacca, Vacca & Gordon, 1995). This model translated into practice often results in reading instruction consisting of direct teaching of phonics and

skills in isolation until students become automatic in translating graphophonemes (Alexander, 1998).

The top-down model is conceptually driven (Vacca, Vacca & Gove, 1995). The reader derives meaning from print by using prior knowledge, expectations and language ability (Gunning, 2000). Skills are taught as they arise within the context of reading, not as isolated activities. The more prior knowledge the reader has about the topic, the easier it will be to comprehend the material (Vacca, Vacca & Gove, 1995). Proponents of the top-down model believe that the process of learning to read should occur in a natural, holistic environment with the reader immersed in interesting stories (Gunning, 2000).

The third model of reading, the interactive model, combines the two approaches. This approach believes that the reader uses prior knowledge to make predictions about decoding and forms hypothesis based on graphophonemic, syntactic and semantic information (Vacca, Vacca & Gove, 1995). Reading instruction in the interactive classroom often consists of implicit teaching of skills within context with many opportunities given for holistic reading and writing (Gunning, 2000).

Many current tutoring programs are based on the interactive model of reading. Reading is viewed as a psycholinguistic process in which the reader uses knowledge of print conventions, perceptual analysis, decoding, prior knowledge, inference making and metacognition to construct meaning from print (Wasik & Slavin, 1993). Tutoring programs also ascribe to the principle that reading is a strategic process involving coordination of visual information, use of reading strategies for decoding unfamiliar words and the use of prior knowledge to increase comprehension (Wasik & Slavin, 1993).

It is the hope of theorists and researchers that by understanding models of reading educators will be able to meet the needs of struggling readers (McCormick, 1999). For those students whose needs are not met, additional instruction intervention programs often are utilized.

Literacy Needs and Literacy Providers

For as long as the written language has existed, there have been those who have struggled to comprehend it (Woo & Morrow, 2001). Most educators agree that literacy begins at home years before children enter school (Barton, 1994; Cuevas, 1999). Early literacy development is termed “emergent literacy” and is considered by some educators as the most crucial period of development (Schuman & Relihan, 1990). The roots of a child’s early literacy develop through their experiences, family’s attitudes and views toward literacy, quality of literacy use in the home and oral language exchanges (Goodman, 1984). Environments that foster literacy development engage children in regular reading, meaningful verbal interaction and daily activities to promote literacy development (Barton, 1994; Stevenson, Lee & Schweingruber, 1999).

Parents who regularly read to children help children develop crucial literacy skills later required in school (Barton, 1984). Wells (1986) conducted a longitudinal study following thirty-two children from their first words to the conclusion of elementary school. He found that listening to stories at an early age had a significant positive influence on the acquisition of literacy, more so than looking at magazines or books. By reading to children on a regular basis children learn about language, vocabulary, syntax, life, how to acquire knowledge, human interaction, social rules and the rhythms of the language (Barton, 1994; Wells, 1986). Children learn that books are special and are used

for different purposes. Children become familiar with the concept of directionality, turning the pages and that print carries meaning (Barton, 1994). In addition, children learn values and attitudes associated with reading. Children who hear regular bedtime stories usually associate reading as a warm, intimate time shared with an adult (Barton, 1994).

Home environments that foster literacy development encourage literacy in all areas of life such as; engaging children in literacy games and surrounding children with the alphabet and other types of print. Parents often model reading by reading for pleasure and other purposes. The parents engage the children in everyday literacy events. These events often involve the participation of the entire family and are considered fun activities (Barton, 1994; Wells, 1986).

By participating in everyday literacy events children begin to understand how meaning is represented by the written language (print), purposes and reasons to use written language and how print is organized so that communication can occur (Goodman, 1984). Children who begin school having heard hundreds of stories read to them over the years, engaged in meaningful verbal exchanges and surrounded by a print-rich environment have formed a solid literacy foundation upon which to begin formal schooling (Stevenson, Lee & Schweingruber, 1999). However, children who have not had this rich literacy experience often need additional instruction to meet the reading demands of formal schooling.

History of Remedial Reading/Compensatory Reading Programs

In the mid 1960's, government began to play a more active role in education as educators and government searched for programs and methods to improve disadvantaged

students' academic achievement (Vinovskis, 1999). Early childhood programs became popular with American educators in the 1960's when psychologists promoted the idea that a person's intelligence quotient (I.Q.) was not fixed but could be improved through early childhood experiences. In the 1960's, President Lyndon Johnson supported compensatory education programs to help the poor. Johnson's educational policy was based on the notion that disadvantaged children were behind because they started school behind their wealthier peers. His goal was to put disadvantaged children on equal footing when they started school. Many legislators on Capitol Hill agreed with President Johnson resulting in congress passing The Elementary and Secondary Education Act (ESEA) in 1965. This was the first major educational endeavor specifically targeting disadvantaged children. Title 1 and Head Start were two educational programs proposed under this legislation (Plunkett, 1985; Vinovskis, 1999).

Head Start was designed as an early intervention program to help disadvantaged children overcome educational deficiencies in their home atmosphere and neighborhood. The foundation of this program was to help prepare at-risk children for elementary school. However, the focus of Head Start was not purely educational, it also provided social, psychological, and health services (Vinovskis, 1999).

Results from evaluations of Head Start have been conflicting. Initially results from the Head Start program claimed that children's IQ went up 10 points after participating in the summer Head Start program, but in later studies these gains were found to fade away (Zigler & Styfco, 2000). In 1969, Westinghouse Learning Corporation evaluations of Head Start found that gains in children's IQ were small and faded rapidly, confirming earlier reports (Vinovskis, 1999).

Title I was initiated simultaneously with the Head Start program, however, no attempt was made to coordinate the two programs (Vinovskis, 1999). Title I was a congressionally-mandated funding program rather than a specific educational program. Initially to pass Title I legislation Congress mandated that most schools would receive some type of funding. Many schools accepted the funds without altering instruction. As time passed, Congress passed new and specific legislation regulating which schools would receive funding and how the funds should be used.

In the 1970's, Title I was evaluated by the System Development Corporation. Data on 120,000 students from 300 elementary schools receiving Title I services were analyzed. The researchers concluded that there were no significant relationships between the students receiving Title I services and academic achievement (Vinovskis, 1999). However, in 1996 Borman and D'Agostino conducted a meta-analysis of 17 Title I research studies from 1966 to 1993 and found a positive impact on student achievement, however the achievement gap between middle and lower socioeconomic students was not closed (Vinovskis, 1999). Regardless of the controversial results of evaluations, Title I services and Head Start Programs were popular programs among educators and the public, laying the groundwork for future intervention programs.

In recent years two new congressional mandates have amended the Elementary and Secondary Education Act of 1965. In 1998, the Reading Excellence Act amended Title I by: (1) recommending reading practices based in scientifically-based reading research (Conaty, 1999); (2) providing early intervention to children deemed at-risk for reading failure; (3) expanding family literacy programs; and (4) promoting a renewed commitment to ensure that every child can read by the conclusion of third grade (Rhett,

1999). The second law that recently has been passed is the, No Child Left Behind Act of 2001. This act was an effort to reform the ESEA of 1965 by ensuring that all children are given the opportunity to learn to read.

The latest mandates for government intervention programs have not been evaluated in longitudinal studies due to their recent implementation, so their effectiveness is unknown. However, it appears that intervention programs are popular among educators as an attempt to help struggling readers at-risk for school failure.

Current Tutoring Programs

In recent years, tutoring has become a popular form of instruction. This popularity is due, in part, to the awareness that began in the 1960's of at-risk children's needs and in part because of the loosening of restrictions on Title I funding allowing a broader range of services to be implemented (Wasik & Slavin, 1993).

The concept of tutoring as a form of instruction is not new to society, it has long historical roots. The word tutor has its origins from the Latin word *tueri* and means. . . "To watch, look after, protect . . . a custodian, a keeper, a protector, a defender" (The New Shorter Oxford English Dictionary, 1993, p. 3431). Tutoring as a form of educational instruction can be traced back to ancient Greeks, from the philosophical dialogues conducted by Socrates with his students, to the use of tutoring as a form of intellectual discipline used in the 16th century by the British Oxbridge College, to Cambridge in the 1800's and continued with its present day use, tutoring has been and remains a popular form of supplemental educational instruction (Gordon & Gordon, 1990).

There are many forms of tutoring that have been popular in recent years including peer tutoring and cross-age tutoring (Cohen, Kulik & Kulik, 1982; Elbaum, Vaughn, Hughes, Moody, 2000). However, recent focus on tutoring has centered on tutoring programs that use adult volunteers in instructional intervention programs to help struggling readers (Shanahan, 1998).

This literature review will examine only tutoring programs that delivered instruction by adults in one-to-one settings. The review will examine; (a) underlying themes current tutoring programs are based on and (b) components of effective tutoring programs. The review will then focus upon issues that appear unclear and inconclusive in the literature including; (c) amount of tutor training; (d) effective tutor strategies; (e) effect of tutoring on attitude (f) effect of tutoring programs on reading achievement and (g) criticism of tutoring programs.

There are numerous tutoring interventions in use in America; among them are Reading Recovery, Success for All, Howard Street Tutoring and America Reads. In reviewing the literature on tutoring programs, some common models of reading emerged.

Many current tutoring programs are based on the interactive model reading. Reading is viewed as a psycholinguistic process in which the reader uses knowledge of print conventions, perceptual analysis, decoding, prior knowledge, inference making and metacognition to construct meaning from print (Wasik & Slavin, 1993). Tutoring programs also ascribe to the principle that reading is a strategic process involving coordination of visual information and strategies and the child's prior knowledge (Wasik & Slavin, 1993).

Most reading tutoring intervention programs are designed to improve the reading competence of at-risk children from impoverished literacy backgrounds (Chambers, 1998). Many tutoring programs focus on children in the lower elementary grades based on the assumption that targeting children in the first grade with the lowest reading ability will help students to develop independent strategies that they will be able to use alone in the future preventing early frustration and the cycle leading to reading failure (Pinnell, 1985; Pinnell, Lyones & Deford, 1997).

Another common assumption of tutoring programs is that children learn to read by reading; therefore, most tutoring time should be spent engaged in reading (Morris, Shaw & Perney, 1990). Tutoring programs such as Howard Street Tutoring focus on giving struggling readers maximum reading time and providing interesting stories that the child can relate to written in a natural language (Morris, Shaw & Perney, 1990).

Components of Effective Tutoring Programs

A review of the literature indicates three common components in effective tutoring programs; (a) the program based in a model or philosophy of reading (Wasik & Slavin, 1993); (b) the supervision of tutors (Morris, 1993) and; (c) a tutor training component (Moss, Swartz, Obeidahhad & Green, 2001; Pinnell & Fountas, 1997; Wasik, 1998b.).

Wasik & Slavin (1993) recommend that tutoring programs are more effective if they are based on a model of reading and address all components of that model. For a tutoring program to be effective, it must state clearly the goals of the program and the goals must be observable and measurable.

The supervision of tutors influences the effectiveness of the tutoring program (Slavin, Madden, Dolan & Wasik, 1996). Successful tutoring programs typically employ some type of supervisor to oversee the day-to-day operation of the program (Invernizzi, Juel & Rosemary, 1997; Wasik, 1998). Wasik (1998) recommends using trained reading specialists to oversee the program. Reading Recovery closely supervises and trains tutors for one year (Morris, 1993). Invernizzi, Juel & Rosemary (1997) recommend that the supervisor provide ongoing feedback to tutors and help design lesson plans.

Research also indicates that for tutoring programs to be effective tutors should receive training that includes certain components; basic instruction on the reading process (Wasik, 1998); exposure to reading theory, child development, behavior management, learning disabilities and diversity issues (Bader, 1998; Corporation for National Service, 1993; Koralek & Collins, 1997); introduction to various instructional strategies to use with the tutee (Bader, 1998; Karalek & Collins, 1997; Morrow, 2000; Pinnell & Fountas, 1997; Slavin, Madden, Dolan & Wasik, 1996); instruction on how to conduct informal assessment of the tutee's reading level (Bader, 1998; Morrow, 2000) and how to place students in appropriate ability-level reading material (Bader, 1998; Pinnell & Fountas, 1997; Morrow, 2000). The tutors should be introduced to methods of establishing rapport with the tutee (Morrow, Woo & Radzin, 2000) and tutors need information on how they should react and what they should do when tutees make a mistake in reading (Topping, 1998).

There are numerous research-based tutoring manuals available to guide program supervisors in the implementation of the program and training of tutors. Some of these manuals include: Help America Read A Coordinator's Guide, and its companion Help

America Read A Handbook for Volunteers by Gay Su Pinnell & Irene C. Fountas (1997); On The Road to Reading by The Corporation for National Service (1997), Reading Helpers A Training Handbook for Tutors by D. Koralek & R. Collins (1998); Handbook for Literacy Tutors by Arlene Adams (1999); and Read to Succeed Literacy Tutor's Manual and its companion Read to Succeed Tutor Trainer's Manual by Lois A. Bader (1998).

Effects of Tutoring

The literature is unclear on the effects of several areas of tutoring. These areas include; the effect of tutor training and subsequent tutee achievement; strategies used in tutoring sessions and the resulting tutee achievement; and the effect of tutoring on tutee reading achievement and attitude.

Effect on Reading Skills

There has been much debate in recent years over the effectiveness of tutoring intervention programs and whether programs that use volunteer tutors are as effective as programs that use certified teachers (Wasik, 1997). This review will concentrate on the evaluation data of tutoring programs that use certified teachers and adult volunteers in some type of reading tutoring program. Next, there will be a review of the America Reads program and a section on meta-analysis of tutoring programs.

Programs That Used Certified Teachers

Two influential tutoring programs that have been implemented widely throughout the country are Reading Recovery and Success for All. Both programs employ certified teachers as tutors and claim substantial results from their programs (Wasik, 1997).

Reading Recovery is a short-term intervention program that targets children in the first grade with the lowest reading ability (Pinnell, 1995). Reading Recovery sessions focus on developing decoding skills, developing reading strategies, and metacognition of the reading process (Wasik & Slavin, 1993). Central to Reading Recovery philosophy is that children who have potential reading problems should be reached in their first year at school before the children become frustrated, get too far behind, and label themselves as failures (Pinnell, 1985). Reading Recovery advocates belief that by intervening early they can prevent the cycle leading to reading failure (Pinnell, Lyons & DeFord, 1999). This program targets children in first grade with the lowest reading ability and helps them develop independent reading strategies that they will be able to use alone in the future (Pinnell, 1995).

There is much debate in the educational literature on the effectiveness of the Reading Recovery program. The next section constitute a summary of numerous published studies that have examined the effectiveness of Reading Recovery.

One of the first studies of Reading Recovery was conducted by Mare Clay, the inventor of Reading Recovery. Clay (1985) conducted research on the effectiveness of Reading Recovery in New Zealand. The results from this study indicated substantial gains for Reading Recovery students as tested on the Clay Diagnostic Survey. Critics such as Nicholson (1989) criticize the findings because no evidence is given on transfer of skills to reading measures other than 'in-house' measures.

An independent evaluation of the Reading Recovery program was conducted by Center, Wheldall, Freeman, Outhred & McNaught (1995). The researchers utilized fifteen schools; ten schools serving as Reading Recovery schools (treatment) and five

schools serving as controls (i.e. they had no Reading Recovery programs in use), using a total of 109 students in the study. Students were pretested on the Clay Diagnostic Survey, The Burt Word Reading Test, Neale Analysis of Reading Ability, The Passage Reading Tests, The Word Attack Skills Test, and the Phonemic Awareness Test. The students were posttested at the conclusion of the intervention and also twelve months after the posttest.

Results indicated that Reading Recovery students significantly outperformed the low-progress control students on all tests of words in isolation and words in context. However, Reading Recovery students did not significantly outperform control students on metalinguistic measures such as phonemic awareness and the cloze. The authors note that this finding should take into consideration that the Reading Recovery group received intensive individualized instruction and the control group received less intensive instruction given in small groups (Center, Wheldall, Freeman, Outhred & McNaught, 1995).

The twelve month posttest evaluation employed a MANOVA and indicated no overall significant differences between Reading Recovery students and low-progress students at the control schools, however univariate analysis indicated that the Reading Recovery group still significantly outperformed the control group on book level. (In the Reading Recovery program books are graded by difficulty and given a grade level. Students are then tested on book level to determine how much progress they are making in reading achievement.) The authors indicate that this finding suggests that Reading Recovery students are unable to generalize the skills they learn to other types of reading (Center et al., 1995).

Pretest comparisons indicated students entering the program with poor metalinguistic skills were not as likely to be successfully discontinued from the program as students who entered the program with stronger metalinguistic skills (Center, Wheldall, Freeman, Outhred & McNaught, 1995). No other differences between the groups were apparent.

Overall, this study employed control groups at similar schools and used several types of measures to gauge the progress of the students. One caution should be noted when interpreting the results. At post-testing, the control group only contained sixteen students from the original control group. The authors do not state how many students were lost, but indicated that 22.6% of students were not used in posttest data due to absence or relocation (Center, Wheldall, Freeman, Outhred & McNaught, 1995). This loss of data could skew the results of the evaluation.

The Detroit Public schools conducted a five-year longitudinal study of Reading Recovery from 1993-1994 through 1997-1998. One hundred and thirty-five students participated in the study. Seventy-five students were in the experimental group that received Reading Recovery services in the first year for twelve to twenty weeks, depending upon the student; sixty students were in the comparison group that did not receive Reading Recovery services (Huggins, 1999). The Reading Recovery group improved throughout the five years of the study and sustained this improvement; however, their scores were consistently below the comparison group, in some years the results were significantly lower. The final evaluation recommended that if Reading Recovery were continued, it should be monitored closely.

There are some potential problems in the Detroit study: The author states in the abstract that “A total of 135 students were studied, 75 in the experimental group participating in Reading Recovery and 60 in a comparison group who were approximately at the same reading attainment level at the start of the study” (Huggins, 1999, abstract). However, in the article the author says of the control group, “They were students with no exposure to Reading Recovery tutoring, and were identified through classroom teachers as performing slightly above the children selected for Reading Recovery to the top of the class” (Huggins, 1999, p.1). Thus, the author’s statement leads us to believe that the groups were non-equivalent. If, however, the groups were equivalent, as stated in the abstract, and the two groups scored at the same level, perhaps the Reading Recovery program needs to identify a better method for selecting those at the bottom of the quartile. The bottom line appears to be that the Reading Recovery group consistently scored below the comparison group on reading achievement throughout the five years of the study (Huggins, 1999).

The Department of Defense in 1998, conducted a study to examine the effectiveness of Reading Recovery in 36 Department of Defense Schools involving 500 children. The results indicated that students in the Reading Recovery program, as tested by the TerraNova Multiple Assessment Test, significantly outperformed students who were not in the Reading Recovery program. This difference occurred regardless of ethnic group and social economic status. Results indicated that students across all ethnic groups who were discontinued from the program maintained their average reading achievement the following year. The report recommended that Reading Recovery be continued and expanded (Department of Defense, 1998).

The strongest aspect of this study is that it employed two control groups of comparable schools with students at equivalent academic levels. The weakness of the study is that not all students were included in the final analysis due to problems with the match between databases: data for 150 students were lost. The effect of the loss is unclear (Department of Defense, 1998).

The San Diego Public Schools conducted a five-year evaluation on the effectiveness of the Reading Recovery program in 38 schools in the San Diego School District (Fass-Holmes & Ciriza, 1996). Among the study's overarching questions were the following: Do students who successfully complete Reading Recovery maintain their average reading skills? What is the performance of students in grade two and above who were not discontinued from the program (Fass-Holmes & Ciriza, 1996)? Short-term treatment effects indicate that only 18% of students who were not discontinued had received all 60 required Reading Recovery lessons, thus indicating that the required sixty lessons were enough to prepare most struggling readers adequately to discontinue the program (Fass-Holmes & Ciriza, 1996).

Sustained results were shown for discontinued students. Seventy-five percent of the students who successfully completed the program (i.e., were discontinued) in the 1991-92 school year retained average reading skills in grades 2, 3, and 4. In the 1993-94 school year two-thirds of the students who successfully completed the program were rated as average readers in grade 2, and in 1994-95 less than fifty-percent of the students who were discontinued (i.e., successfully completed) the program were rated as average readers in grade two. This evaluation also indicated that sustained academic benefits were achieved for three ethnic groups, African-American, White and Hispanic.

Recommendations included strategies to increase student participation until they reached sixty lessons and for the school district to pilot a full implementation program at a limited number of sites (Fass-Holmes & Ciriza, 1996).

The San Diego Public Schools were expanding the Reading Recovery program during this evaluation and implemented some new restrictions that may have accounted for some of the differences in achievement from year to year. There was probably a decrease of discontinued students in 1994-1995 due to new restrictions stating that only the lowest 20% of students could participate in the program, whereas, in previous years participants were chosen from the lowest 30% of students (Fass-Holmes & Ciriza, 1996). However, the results of this study could be somewhat inflated (as most Reading Recovery studies) because it only considers students who had been successfully discontinued, thus increasing the probability of statistical significance by omitting data from children who were unable to complete the program.

In a two-year (1984-1986) longitudinal study of Reading Recovery, conducted at Ohio State, involving twelve schools and thirty-two teachers in Columbus, Ohio, children were selected randomly from the lowest 20% of their class and assigned to either control groups (not receiving tutoring) or the Reading Recovery group (Wasik & Slavin, 1993). The results of the first year indicated that the Reading Recovery group substantially outperformed the control group on most measures, with the exception of word recognition and letter identifications, which have ceiling effects.

The Reading Recovery students who were discontinued (succeeded) were performing at a level similar to their classmates and substantially better than the students who were the low achievers in the comparison group. Not-discontinued children

(children who did not succeed) were still performing lower than their classmates and substantially below the comparison group. Of the comparison group students (low group), 31% were retained, while only 22% of the not discontinued Reading Recovery group were retained. Overall, the authors report that Reading Recovery shows large improvement on text reading level and this improvement is maintained the following year. However, it must be noted that the authors state that the groups improved substantially, but do not indicate whether that improvement was significant (Wasik & Slavin, 1993).

Evaluations of the Reading Recovery program are confusing and conflicting, often achieving different conclusions, depending on the type of research design used. The problem with the research is that the methods used to evaluate the programs vary. Some of the research has documented individual case studies, some has compared local programs; other research has compared statewide programs using equivalent groups, and others use non-equivalent groups, in all making the overall program difficult to decipher.

Critics point out that Reading Recovery only claims to bring the lowest 20% of children up to the average for their class within 12 weeks or 60 lessons. The problem with this premise is that the class averages vary. The average for a low socioeconomic status class full of at-risk students who may be reading at or below the 50th percentile is different from the average for a class of students who are reading at the 80th percentile (Grossen, Coulter & Ruggles, 2000).

Other criticism notes that the persons who are responsible for the success of the program are the persons who collect and analyze the data. Analyses that have been conducted by independent sources do not indicate the same levels of student

improvement as the data from in-house sources (Grossen, Coulter & Ruggles, 2000). Still other critics suggest that the tutoring sessions specifically focus on tasks that are used to evaluate the program. Children are taught to decipher words in context with books that use predictable text rather than authentic texts. The children later are tested only on predictable texts. This gives an unfair advantage to the Reading Recovery students because of their repeated exposure to this type of task (Grossen, Coulter & Ruggles, 2000).

Another criticism has been raised over the exclusion of data on students who drop out of the program. It is estimated from 25% to 30 of the students entering Reading Recovery do not complete the program for various reasons (Shanahan & Barr, 1995). Some students are not included in the final analysis because they moved away from the school district, joined the program in the Spring semester or were put into special education classes. Some critics insist that this exclusion of data may skew the results substantially in favor of Reading Recovery gains (Center, Wheldall, Freeman, Outhred & McNaught, 1995; Shanahan & Barr, 1995; Topping, 1998). Grossen, Coulter & Ruggles (2000) go as far as to state that it is the policy of the Reading Recovery program to drop students who they do not believe will succeed and replace them with other students.

Critics of Reading Recovery also point out that it is an expensive intervention program to implement in the school system. Estimates for the cost of implementing Reading Recovery in a school vary. The Department of Defense (1998) estimated their Reading Recovery program cost \$400 per child. However, most studies report higher costs. Bracey (1995) reported costs for Reading Recovery around \$2,063 per student annually, and Fass-Holmes & Crizza (1996) reported costs of \$4,961 annually per child.

Research by Heibert (1994) indicates that achievement is only realized for the participants of Reading Recovery; overall school achievement is not improved by implementing Reading Recovery. Critics insinuate that for the same cost of implementing Reading Recovery in a school, class sizes could be reduced, teachers given additional training, and the literacy program restructured to enable more students to be served and affected (Grossen, Coulter & Ruggles, 2000).

In summary, Reading Recovery evaluations have reported mixed results. In an independent evaluation of Reading Recovery programs by Shanahan and Barr in 1995, examining all published evaluations and unpublished evaluations of Reading Recovery in the United States that used statistical data (means and standard deviations) for reporting, the results indicated that Reading Recovery does have positive effects on reading and literacy acquisition, although not always significant effects. "Many children leave the program with well-developed reading strategies, including phonemic awareness and knowledge of spelling. Although some initially low-achieving students will succeed without Reading Recovery, evidence indicates that many who otherwise would not succeed are able to do so as a result of this intervention" (Shanahan & Barr, 1995, p. 989). However, other researchers question the lasting benefit of Reading Recovery. Center, Wheldall, Freeman, Outhred & McNaught (1995) indicates that on posttest evaluations twelve months after participating in the Reading Recovery program, students show no significant overall reading gains, only in book levels, compared to a control group.

Success for All is another tutoring program that has received much publicity and press in previous years. The theoretical basis for this program is that all attempts to

improve success must be comprehensive. Intervention must begin early and high quality instruction and curriculum must be consistent throughout the grades. Every effort is made to avoid retention and remediation (Madden, Slavin, Karweit, Dolan & Wasik, 1993). Success for All focuses on children learning to read by reading stories that are meaningful, reading skills are taught in context, phonics taught systematically in context and metacognition of comprehension strategies are emphasized directly (Wasik & Slavin, 1993).

One of the differences between Success for All and Reading Recovery is that the tutoring in Success for All is intended to supplement regular classroom work whereas Reading Recovery materials are separate from classroom work. Also, in the Success for All program, the first graders receive tutoring for as long as they need it, even into the second grade if necessary, whereas Reading Recovery only offers tutoring to first grade students (Wasik & Slavin, 1993). Numerous studies have investigated the effects of Success for All.

Wasik & Slavin (1993) investigated the effects of Success for All on programs in two Baltimore schools. Each school used a similar comparison school, that did not have Success for All available, and students were matched on pretests consisting of standardized individual reading achievement scores.

In both Success for All schools that implemented curricular changes, tutoring and family support services, powerful effects were obtained. The first graders in the Success for All program scored +1.15 mean effect size in comparison to their matched counterparts in comparison schools. Second graders scored +.82 better than comparison students, and students in grade three who had been in the program since first grade scored

effect size of +1.16 (Wasik & Slavin, 1993). Grade one made the highest achievement on word attack and grade two results varied with some years reporting highest gains on word attack and other years on silent reading.

There are some limitations to this study. First, only one school was involved as a comparison, therefore effects from that specific schools could have an effect on the results. In addition, random assignment was not used to assign the comparison school or the students to groups, therefore, there could be some preexisting differences that could have contributed to the results (Wasik & Slavin, 1993).

Results of an evaluation of the Success for All program in Montreal, Quebec using 425 at-risk students from a high poverty area indicated that regular students in the treatment group (Success for All group) performed significantly better than students in a comparison group on word identification and word attack subtests of the Woodcock reading measures. In addition, special needs students in the treatment group scored significantly better than their counterparts in the comparison group (Chambers, Abrami, Massue & Morrison, 1998). “The results from five years of research indicate that the difference between the SFA and control students’ reading scores continues to grow with each successive year the students are in the program; thus, novelty does not explain the program’s apparent effectiveness” (Chambers, Abrami, Massue & Morrison, 1998, p. 360).

There are some factors, which could significantly affect the results of this study. The study was conducted in an experimental school that contained a high number of special-needs students, unlike the comparison schools. The authors also report that the

study was missing quite a bit of data and therefore the results should be interpreted with caution (Chambers, Abrami, Massue & Morrison, 1998).

A multi-site-replicated experiment of various Success for All schools across the United States was conducted. The study used twenty-two cohort first grade classes and only students who entered the Success for All program in first grade (Slavin, Karweit & Wasik, 1992). Effect sizes on the Woodcock and Durrell for each grade level were averaged. The research indicated that when results were averaged across all schools, first graders performed three months better than their matched control groups with mean effect size of +1.15. Second graders performed five months better and third graders seven months better than their matched control groups with a mean effect size of +.82. This indicates that the effects of Success for All grow with each year in the program (Slavin, Karweit & Wasik, 1992).

Various Success for All programs have been evaluated. Some Success for All programs report that implementing Success for All in the school helps to change at least two beliefs that have become popular: that parents of low income children do not care and that there is a segment of the population that cannot learn higher level skills (CRESPAR, 1997). The family support team helps to change these attitudes.

Critics of the program suggest that the children who are involved in the program may become more familiar with specific items that are being tested due to being introduced to them in tutoring and constantly reviewing the items. In addition, there are potential problems with the fidelity of implementation of the program. It is important to know if the programs at various sites faithfully follow the model of reading that the program is based on and how tutoring sessions are structured and implemented. This

brings up issues of reliability of data. If the instruction is different at different sites, what does the mean effect size indicate? The authors suggest that qualitative data be collected to ascertain the content and quality of tutoring sessions (Wasik & Slavin, 1993).

Programs That Use Adult Volunteers

Tutoring programs that use certified teachers are often too expensive to implement by school districts supported by a low tax base. Therefore, it is essential to understand what type of results can be expected from programs that use adult volunteers.

Ritter (2000) conducted an experimental study on the academic benefits of a tutoring intervention program delivered by adult volunteers to urban at-risk students. Three-hundred and eighty-five students were identified by their teachers as requiring additional instruction. From this pool, the researcher randomly chose 51% of students to receive tutoring and the remaining students were used as a control group. Analysis indicated no measurable academic benefits on grades or standardized tests for students who participated in the program.

Juel (1996) conducted a study using college student athletics to tutor at-risk urban elementary students in reading. Children were selected to participate in the program based on low achievement test scores and teacher recommendations. Children received tutoring twice a week for 45 minutes each session throughout the academic year. Using a pre-test and post-test comparison on the Iowa, results indicated that children's reading scores improved significantly in comparison to a non-tutored group. However, in comparison to a normative sample the intervention was not successful. Juel (1996) indicates that a comparison to a normative sample is critical to determine overall effectiveness of the intervention. A major limitation of this study is the small number of

tutees who were mostly male minority students. The tutees were also of minority status from an all-minority school located in a low socioeconomic area. This could limit the generalizability of the study.

Howard Street Tutoring program was developed as a reading-tutoring program to serve a poor community on the North side of Chicago. The main goal of the program was to provide supplemental instruction in the form of tutoring to second and third graders who were struggling in reading (Wasik, 1998).

There are several underlying assumptions of the program. One assumption is that the most valuable tutoring tool is letting children read, because children learn to read by reading. Therefore children were provided with interesting stories written in a natural language, i.e., not formal. The sessions were work-filled with good, but interesting instruction and phonics instruction was secondary (Morris, Shaw & Perney, 1990).

Morris, Shaw & Perney (1990) reported that evaluations from the Howard Street Tutoring Program in Chicago indicated that the program was successful at improving at-risk children's reading ability. Thirty percent of the children in the program improved a full year in reading. One-third of the children improved to the level of the non-tutored classmates. Less than 40% of the children showed progress in their reading skills but at a much slower rate than the other children in the program. The results were hard won. It took 50 hours per child of well-planned tutoring sessions to achieve one-half a year's difference in reading achievement (Morris, Shaw & Perney, 1990).

The program compared the pre-test and post-test results of the treatment group (receiving tutoring) to the pre and post-test results of the comparison group. The authors used gain scores to evaluate the progress. Two years' scores, 1986-1987 and 1987-1988,

were compared, and in both years, the tutored children outperformed the non-tutored children. In the 1986-1987 school year, the tutored group significantly outperformed the non-tutored group on basal words, spelling quality and basal passages at the .02 level. In the 1987-1988 school year, the tutored group significantly outperformed the comparison group on spelling correctness and basal passages at the .05 significance level (Morris, Shaw & Perney, 1990).

Although the Howard Street Tutoring Model originally was designed for an urban environment serving mostly minorities, it recently was implemented in a rural area in western North Carolina (Morris, 2001). In this study, three second-grade classroom teachers were asked to identify the five lowest-achieving readers. All fifteen students were pretested by the reading specialist, and the ten lowest scoring students were admitted to the program (Morris, 2001). The volunteer tutors were recruited from all types of occupations. They tutored the children two days a week for forty-five minute sessions. The children's progress was monitored carefully and their instructional level discussed with the tutors (Morris, 2001).

An evaluation of the program revealed that all children participating in the program increased in their reading ability. Three of the children's word recognition skills were below pre-primer levels and one rose to pre-primer and two to primer levels. After a year of tutoring seven out of the ten students could read a passage at second-grade level and five of the children could read at 2.2 level (Morris, 2001).

One of the biggest problems with the program is that there was a mismatch between the materials the tutors used and the materials used in the classroom. The teachers were required to use basal materials on that grade level regardless of the level of

the child, whereas the tutoring program used materials suitable for the child's ability. The authors of the study noted that if the reading program in the school is appropriate for that grade level, then the tutoring program should supplement the classroom material. In other words, the tutor should help the child understand material presented in class, rewrite and edit class work, and reinforce basic spelling patterns or phonics that are being taught in the classroom (Morris, Shaw & Perney, 1990). Juel (1996) explains that if the tutor uses materials different from those used in the classroom, the child must master two sets of materials and possibly two sets of strategies for decoding the material. This can be extremely difficult for the child who is having difficulty mastering one set of materials.

Rimm-Kaufman, Kagan and Byers (1999) conducted research on tutoring at-risk first grade children in reading in six public schools in Cambridge, Massachusetts. The researchers used a matched group (on SES, gender and ethnicity) for comparison and all students were randomly assigned to groups. Results indicated that children in the tutored group were able to identify significantly more letters than children in the control group. The tutored group also made higher gains on reading comprehension as measured by Clay's reading assessment, but the difference was not significant.

The authors noted that perhaps the young age mitigated the tutoring effects, emphasizing the importance of maturation and readiness. Teachers and tutors also reported in anecdotal accounts that they felt that tutoring had a calming effect on the children, perhaps changing their attitudes toward school and their ability to accept authority (Rimm-Kaufman, Kagan & Byers, 1999).

America Reads

The America Reads program is the latest government sponsored program. The America Reads program uses adult college students to tutor children in local schools who are at-risk for reading failure. The programs are implemented differently at the various sites but most programs reviewed for this study had tutoring sessions that started with reading familiar stories, using word card activities or phonemic awareness activities and introducing new materials.

Recently program results have been forthcoming on the America Reads program, the latest government sponsored reading intervention program that uses adult volunteers to tutor at-risk students. The evaluation data indicates mixed results with some programs finding significant differences in tutored students and some studies indicating no differences.

The America Reads Program at Old Dominion University was initiated in the fall of 1997. The program was evaluated in the 1998–1999 school year. A randomly selected matched, although not equivalent, comparison group from the same schools was chosen using a random numbers table. The comparison group consisted of children who were reading below average, average and above average. The tutored group consisted of 45 students and the comparison group had 47 students. Criterion-referenced tests in mathematics and communication, developed by the school district, were administered three times a year and used as the basis for comparison in this study (Gupta, Robinson & West, 2001).

The evaluation results indicated that the tutored group significantly outperformed the nontutored group at the .001 level on tests of communication skills.

The tutored group had made significant gains in reading. In other words, the gap between the two groups closed significantly. Another result was that the nontutored group significantly outperformed the America Reads Program tutored group (who only received tutoring in reading) on math achievement. Not only was the gap significant, it had increased since the beginning of the year. In other words, the gap in math skills between the two groups had increased significantly, thus indicating that the gain in reading was not a result of individualized attention only, but the content of the tutoring sessions (Gupta, Robinson & West, 2001).

One of the first articles published on the effectiveness of the America Reads Program was by Morrow, Woo & Radzin for the Website *Reading Online in 2000*, concerning the program at Rutgers University in New Jersey. A total of eighty students in grades K-3 were selected randomly from the school population consisting of 55% Hispanic, 35% African-American and 10% European Americans. Seventy-five percent of the tutored population was eligible for Title I services. The students were put into either the control or treatment group (Morrow & Woo, 2000). Each child received approximately 60 hours of tutoring. The evaluation yielded significantly better results on two of the four measures tested: story-retelling and probed comprehension. Most improvement was shown in kindergarten and first grade (Morrow & Woo, 2001).

In 1997-1998 school year students in Prince George County, Maryland were chosen randomly to receive America Reads tutoring or to be placed in a comparison group not receiving tutoring. In the Spring of 1998 students in the America Reads, program and those in the comparison group took the California Test of Basic Skills and

their results were compared. The study found no significant differences in students' reading comprehension (Dromsky & Gambrell, 2001).

Another study involving Prince George County students was conducted from September to December 1998. The America Reads tutors administered tutees several informal measures, including letter identification, dictation tasks, writing and word recognition. These assessments served as a guide to tutors during tutoring sessions and as a pretest score for evaluation. The post-test analysis using a t-test of paired samples indicated that there was a statistically significant difference at the .05 level on high-frequency word recognition and in student's ability to identify letters (Dromsky & Gambrell, 2001).

Limitations of the Dromsky & Gambrell studies were noted. In the 1997-1998 study conducted by the Office of Research, Evaluation and Accountability (OREA), the children were selected randomly from the school's second grade population without regard to achievement scores or ability. Therefore, there were some children who participated in the program who did not need reading tutoring and some children in the comparison group who needed tutoring and did not receive it. The study did not report pre-test scores, so it was impossible to determine if the two groups were equivalent at the beginning of the study. In addition, 49 out of 70 tutees received less than ten sessions of tutoring. The authors indicated that those tutees who received 16 to 45 sessions scored higher on the test, approaching approximate statistical significance (Dromsky & Gambrell, 2001). In the second study conducted in the fall of 1998, the author does not indicate what type of informal measures were used and if tutors were given adequate training to administer these tests. Unfortunately, this study did not employ the use of a

comparison group, so it is difficult to determine if the gains were due to maturation, classroom instruction, or other programs, such as Title I, that were in use in the school.

The University of North Carolina at Chapel Hill conducted a study on the America Reads Tutoring Program in the 1997-1998 school year using 39 undergraduate work-study students tutoring 144 students from first through third grades at local participating schools. A study using a within-program control group indicated that children involved in the tutoring program made significant gains, averaging 1.19 grade levels for six months of tutoring. Evaluation data suggests that children made the most gains in their ability to read words, and most of the growth that occurred was in the second half of the program (Fitzgerald, 2001).

Interpretation of this study was limited insofar as it did not describe how tutees were chosen for the program, what grade levels participated, what tests were used to gauge reading levels, who the comparison groups consisted of, nor whether the two groups were equivalent or non-equivalent. More detail is required for complete understanding of this study.

The America Reads program at South Florida University also began in 1997 and is one of the largest America Reads program at this time. The program employed approximately 220 work study tutors from various colleges and universities in the area and they tutor at 43 sites (Young, et al., 2001). Evaluation of the South Florida University program was conducted for the 1997-1998 and 1998-1999 school years, involving 1,800 children at 43 sites. In both years, the evaluators found significant improvements for tutored students on concepts of words in print phonemic awareness, letter production, letter recognition and story reading (Young, et al., 2001). There were some limitations to

this study. A control group was not used and the measures employed to gauge achievement were not standardized (Young, et. al, 2001).

Summary of the America Reads Tutoring Programs

All the America Reads programs that were reviewed reported that their tutors received training by reading specialists and were monitored at some point during the semester and provided with ongoing support. The programs reported that their tutoring sessions consisted of rereading familiar work, introducing new material, word study activities and writing activities.

The studies reported to this date and reviewed in this research indicate that the America Reads programs are improving tutees' reading abilities. Rutgers University, the University of North Carolina at Chapel Hill, and Old Dominion University reported statistical significance with tutees when using a comparison group. The University of South Florida program also found significant results on letter production, letter recognition, concepts of words in print, and story retelling when employing a within-group measure. The University of Maryland at College Park obtained significant results on a within-group comparison on informal measures of high frequency word and letter identification. However, the Prince George School District evaluated the University of Maryland at College Park's America Reads Tutors and found no significant differences in tutee's reading achievement. Most America Reads programs reported participants involved in the program, including teachers, administrators, and tutors, all rated the programs highly and recommended continuation. Most reports published so far indicate that America Reads Programs are having a significant effect on student's reading achievement.

Meta-analysis of Tutoring Programs

In addition to the preceding studies various meta-analysis on tutoring programs have been conducted. A meta-analysis of sixty-five independent tutoring programs at schools throughout the country indicates that tutoring does have positive effects on the participants in the programs (Cohen, Kulik & Kulik, 1982). All programs included in this analysis employed control groups, reported quantitative measures and were free from major methodological flaws. Out of the sixty-five studies reviewed 52 reported on academic achievement. Out of these fifty-two studies, forty-five reported that tutored students performed better than the control group, however only twenty studies were significant. Nineteen of the twenty studies reported that tutored students had made significantly higher gains (Cohen, Kulik & Kulik, 1982).

Although this metaanalysis encompassed many tutoring programs and indicated statistical significance, a gain of .29 effect size translates into a relatively small gain of educational value. Determining meaningful effect sizes is a judgment call. Professionals in the field of education usually specify that an effect size of .29 to be a relatively small educational gain (Stevens, 1996).

In 1984, Bloom conducted a meta-analysis of studies on tutoring results and found that the average student who received one-on-one tutoring scores approximately two standard deviations above the average student who did not receive tutoring services (Topping, 1998).

In a meta-analysis of sixty-eight Americorps tutoring programs that use adult volunteers, results indicate that tutored students achieved statistically significant higher gains on reading measures than expected for the typical child at the same grade level.

Gains were made on reading skills and comprehension with higher gains on word attack and letter word identification as measured by the Woodcock-Johnson Reading Test (Moss, Swartz, Obeidahhad, & Green, 2001).

Overall, this was a detailed meta-analysis giving the reader a great deal of information on numerous aspects of tutoring, not just on achievement. One possible limitation to this study was the use of within group pretest and posttest scores. The tutored group was compared to national norms of how students were expected to perform by the end of the school year. A comparison group would have allowed for a detailed analysis of students who were similar to the tutored population.

Summary of Results

The tutoring programs reviewed in this study varied somewhat in their philosophy and implementation. Reading Recovery focused on the lowest achieving first graders and only offered children the opportunity to participate in the program for one year. The program was based on the idea that at-risk children should be reached early before they experience reading difficulties and label themselves as failures. Reading Recovery focused on decoding skills, monitoring comprehension and developing reading strategies. Success for All also was based on the idea that early, intensive intervention was necessary to prevent failure and referrals to special education classes. Success For All emphasizes learning to read by reading meaningful stories, learning phonics in context and developing metacognition of comprehension strategies. Unlike Reading Recovery, Success for All tutees could stay in the program for as many years as they needed additional intervention. Howard Street Tutoring focused on second and third graders because the program believed that the fall of first grade was too early to detect

children who had reading problems. Howard Street believed that children learn to read by reading; therefore, they focused on reading many stories. Most of the America Reads programs catered to K-3 students who were selected as being most at-risk for reading failure. The programs varied, but most of the tutoring sessions followed the format of rereading previously introduced books, word study activities and phonemic awareness activities and introducing new books.

All the reviewed tutoring programs focused primarily on teaching students specific skills related to reading and engaging in reading during tutoring sessions. The Success for All program included a whole-school approach and tried to implement changes in school curriculum and educate and involve parents in their child's education.

In summary, most of the tutoring programs reviewed in this study indicated some type of tutee improvement, although not all improvement was significant. Many times this improvement served to close the gap between the tutoring participants and the comparison group. It is difficult to compare the effects of programs that employ certified teachers and programs that use volunteers due to the differences in evaluation measures used and the amount and detail of data reported. Out of the twenty studies examined, eleven reported significant improvement of tutees reading achievement (Chambers, 1998; Department of Defense, 1998; Fitzgerald, 2001; Morris, Shaw & Perney, 1990; Morrow & Woo, 2000; Rimm-Kaufman, 1999; Slavin, Madden, Karweit, Dolan & Wasik, 1992; Wasik & Slavin, 1993) and two studies indicated gains in reading achievement, but did not report on significance (Fass-Holmes & Ciriza, 1996; Wasik & Slavin, 1993). Two studies reported that students had made gains, but the gains were not statistically significant when measured against a normed or control group (Dromsky &

Gambrell, 20001; Huggins, 1999). Juel (1996) reported significance compared to a control group but not compared to a normed group. Only one study reported no measurable gains (Ritter, 2000). All three metaanalysis reported significant tutee gains (Bloom, 1984; Cohen & Kulik, 1982; Moss, Swartz, Obeidahhad & Greene, 2001).

In this review of the literature, Reading Recovery programs reported various results. Center, Wheldall, Freeman, Outhred & McNaught (1995) reported significant tutee gains in reading comprehension, word attack and word identification. The review of the Detroit Public Schools reported no significant gains (Huggins, 1999). The review of the San Diego Public Schools indicated that 55% successfully completed the program, but it does not indicate gains using a comparison group (Fass, et. al., 1996). The Department of Defense study indicated that tutees significantly outperformed a comparison group on both reading and language arts tests (Department of Defense, 1998). Shanahan & Barr (1995) in a review of five Reading Recovery programs reported that students made significant gains on letter names and phonemes. Pinnell, Lyons, Deford, Bruk & Seltzer (1994) reported significant gains on dictation, reading level and on the Woodcock.

Examining sustained gains, The Department of Defense (1998), Fass-Homes & Ciriza (1996), and Wasik & Slavin (1993) reported that Reading Recovery participants still have statistically significantly gains on longitudinal evaluations. Center, Wheldall, Freeman, Outhred & McNaught (1995) reported that gains remain on book level reading but no overall gains are apparent between Reading Recovery participants and a control group on a longitudinal follow-up.

In this review of Reading Recovery it appears that the program does improve participants' reading achievement, however, the amount of improvement is not always significant and most studies report that the results are not sustained at 12 month posttest evaluations. Critics claim that the program's policy of removing unsuccessful students from the program and not using the evaluation data on students who did not successfully complete the program skew the evaluation results in favor of the Reading Recovery program. Researchers also question the cost effectiveness of the program in comparison to other less expensive interventions.

All three Success for All programs reviewed in this study reported significant tutee gains, however, the gains were not necessarily in the same type of reading skills. Morrison (1998) reports significant gains on word identification and word attack, however, Wasik & Slavin (1993) in a review of Success for All report that univariate analysis indicated consistent gains on word attack but not on letter identification and word identification.

The tutoring programs that used adult-volunteers (non-certified tutors) reported various gains. Howard Street Tutoring reported tutees significantly outperformed the comparison group on basal words, spelling and basal passages. Rimm-Kaufman, Kagan & Byers (1999) reported that tutees performed significantly better on letter identification but not on reading comprehension. The America Reads programs reported significance on story-retelling and probed comprehension at the College Park site. The Office of Research, Evaluation and Accountability (OREA) reported no significant difference in their America Reads program. The University of North Carolina indicated that children made significant gains averaging 1.19 grade levels for a within-group design and most of

the tutee's progress was in word recognition. The South Florida program did not use a control group, but reported significant improvement on story reading, letter identification, and phonemic awareness. The Old Dominion study indicated a significant improvement in reading as gauged by a criterion-referenced test. For a more detailed breakdown of program results see Table 1 on page 57.

Table 1
Summary Of Tutoring Intervention Evaluations

Program	Number	Selection	Time	Test	Effect of Tutoring Intervention
Reading Recovery Center, et al. 1995	15 schools 10 RR 5 control	Children at greatest risk of reading failure		Clay Diag Neale Analysis Burt Word Passage Read. Word Attack Phonemic Aw. pre/post/12 mo.	-Reading Recovery students significantly outperformed control students on all tests of words in isolation and words in context. -Reading Recovery students did not significantly outperform control on all metalinguistic measures. -Reading Recovery significant differences still apparent at 15 weeks posttest. -At 12 mo. posttest A MANOVA indicated no overall significant differences between Reading Recovery students and control. However, univariate analysis indicated Reading Recovery students significantly outperform control on book level.
Detroit PS 5- year Long. Huggins (1999)	235 Students 75 Exper. 60 Comp.	Lowest 20- 30% of 1 st graders	60+ lesson	Calif. Ach. Test Metropol. Michigan Ach. Test	-RR Group improved throughout the five years, however scores still significantly below control group -Improvement sustained
Department Of Defense (1998)	36 Schools 500 Children.	Lowest 20% In first grade	30 minute daily pullout	Terranova Multiple Assessment	-Tutored students sig. outperformed non-tutored(all ethnic groups) on both Reading and Language Arts subtest -Results maintained following year.

San Diego PS 5 years Evaluation Fass, et. al. (1996)	38 Schools	Lowest 8 1 st graders at every school	30 minute daily pullout 12-20 weeks	Observat. Survey Inst.	-55% successfully completed the program (White, Hispanic, African Americans) -Rated as average readers the following year -Indicated sustained academic benefits
Ohio State 2 yrs Wasik & Slavin (1993)	12 Schools 32 Teachers	Random lowest 20% control or RR	60 + lesson		-1 st year RR substantially out perform control except on word recognition and letter ID (Which have ceiling effects) large improvement -Discontinued students perform at a level similar to whole class
Success For All					
2Baltimore Schools (Wasik & Slavin (1993)	-----	Used Comparison Schools students matched on reading score	Daily 20 min.	Woodcock Durrell	-1 st graders + 1.15 mean effect size in comparison to their matched counter parts. 2 nd grader+.82 effect size. - Student who received two years of tutoring + 1.16 mean effect size. -Multivariate analysis always significant but univariate analysis indicate 1 st grade positive on word attack consistently but not always on letter I.D. and word I.D.
Montreal Chambers, et al. (1998)	425 at-risk	Matched with Control group	Daily 20 min.	Woodcock	-Tutored students scored significantly higher than comparison on word ID and word attack.
Multi-site Slavin, et al., (1992)	22 cohort 1 st grade classes	Matched control group	Daily 20 min.	Woodcock Durrell	-Tutored 1 st graders performed 3 months better than control group=effect size +.31 -Tutored 2 nd graders scored 5 months better than control group = +.53 -Tutored 3 rd graders scored 7 months better than control group Significant at all levels

Adult Volunteers									
Ritter (2000)	385		Random selection of 51% /control group used				Grades Standard Tests		No measurable academic benefits
Juel (1996)	Lowest 30 1 st graders 3 spec. ed.	2 X a week 45 min	1 group tutored 1 non-equiv.	Total Of 50 hrs	Pre/post Basals	Metrop. Readiness Test/Iowa			-Reading scores improved significantly on pre/post test -However, not significant compared to normative sample
Morris, Shaw & Perney (1990)	Lowest Quartile 20 children per year		Tutored/close Match comparison group						-30% improved 1 year in reading -Under 40% showed progress but at a slower rate -Significant on basal words + basal passages
Rimm-Kaufman (1999)	6 public schools		Random assign/match Groups				Clays Reading assessment		Tutored group significantly outperformed control on letters. Gains on comprehension but not significant
America Reads									
Prince George County Dromsky & Gambrell (2001)	2 nd grade from 1 school		Random/Control				CTBS		No significant differences
Gupta, Robinson & West (2001)	2 schools 45 tutored 47 control 1 st - 5 th	40 min. varied X per	Comparison of students within class				School district developed test		-Tutored group significantly outperformed comparison group at the .001 level on tests of communication skills.

	grade	Within program control	week			
U of NC Fitzgerald (2001)	144 students K-3	Within program control	2 X 40 min.			Within program control Significant gains 1.19 grade levels for 6 months of tutoring
Morrow & Woo (2000)	80 K-3	Control/ Treatment	60 hours	Story retelling Probed comp. & writing		-Significant on story-retelling and probed comprehension -Writing assessment not significant
Meta-Analysis Cohen & Kulik (1982)	65 tutoring programs					-38 studies reported on reading achievement -33 reported gains in tutee achievement with 10 studies statistically significant
Bloom (1984)						Tutees significant higher gains on reading measures
Moss, et. Al. (2001)	68 Americorp Programs	Treatment group only Comparison to normed standards	3x a week 1.15 hours per week	Woodcock pre/post		-Significant gains in reading comprehension -Highest gains in word attack & letter I.D.

Effect of Tutor Training

One area of the educational literature that is unclear is the amount of training that non-professional tutors require to be effective (Wasik, 1998). Research indicates that most successful tutoring programs incorporate some type of training for tutors (Corporation for National Service, 1993; Moss, Swartz, Obeidahhad & Greene, 2001; Pinnell & Fountas, 1997; Wasik, 1998). There are no fixed guidelines for the amount of training tutors should receive before they begin tutoring; however ten to twelve hours of total training should help tutors to meet the challenges they will face (Morrow, Woo & Radzin, 2000). The amount of training that tutors receive varies from program to program. Certified teachers are used as tutors in the Reading Recovery program (Bozone, 1994; Huggins, 1999; Pinnell, 1985; Pinnell, Lyons & DeFord, 1999; Sensebaugh, 1988) and Success for All (Chambers, 1998; CRESTAR, 1997; Madden, Slavin, Karweit, Dolan & Wasik, 1993; Pikulski, 1994). Reading Recovery teachers are also trained comprehensively and observed for one year (Pinnell, Fried & Estice, 1990; Sensebaugh, 1988). Other tutoring interventions, such as Howard Street Tutoring, uses volunteers from the community and offers on the job training with an on-site supervisor (Morris, 1993). The America Reads Programs have varied tutor training with some offering 10-12 hours of initial training (Morrow, Woo & Radzin, 2000) and others offering 3-4 hours initial training with other training workshops provided throughout the academic year (Gupta, Robinson & West, 2001).

There is little research available to substantiate claims about the amount of training required for tutors to be effective with students. Plantec, Paramore and Hospodar (1972) conducted a study on the effects of Project Upswing, a volunteer

tutoring program sponsored by the Office of Education. The study examined the achievement of first graders who were tutored by trained tutors, untrained tutors and a control group that received no tutoring. The results indicated that tutored students made greater gains than the control group, however, there were no significant differences between the reading achievement of students tutored by trained tutors versus those tutored by untrained tutors.

More recently, Fitzgerald (2001a) conducted research on the America Reads program at Chapel Hill, North Carolina. She compared the academic achievement of two tutees; one tutee whose tutor was supervised and trained by an experienced reading specialist and the other tutee whose tutor was supervised and trained by an inexperienced trainer. Evaluation data on the tutees at the end of the year revealed both tutees were reading books at the same level with no significant differences in their reading achievement levels.

However, research by the AmeriCorps program found a positive relationship between tutor training and tutee achievement. AmeriCorps examined 869, 1st – 3rd grade children in 68 Americorps Tutoring Programs using a multiple regression analysis to investigate the relationship between student's reading achievement and tutoring practices. They found that tutor training was related significantly to student achievement (Moss, Swartz, Obeidahhah, Greene, 2001).

In another study, Elbaum, Vaughn, Hughes & Moody (2000) conducted a meta-analysis on 31 separate tutoring intervention programs. Their findings indicate that tutors who had received training were highly effective in improving students' reading achievement (Elbaum, Vaughn, Hughes & Moody, 2000).

Effect of Tutor's Strategies

Another question that appears inconclusive in the literature is the effect of tutor strategies on tutee reading achievement. Once the tutor receives training, does s/he implement the strategies they were taught and do these strategies make a difference in tutee achievement? In a review of the literature very few studies were found that addressed this issue. First, this section will review effective reading strategies as reported by educational literature and then report the studies that pertain to this issue.

There appears to be widespread agreement in the educational literature that successful readers employ a variety of reading strategies and monitor their comprehension (Pinnell, 1989; Richardson & Morgan, 2000; Ruzzo, 1999; Vacca, Vacca & Gove, 1995). Successful readers search for clues in the text, draw meaning from prior experiences (Vacca, Vacca & Gove, 1995) and use their knowledge of the language structure (Pinnell, 1989). In a study that examined 25 years of the Benchmark Tutoring Program, Gaskins (1998) found significantly higher reading achievement scores for students who had received several years of strategy instruction in comparison to students who had not received instruction.

To enable at-risk readers to develop adequate reading skills tutors must be aware of effective strategies successful readers use. Gee & Rakow (1991) conducted a survey in which thirty-seven published reading professors were asked which strategies were the most important for at-risk readers to develop. Results from the survey indicated that setting a purpose for reading, activating prior knowledge, making predictions, retelling the story, and discussing the reading afterwards were among the most crucial strategies to improve reading achievement.

Other components of successful reading instruction includes; instruction in phonemic awareness; appropriate level reading materials (Cunningham, 1990); repeated readings to develop fluency and confidence (Bracey, 1995; Rasinski, 1990); awareness of the letter sound correspondence when writing (Bracey, 1995; Cunningham, 1990; Juel, 1996); use of a variety of reading strategies (Cunningham, 1990; Wasik & Slavin, 1993); and the use of repetitive words and word families (Juel, 1996). Successful reading instruction also emphasizes improving student's comprehension. The educational literature has a plethora of techniques and strategies for educators to use to improve student comprehension. These techniques include; graphic organizers, guided reading procedures, study guides and effective questioning techniques (Richardson & Morgan, 2000).

There is a sparse amount of research on the types of strategies tutors implement in tutoring sessions and the resulting achievement of the tutees. Juel (1996) analyzed transcripts of tutoring sessions and found that tutors in successful tutoring dyads employed more variety in strategies and scaffolding techniques and comprehensively modeled the reading and writing processes. In reviewing this study, Wasik & Slavin (1993) report that less successful tutors spent more time recognizing letters and words as separate skills and less time engaging reading for meaning.

Fitzgerald (2001a) conducted a study comparing the differences in strategies implemented in tutoring sessions by a tutor that was trained, advised and monitored by an experienced reading specialists and a tutor that was guided by an inexperienced trainer (who had no experience in the field of education). In examining data from transcripts, that the tutor who had been trained by an experienced reading specialist had become

more proficient at questioning techniques and used more variety in decoding strategies. However Fitzgerald concluded that there were no significant differences between techniques and strategies tutors used. Neither tutor engaged in guided reading, scaffolding techniques nor post-reading discussions.

Effects of Tutoring Programs on Students' Attitudes

Two of the questions investigated in this study are the effect of America Reads tutoring program on reading attitudes and the relationship between attitude and reading achievement. In reviewing the literature research indicated conflicting and inconclusive results.

Many researchers studying reading have hypothesized that there is a causal relationship between attitude and reading achievement (Quinn & Jadav, 1987). In reviewing past research on reading there appears to be disagreement in the literature on the relationship between attitudes and reading achievement.

In 1982, Cohen, Kulik & Kulik conducted a meta analysis of 65 tutoring programs. Eight studies reported on students' attitude toward the tutored subject. All eight studies reported improved attitude toward subject matter after tutoring intervention, however only one study had a large enough effect to be considered statistically significant.

Quinn & Jadav (1987) examined previous research on attitudes and reading achievement conducted by Askov & Fishbach, 1973; Deck and Barnette, 1976; Nielson, 1978 & Roettger, 1979; Szymczuk & Millard, 1979. The results of these studies suggest “. . . that the correlation between reading attitude and achievement is most often positive, but often demonstrating 10% or less common variance between these variables” (p.367).

In an effort to obtain more information, Quinn & Jadav (1987) conducted a study to explore the possible causal relationship between students reading achievement and attitude. The study employed twenty-one fifth grade classes and twenty-five second-grade classes consisting of a total of 1,758 students. Attitudes were measured at three points in time, October, December and May. A cross-lagged panel analysis indicated that there was no significant relationship between attitudes and reading achievement.

A study was conducted by Swanson (1984) using ninety-six elementary students. A self-report inventory on reading attitudes was administered and correlated with students' scores on the reading component of the Metropolitan Achievement Test. A non-significant relationship was found. The researcher hypothesized that the lack of association "could be due to the lack of well-formulated attitudes in young children" (Swanson, 1984, p.170). Another plausible explanation is that young children may have a lack of prerequisite skills to complete this type of inventory (Ball, 1971 in Swanson, 1984).

Another possible reason for the lack of relationship between attitude and achievement could be the format of the survey used. Smith and Ryan (1997) conducted a study using two types of surveys to ascertain student's reading achievement. One survey employed Likert-type scale ratings and the other survey used the cartoon character Garfield. The researchers found a main effect due to the type of survey format; otherwise, there was a significant interaction between reading achievement and format. The Garfield Survey produced higher attitudes in above-average students and average-students than in below-average students. The Likert-type scale produced higher ratings than the Garfield scale in average and below average students (Smith & Ryan, 1997).

However, studies on children receiving some type of reading intervention indicate that students' attitudes toward reading improve significantly after participation in the program. A study conducted in Kansas used 156 students with forty-five students in an experimental group and one hundred eleven in a control group. This study examined students' attitude after participation in a reading program and other variables. The study found no significant relationship between attitude and reading achievement. However, the study did find a significant relationship between attitude and students participation in the reading program. Students who received tutoring had more positive attitudes toward reading than students who did not receive tutoring (Rains, 1993).

Thames & Reeves-Kazelskis (1992) conducted a study to explore the effects of individualized reading instruction on students' attitudes. They used sixty-three elementary students, thirty-three in the treatment group and thirty in the control group. The students in the treatment group received instruction two times a week for twelve weeks. Results indicated significant improvement in female students' attitude in the treatment group as compared with the control group. The researcher was unsure why only female student's attitudes were improved significantly and indicated this as an area for future research (Thames & Reeves-Kazelskis, 1992).

Another study investigated students' attitude toward reading before and after participation in a reading program using fifty-eight elementary students. This study found that the students who participated in the program scored significantly higher on attitude than students who did not participate in the program. The study also indicated that females in sixth grade scored significantly higher than male students on attitude toward reading (Potter, 1996).

In summary, the educational literature is controversial on the relationship between reading attitude and reading achievement. Of the research reviewed, one meta-analysis indicated a positive correlation between reading attitude and reading achievement and one study reported a significant relationship between reading attitude and reading achievement. However, two meta-analyses using 1,854 students indicated no significant findings. On the other hand, research investigating students attitudes after participating in a tutoring intervention program indicated those students' reading attitudes improve after receiving some type of intervention.

Criticism of Tutoring Programs

The chief complaint about tutoring is the cost (Wasik & Slavin, 1993). Implementing tutoring programs such as Reading Recovery can cost from \$3,200 to \$4,000 per student (Shannon & Barr, 1995). To counter this complaint, Wasik & Slavin (1993) state; “. . . if in fact early intervention can prevent children from experiencing failure and can help them get off to a successful start in school, the use of this expensive intervention may be cost effective in the long run” (p.179).

Other criticisms of tutoring programs note that children miss whatever else is going on in the classroom when they are pulled out for tutoring (Allington, 2001). The transition time between the tutoring session and return to class is wasted time. Often the tutoring session involves entirely different material from what is covered in class, therefore making it more difficult for the children because they have to comprehend class work and tutoring work, conquering two sets of words, sentences, books or material that may not be overlapping (Morris, 1993). Sometimes the tutoring session involves different methodology that the children are not accustomed to, causing frustration and

adding to their difficulties. The children may feel like failures because they require outside help, thus distinguishing themselves from the other children. The classroom teacher may also feel like a failure or abdicate responsibility for the child's learning (Juel, 1996).

Still other critics propose that most abilities, including reading, follow the normal distribution curve, positing that humans have differing amounts of ability for different skills and indicating that not all children will be able to meet the goal of reading well and independently by the end of grade three. Regardless of the intervention used, the results will be analyzed in terms of the average of that grade level, consequently there will always be some children above that average and some below (Fry, 1997).

Assessment of Literacy Deficits

Standardized reading assessment has become a popular tool to gauge reading achievement. Confusion and debate abound in the educational literature over the goals of reading assessment and the types of assessments that should be used to measure these goals (Farr, 1992).

Over the past few decades disappointment in America's schoolchildren's reading achievement has led to criticism of the American school system (Berlinger & Biddle, 1995). This criticism has led to greater demand from the public and from governmental agencies for increased accountability (Farr, 1992).

Accountability demands from the various stakeholders has led to an increase in standardized testing, norm-referenced testing, and state minimum competency requirement tests (Farr, 1992). Students currently are engulfed in a testing craze consisting of criterion-referenced tests, nationally normed tests, state-mandated tests,

basal tests, teacher made tests and school district developed tests (Valenica & Pearson, 1987).

This testing craze has created an environment of high stakes testing in which rewards and punishments are given for test results. This results in teachers teaching to the test. Students' test scores increase, without a corresponding increase in actual knowledge or improvement in conceptual understanding (Shepard, 2000).

In an effort to improve standardized tests and to create an alternative, various assessment measures have been developed in response to accountability demands. Educators also have been trying to create reading assessment measures more closely aligned with authentic experiences (Farr, 1992). This has created a proliferation of new informal and formal assessments. These new assessment often assess the reader's prior knowledge, interests and metacognition (Farr, 1992). Reading theory recommends using reading assessment that is aligned closely with what occurs in real-life situations. Educators have developed authentic, performance, observation, portfolio and integrated assessment in an attempt to create more realistic assessment (Farr, 1992).

Performance assessment is the application of strategies and knowledge that a student learns and applies in a meaningful situation (Farr & Tone, 1994). Observational assessment enables teachers to measure student progress in an authentic situation, however, teachers need to be trained in a systematic way to look for certain behaviors (Farr, 1992). Portfolios assessment consists of the teacher and student collecting samples of the students' work in a folder called a portfolio. This allows for assessment of actual classroom work (Fair & Tone, 1994). Integrated assessment examines the thinking, writing and reading process in an integrated context.

Farr (1992) insists that the focus of assessment should be on the purpose of assessment and whether the current tests in use serves that purpose. “The bottom line in selecting and using any assessment should be whether it helps students” (Farr, 1992, p.8).

In this study the researcher used standardized tests for assessment purposes instead of extensive teacher observation and performance assessment as some researchers recommend. There were several reasons for this; (a) the tests that were used for assessment were already in place in the school, and (b) the students are currently “excessively tested” and the researcher did not want to add another test to their agenda, and (c) using standardized tests appears to be acceptable since most of the studies the researcher reviewed used some type of standardized tests for measurements. Numerous tests were used to give a wide array of data on the various reading components. The SOL (Standards of Learning) yields data on realistic reading passages using a variety of formats for questions. The PALS (Phonemic Awareness Linguistic Survey) measures various phonemic awareness skills and the STAR furnishes information on reading level compared to national standards. Other researchers, Center Wheldall, Outhred, McNaught (1995) and Fitzgerald (2001b) have also employed numerous achievement tests to gauge reading.

Factors that Affect Reading Performance

A substantial amount of research has accumulated in the educational literature about the causes of and possible solutions to student underachievement in reading. The literature repeatedly indicates that there are various learner, social and educational factors that affect reading performance (Elley, 1992; Snow, Burns & Griffin, 1998).

Individual factors

Individual factors such as; physical development and language development may limit the learners' potential. Reading problems can develop from numerous conditions such as; nutritional deficiencies, hearing impairment, cognitive deficiencies, attention disorders and early language delays (ELD).

Many children from lower socioeconomic families have poor diets. These diets result in poor nutrition and can have detrimental effects on reading achievement. Problems such as excess sugar, protein deficiency and inadequate calorie intake can lead to diminished learning (Norwood, 1984). Malnutrition produces a lack of exploratory behavior, listlessness, and apathy (Tseng, Mellon, Bammer, 1980).

Children who experience chronic ear infections, ear surgeries or some type of hearing impairment are at a higher risk for experiencing reading difficulties. Snow, Burns & Griffin (1998) reviewed a study by Wallace and Hooper that indicated there is a relationship between chronic ear infections and reading achievement.

Children who have cognitive deficiencies usually experience reading difficulties and often develop very limited reading ability. Cognitive deficiencies can be caused by fetal alcohol syndrome, severe nutritional deficiency and other conditions that occur during prenatal or early childhood (Snow, Burns & Griffin, 1998).

Reading disability often occurs when children have attention deficit disorder. Although the two disabilities are separate, they often co-occur and require special intervention (Snow, Burns & Griffin, 1998). Ruschko (1996) recommended that students suffering from this type of problem should be taught individually or in small groups and given material that they are able to comprehend.

Children who experience language development delays in the preschool years often become poor readers later in school. Scarborough & Dobrich (1990) analyzed students who were diagnosed with early language delays in comparison to a control group of students. The researchers found that the students who were early language delayed were significantly poorer readers than the control group at the end of grade two. Deficiencies in lexical semantics, phonology and syntax resulted in almost normal language proficiency at age five, but children still developed severe reading disabilities (Scarborough & Dobrich, 1990).

Educational Factors Associated with Reading Achievement

There are numerous educational variables that affect students' reading achievement. These variables can be divided into school factors, teacher factors and classroom factors.

School factors play an important role in the child's ability to learn. Children who attend schools with high numbers of, minority students, limited English proficient speakers, low socioeconomic students, and students with behavioral problems often have lower reading achievement.

Many of the schools that serve low socioeconomic and high minority populations are not equipped adequately. Some schools have computer class with no computers and chemistry class without any microscopes or lab equipment. Reading books are often outdated and in short supply (Kozol, 1991). Many of these schools do not use their libraries and the other few resources to their fullest potential, making them ineffective (Snow, Burns & Griffin, 1998).

Tiddie and Stringfield (1993) conducted a study examining schools with exceptionally low achievement and found that these schools spent less time on academic work and were not academically focused. These schools often began school late, took more transition time between classes and ended school earlier. Students spent less time on task and were given less academically challenging material. Schools with lower reading achievement spend less time devoted to reading and reading-related activities (Taylor, Pearson, Clark & Walpole, 2000).

Teachers at schools that Tiddie and Stringfield (1993) examined held low academic expectations of their students. This has been documented by other researchers, Firestone, 1989; Haberman, 1995; McLedo, 1996; McMillian & Reed, 1993. Many of teachers in low achieving schools give less positive reinforcement to their students and have more discipline problems. These teachers also spend more time working in isolation and do not cover all of the curriculum (Snow, Burns & Griffin, 1998).

Numerous classrooms in schools with low academic achievement are characterized by slow-paced instruction, excessive use of ditto sheets and little interactive teaching. Students often are not rewarded or recognized for their accomplishments (Snow, Burns & Griffin, 1998).

Schools make a difference in children's achievement (Teddle & Stringfield, 1993). Children who attend poor-quality schools often have significantly lower achievement than children who attend more effective schools.

Social Factors

There are numerous social factors associated with reading achievement. These factors include family socioeconomic status level (SES) (Crane, 1996; Elley, 1992;

Smith, 1996), home atmosphere (Dishion, Reid, & Patterson, 1995; Hawkins, Catalano & Miller, 1992; Hawkins, Lishner & Catalano, 1985), opportunities to read (Elley, 1992) and parental expectations (Connell, Spencer & Aber, 1994).

Smith (1996) reports that one of the most significant influences on student achievement is family income level. Family income level falls into a broader category called, socioeconomic status (SES). SES is often defined and measured by demographic variables such as family income level, parent's educational level and occupation (Snow, Burns & Griffin, 1998). Families in higher SES often understand how to guide and direct their children's education, they are not afraid to interact with the school system, make appointments with teachers, ask questions and seek the help of specialists when necessary, they are also more likely to hire tutors when a child is weak in a particular subject (Smith, 1996).

However, children who are raised in conditions of poverty often experience negative conditions in the home that are not conducive to high achievement (Dishion, Reid & Patterson, 1995). Children from poverty-stricken homes often lack quiet places to study (Crane, 1996), have fewer books in the home and less access to well-stocked libraries (Elley, 1992). In addition, many students are ill nourished, have little sleep (Crane, 1996) and suffer from stresses from the home environment (Batten & Russell, 1995). Many lower income students have high mobility rates resulting in lower academic achievement (Schuler, 1990; Worrell, 1997). These students feel disconnected with the school environment, are unable to establish a routine, and are unable to establish relationships with peers and teachers.

Many struggling readers from impoverished literacy environments receive little support and encouragement from their parents (Chambers, 1998). Parental involvement is associated positively with reading achievement (Reynolds, 1991). Children score significantly higher when their parents show more support for their academic achievement (Connell, Spencer and Aber, 1994). Finn and Rock (1997) found that students who are successful despite coming from poverty homes indicated high parental academic expectations.

Children who encounter several of these negative factors in their environment are labeled at-risk. Richardson and Morgan (2000) define at-risk as “students who are in danger of dropping out of school, usually because of educational disadvantages, low socioeconomic status, or underachievement” (p. 404). Concern over these students has led educators to implement various instructional interventions to address the needs of this population of students.

How Tutoring Programs Address The Needs of At-risk Students

Tutoring programs help meet the needs of at-risk students by offering; early intervention (Pinnell, 1985), opportunities to read (Chambers, 1998), a feeling of connection to school (Blakeman, 1993; Slavin, Karweit & Wasik, 1992), and individualized instruction (Nardini & Antes, 1991). Some programs, such as Success For All, elicit parents’ active involvement in their child’s education (Madden, Slavin, Karweit, Dolan & Wasik, 1993).

Early Intervention

Research suggests that children who are at-risk for reading failure should be reached early before they label themselves as failures (Pinnell, 1985). The majority of

tutoring interventions are aimed specifically at emergent readers offering tutoring services beginning in kindergarten.

Opportunities to Read

Many struggling readers come from impoverished literacy backgrounds.

Tutoring programs focus on enriching the child's background knowledge and familiarity with books (Chambers, 1998) by offering struggling readers a variety of books to help children become familiar with different genres of reading and to acquire new vocabulary (Wasik, 1999). Rereading familiar books is a common technique to help children develop automaticity in word recognition (Samuels, 1979), improve comprehension (Dowhower, 1987), and improve prosodic reading expression (Rasinski, 1990).

Classroom reading material is often at the struggling reader's frustration level. Tutoring programs offer the student appropriate instructional level reading material to help students achieve maximum growth. Research also suggests that many opportunities to read are the key to improving reading (Chambers, 1998). Insufficient supervised reading time has long been a problem in elementary schools and it is considered especially harmful for low-achieving beginning readers. Tutoring programs ensure that at-risk students spend a greater amount of time on reading and receiving individualized reading instruction than students considered not at-risk (Pikulski, 1994).

Feeling of Connection

Many at-risk students are highly mobile moving more than once a year (Schuler, 1990; Worrell, 1997). Due to this mobility, many students feel disconnected from the school environment (Schuler, 1990; Worrell, 1997). Research indicates that one-to-one

tutoring is effective for highly mobile students in part because students need one-to-one contact (Blakeman, 1993; Slavin, Karweit & Wasik, 1992).

Individualized Instruction

Tutoring programs offer students' individualized instruction conveyed at the moment of need and repeated as often as necessary for the child to internalize the concept (Juel, 1996). Instruction can focus on specific needs of the child such as decoding words, comprehension activities, slower pace and encouragement.

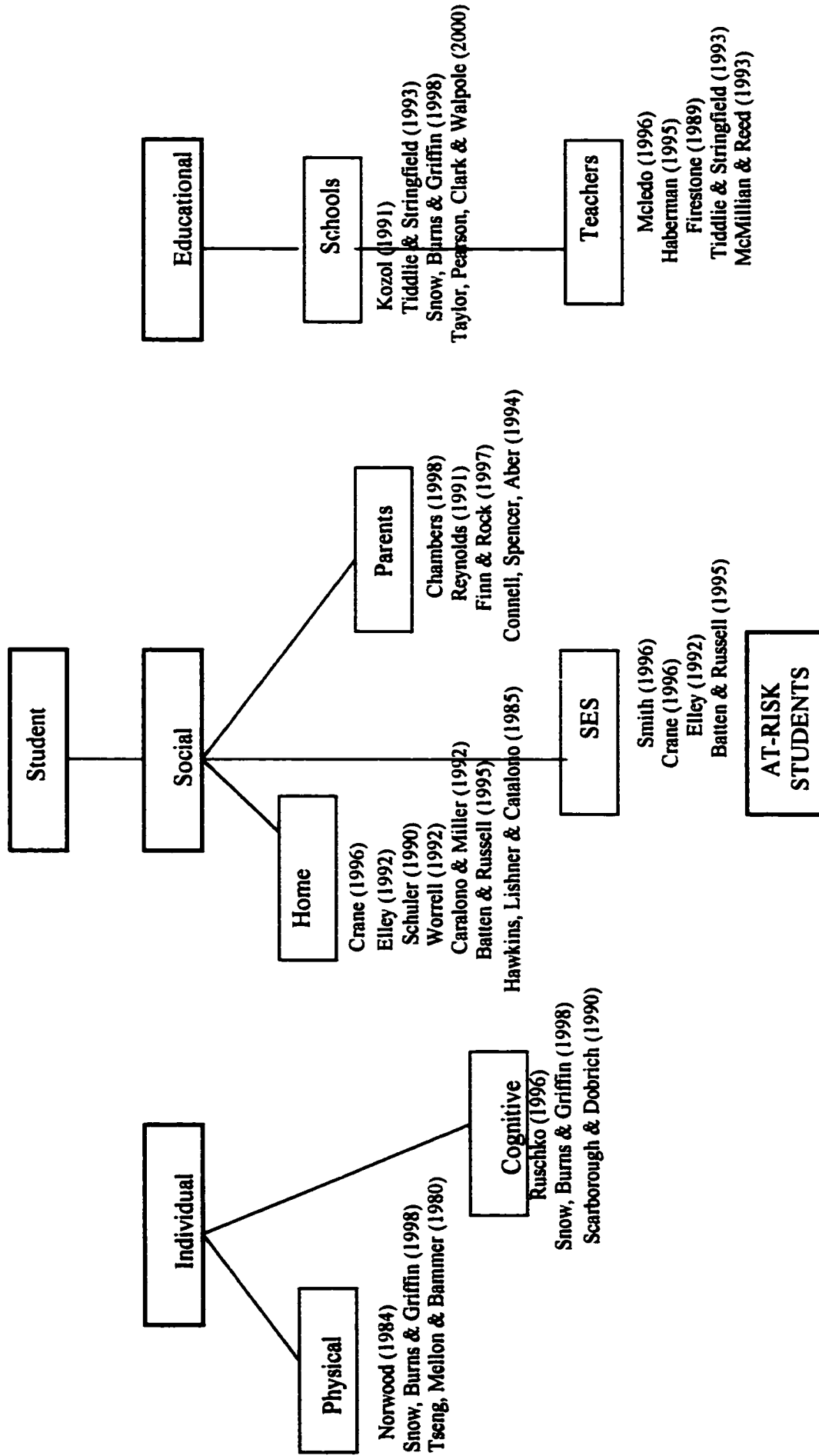
Many struggling readers in the lower grades are unaware of or unable to decode words and implement reading strategies. Tutoring intervention programs are structured to help children in the lower grades decode unfamiliar words in context by explicit teaching and modeling (Gaskins, 1998; Knapp, Turnbull & Shields, 1990) and improve reading comprehension by scaffolding (Juel, 1996), questioning, modeling comprehension strategies and practicing guided reading techniques (Gaskins, 1998).

Struggling readers are often unable to keep pace with classroom activities. Tutoring allows the student time to complete assignments (Gaskins, 1998) proceed at their own pace (Slavin, 1997), and ask questions in a one-to-one situation (Wasik, 1999).

Children score significantly higher when parents hold high expectations for their children (Connell, Spencer and Aber, 1994). Some tutoring programs, such as Success for All, attempt to improve student success through a total school program, attempting to educate and involve parents as well as tutor children (Madden, Slavin, Karweit, Dolan & Wasik, 1993). Success for All invites parents to participate in their child's education and holds parent workshops on techniques that parents can use at home to help improve their child's education.

For a visual summary of factors that affect reading performance refer to Table 2. The table is divided into individual, social and educational factors. These categories are subdivided into specific components that affect reading achievement.

Table 2
Factors That Affect Reading Performance



Summary

Most educators agree that early literacy development is the foundation for later reading achievement. Literacy begins years before the child enters school and is developed through home literacy experiences, verbal exchanges, regular reading and daily literacy activities. Unfortunately, children who are not raised in this type of environment often begin school behind their peers and are considered at-risk for school failure. These students often require additional instructional intervention to attain age-appropriate reading skills. Tutoring programs are one type of intervention many schools are implementing to meet at-risk students' needs.

The America Reads program is the latest government sponsored tutoring intervention in use in America. This new government program created much debate among educators about; (a) the effectiveness of tutoring programs; (b) the amount of training required for non-professional tutors to be effective; (c) the type of strategies tutors should use in tutoring sessions; and (d) the relationship of student attitude and reading achievement.

Educational research indicates varied results of tutoring interventions that use certified teachers and those that use non-professional tutors. Some interventions that employ certified teachers showed significant tutee improvement, some did not. Some interventions that utilize non-professional tutors showed significant tutee gains, some did not. Although the majority of tutoring interventions indicated significant improvements, the results are inconclusive on what aspect of reading skills is most improved by tutoring and why some intervention programs do not achieve significant gains.

The educational literature is also unclear on the amount of tutor training that non-professional tutors require to be effective. A large portion of the literature reviewed suggested some type of training for tutors ranging from three to thirty-three hours with ongoing sessions throughout the year. Most studies also recommended supervision of tutors by a reading specialist. Hospodar (1972) and Fitzgerald (2001a) indicated no significant gains by tutees who had trained tutors versus a control group who had been taught by a minimally-trained tutor, however, Moss, Swartz, Obeidahhad & Greene (2001) indicated that tutor training was related significantly to tutee achievement. In summary, educational research is unclear and inconclusive on the amount of training non-professional tutors require to be effective.

There is also a dearth of research on the types of strategies that tutors implement and the resulting tutee achievement. Juel (1996) found that tutors in successful tutoring dyads extensively modeled their reading process and used more scaffolding techniques to support the learner than tutors in non-successful dyads. Wasik & Slavin (1993) indicated that less successful tutors spend more time on out-of-context letter presentation and less time engaging in reading for comprehension. Again, this is another area of the literature that is unclear and inconclusive requiring additional research.

Many educators assume that there is a relationship between attitude and reading achievement, however, research findings are contradictory. Cohen, Kulik & Kulik (1982), in a meta-analysis, examined eight studies on attitude and found a significant relationship in only one study. Quinn & Jadav (1987) found a 10% or less common variance between reading attitude and reading achievement. Ball (1971) found a non-significant relationship in reading attitudes and reading achievement in a study of 96

students. The research on the relationship between reading attitude and reading achievement appears inconclusive and warrants further research.

Chapter II also described assessment of literacy deficits; factors that affect reading performance and how tutoring programs address these needs. Based on the review of the literature the following research hypotheses are set forth:

1. There will be a difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores.
2. There will be a difference between the pretest and posttest achievement scores of students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors.
3. There will be a change between the pretest and the posttest over the course of an academic year in the America Reads tutees' attitude as measured by the Elementary Reading Attitude Survey as compared to the control group.
4. There will be a relationship between the student's reading attitude and reading achievement.
5. There will be a difference in the attitudes of females versus males as measured by the Elementary Reading Attitude.
6. There will be a difference in the strategies that moderately-trained and minimally-trained tutors implement in their tutoring sessions and the resulting reading achievement scores of the tutees.

CHAPTER III

DESIGN, METHODOLOGY, AND PROCEDURES

The purpose of this study is to examine if the America Reads tutoring program at Old Dominion University is having an effect on the attitudes and reading achievement of the tutees who are participating in the program. In addition, this study will examine whether the amount of training that the tutor receives has an effect upon the strategies that the tutor employs in tutoring sessions and if those strategies result in differences in tutee's reading achievement compared with a comparison group. This chapter is divided into the following sections: (a) Rationale and Design, (b) Research Questions, (c) Description of the America Reads Program, (d) Participants, (e) Instrumentation, (f) Procedures, (g) Data Analysis and (h) Summary.

Rationale and Design

Years before children enter school they begin to acquire knowledge about literacy at home (Cuevas, 1999). Some children are fortunate enough to engage in meaningful verbal interaction and are immersed in print-rich environments while other children come from homes with limited verbal exchanges and scarcity of books and other literacy materials (Kind, 1999). The early years are crucial to future academic development. Without an adequate foundation children entering school quickly fall behind their peers and it becomes the job of educators to rectify the situation. One effort to help these children has been tutoring programs provided through Title I programs and community volunteers. There appears to be general agreement that tutoring programs are beneficial, or at the very least not harmful, but there is considerable disagreement over

the amount of training tutors require (Wasik, 1997), gains the tutees make when using a comparison group (Wasik, 1997; Wasik & Slavin, 1993), and if the student's attitude toward reading is related to reading achievement (Askor & Fishbach, 1953; McKenna & Kear, 1990; Swanson, 1984; Quinn & Jadav, 1987).

Thus, this study will attempt to examine several components of tutoring programs that are controversial in the educational literature. First, the study will examine the conflicting reports on the effect that volunteers have on tutees reading achievement in grades K-3, as measured by the PALS, STAR, Test For Higher Standards and SOL's. Next, the study will investigate the amount of training required for tutees to be effective by comparing tutors receiving three hours of initial training to tutors receiving a total of twelve hours of ongoing training and the tutee's subsequent academic achievement. Last, the study will investigate the relationship between tutees attitude and reading achievement as measured by The Elementary Reading Attitude and the PALS, STAR, Test For Higher Standards and SOL's, and if tutoring intervention changes students attitude as measured by The Elementary Reading Attitude.

This design is quasi-experimental because subjects will be placed in control and treatment groups. Students in the lowest 20% of reading achievement will be chosen to serve as a comparison group in two similar comparison schools. These are students who would be chosen to receive America Reads tutoring if the program was available in their school.

Research Questions

This study examined six central questions:

1. Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?

1a. Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring in kindergarten, as measured by the PALS test?

1b. Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring in grade one, as measured by the PALS test?

1c. Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring in grade two, as measured by the STAR test?

1d. Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring in grade two, as measured by the Test For Higher Standards?

- 1e. Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring in grade three, as measured by the STAR test?
- 1f. Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring in grade three, as measured by the Test For Higher Standards?
- 1g. Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring in grade two, as measured by the SOL test?
2. Is there a difference between the pretest and posttest reading scores of students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors?
 - 2a. Is there a difference between the pretest and posttest reading scores of kindergarten students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the PALS test?
 - 2b. Is there a difference between the pretest and posttest reading scores of grade one students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the PALS test?
 - 2c. Is there a difference between the pretest and posttest reading scores of grade

two students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the STAR test?

2d. Is there a difference between the pretest and posttest reading scores of grade two students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the Test of Test For Higher Standards?

2e. Is there a difference between the pretest and posttest reading scores of grade two students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the PALS test?

2f. Is there a difference between the pretest and posttest reading scores of grade three students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the STAR test?

2g. Is there a difference between the pretest and posttest reading scores of grade one students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the Higher Standards test?

2h. Is there a difference in the pretest and posttest reading scores of grade one students who were taught by moderately-trained tutors and those who were taught by minimally trained tutors as measured by the SOL test?

3. Is there a change over the course of an academic year in the America Reads tutees' attitude as measured by the Elementary Reading Attitude Survey as compared to the comparison group?

3a. Is there a change over the course of an academic year in the America Reads

- tutees' reading attitude in kindergarten as measured by the Elementary Reading Attitude Survey as compared to the comparison group?
- 3b. Is there a change over the course of an academic year in the America Reads tutees' reading attitude in grade one as measured by the Elementary Reading Attitude Survey as compared to the comparison group?
- 3c. Is there a change over the course of an academic year in the America Reads tutees' reading attitude in grade two as measured by the Elementary Reading Attitude Survey as compared to the comparison group?
- 3d. Is there a change over the course of an academic year in the America Reads tutees' reading attitude in grade three as measured by the Elementary Reading Attitude Survey as compared to the comparison group?
4. Is there a relationship between the student's reading attitude and reading achievement?
- 4a. Is there a relationship between the student's reading attitude and reading achievement in kindergarten?
- 4b. Is there a relationship between the student's reading attitude and reading achievement in grade one?
- 4c. Is there a relationship between the student's reading attitude and reading achievement in grade two?
- 4d. Is there a relationship between the student's reading attitude and reading achievement in grade three?
5. Is there a difference in female students attitudes and male students attitudes after participating in a tutoring intervention program?
- 5a. Is there a difference in kindergarten female students attitudes and male students

attitudes after participating in a tutoring intervention program?

5b. Is there a difference in grade one female students attitudes and male students attitudes after participating in a tutoring intervention program?

5c. Is there a difference in grade two female students attitudes and male students attitudes after participating in a tutoring intervention program?

5d. Is there a difference in grade three female students attitudes and male students attitudes after participating in a tutoring intervention program?

6. Is there a difference in the strategies that moderately-trained and minimally-trained tutors implement in their tutoring sessions?

Descriptive statistics were used to describe the differences in strategies that tutors used during tutoring sessions. The Tutoring Checklists (see Appendix A) were used to determine strategies used.

Participants

The America Reads Program at ODU

The America Reads Program at Old Dominion University was initiated in 1997 under the auspices of the Career Management Center. The responsibility later was transferred to the education department and a faculty member was selected to be the director of the program. The director is responsible for establishing relationships with local partner schools, acts as a liaison between the America Reads program and the school, and is responsible for initial and ongoing tutor training.

A program coordinator, usually a graduate assistant from the College of Education who is employed part-time, completes necessary work documents for the tutors, is

responsible for hiring tutors, explaining paperwork, processing time slips and the day-to-day operations of the program.

Tutors

To become an America Reads tutor, the university student must be eligible to receive a federal work-study award. The tutors are acquired through announcements in the Career Management Office, posters and notices posted in various locations on campus and flyers sent out with work-study award notices. Letters of recruitment also are sent to elementary education and early childhood majors.

The Students and Schools.

Four Professional Development schools participated in the study. Professional Development Schools are schools that have formed a relationship with a local university. These schools have agreed for professors and students to come into the school to implement various educational programs. All four schools that participated in this study scored in the lowest quartile in the school district on academic achievement in previous years. All four schools are Title I schools and have Title I tutoring services in place along with after school SOL tutoring for grade 3 and some volunteers who come into their schools to help tutor students. The schools were matched as closely as possible in terms of socioeconomic level, achievement level and minority composition.

All children who participated in this study were in kindergarten through grade three. They attend inner-city urban elementary schools in a major southeastern U.S. city. The schools are located in areas of considerable poverty, in neighborhoods often troubled by drugs and crime. Due to the amount of poverty in the children's families, 98% of children received both a free or reduced breakfast and lunch. Mirroring the neighborhood

populations the school's population is approximately 97% African-American and 3 % other.

The students were selected for the America Reads Program based upon reading achievement scores from the previous year's test scores on the PALS, SOL, STAR and final class grades, recommendations by classroom teachers and recommendations by reading specialists who have worked with students the previous year and in some cases administered informal assessments. Table 3 for provides additional information on the number of tutors, number of tutees and comparison students in this study.

Table 3
Participants in this Study

Grade	Tutors	Tutees	Comparison
Kindergarten	7	14	22
Grade One	3	13	25
Grade Two	8	23	23
Grade Three	6	22	21
Totals	24	72	91

Note: The numbers depict tutors who were with the program at least one academic semester. The numbers of tutees and comparison depict students who had both pre and post test data available.

Instrumentation

Several instruments were used as dependent variables to determine students' academic achievement in reading and attitude toward reading. All the instruments used

were tests that are currently in place in the school system. Multiple instruments were used being used in this study because the subscales on each test reveals different information that is valuable in creating an overall assessment of reading skills. For instance, the STAR yields data on grade equivalency, whereas the PALS subscales supply data on letter sounds, alphabetic knowledge and word lists. Each instrument contributes unique knowledge to create a clearer picture of the participants reading skills. Other researchers such as Center, et. al. (1995) have also used multiple instruments.

The Standards of Learning Test

The Standards of Learning Test is a state-mandated test administered to grades three through twelve. The internal consistency reliability estimates using the Kuder-Richardson Formula 20 (KR20) for grade three English (reading and writing) is .90 for the main test (core 1) and .91 for the makeup test (core 2) (Virginia Department of Education, 1999).

Validity was determined by comparing student's results on the SOL's with their results on the Literacy Passport Test (LPT) and the Stanford Achievement Test ninth edition. One thousand and seventy-one schools were used in this study. A Spearman Rank Order correlation for grade three for the English (reading and writing) component indicated an r .78 (Virginia Department of Education, 1999).

Phonological Awareness Literacy Screening

The PALS test was designed to be used as a screening tool to help identify kindergarten and first grade students who are at-risk of having difficulty with reading. There are two separate tests; one for kindergarten students and one for students in grades one through three. Cronbach's alpha indicated that internal consistency was .81 to .85

for the kindergarten test (Invernizzi, Meier, Swank, Juel, 2001). Concurrent validity on the kindergarten test was established through correlational analysis using the Stanford-9 (PALS News, 2001). Correlation results on the overall summed score ranged from .56 to .80 (Invernizzi, Meier, Swank, Juel, 2001).

Concurrent validity on the PALS K-3 test was measured against four independent standards. First grade results were measured against the Qualitative Reading Inventory-I (QRI), the California Achievement Test, The Stanford-9 and the Developmental Reading Assessment (DRA). First grade correlations were significant and indicated from medium to high correlations between all tests. First and second grade concurrent validity was established by comparing the results from the PALS with the Stanford-9 test, DRA, and the Virginia Standards of Learning Assessment. Statistically significant correlations were found between the PALS test and all tests compared. Third grade scores also indicated a high correlation between the PALS results and the Virginia SOL assessment and the DRA (Invernizzi & Meier, 2001).

The Test For Higher Standards

The Test For Higher Standards was designed to be used as a pretest and posttest for the Virginia Standards of Learning Test. The language arts component of the test yields data on comprehensive reading, word analysis and writing scores. For the participants in the America Reads program the test was administered in grades 2 and 3. The reliability for the Test For Higher Standards is based on small samples in only a few schools in Virginia. Internal consistency estimates were given for the mathematics and science portions using the Kuder-Richardson yields .79 to .93 for tests using 50 to 95

items (Mott, 2000). No information was available on the internal consistency of the Language Arts Section.

The content validity of the Test For Higher Standards was measured by asking “Do the tests adequately reflect the content stated or implied by the Standards of Learning themselves” (Mott, 2000, p.1). Items on the tests were reviewed by curriculum specialists, administrators and teachers to determine their validity.

Predictive score validity has only been informally reviewed in correspondence with the SOL’s. Mott states that informal evidence indicates that the SOL’s and Test For Higher Standards scores have a high correlation, however no data or evidence was forthcoming (Mott, 2000).

Standardized Test for Assessment of Reading

STAR is the acronym for Standardized Test for Assessment of Reading. The results of the STAR correlate with widely accepted standardized tests using 40,000 students. The STAR gives a quick estimate of instructional reading level. It estimates students’ reading level compared to national norms. The producers of STAR, Advantage Learning Systems, Inc., claim that it is a valid basis for school comparison, grade comparison and specific student populations. The STAR yields three types of information, the instructional reading level, the grade equivalent reading level and the student’s percentile rank. The norming sample used on the star consisted of 16% African-American. This closely approximates U.S. National Samples of children attending school. The reliability for the STAR at grade level 3 is scaled score (SS) = .80 and at Grade 2 is scaled score (SS) = .82. The validity of the STAR indicates that on

grade 3 level the STAR has a correlation of $r = .79$ with $n=110$ on the Iowa Test of Basic Skills and $r = .68$ with $n=158$ on the Stanford Achievement Test.

The instructional reading level that is given by the STAR is a criterion reference score. It “measures student performance by comparing it to some standard criterion. This criterion can come in any number of forms; common criterion foundations include material covered in a specific text, lecture, or course. It could also take the form of curriculum or district educational standards. These scores provide a measure of student achievement compared to a fixed criterion, they do not provide any measure of comparability to other students” (Advantage Learning Systems, Inc., 1997 p.43).

The Percentile Rank (PR) is a norm-referenced score. This score indicates the student’s standing in comparison to other students at the same grade level and the same period of time who obtained equal or lower scores on the STAR. (Advantage Learning Systems, Inc., 1997).

The grade equivalent scores (GE) yielded by the STAR indicates the typical score for which students at that grade level are reading. For example if a student is in grade 3 and they receive a GE of 5.2 then they are reading on a level that is typical for students in grade five in the second month of school. It does not mean that the student can read books at grade five level, only that the student is reading as well as students on average, who are in the second month of grade five (Advantage Learning Systems, Inc., 1997).

Elementary Reading Attitude Survey

The Elementary Reading Attitude Survey was developed by McKenna and Kear in 1990. Their purpose was to develop an instrument that could be used widely to determine reading attitudes with a quick group administration. They used the cartoon

character Garfield because it was widely recognized by children. Four responses were used so no neutral category would be available because respondents often choose the middle category to avoid committing to an opinion (Nunnally, 1967 in McKenna and Kear, 1990). McKenna and Kear also tried to develop a student-friendly response format. The Garfield survey yields two subscales, recreational reading and academic reading plus a total score (McKenna & Kear, 1990).

The survey was piloted using 499 elementary students. Revisions were made based on this pilot and it was administered to 18,000 students in a national survey using a stratified sample closely resembling the American population consisting of 9.5% African-Americans and 6.2% Hispanics (McKenna & Kear, 1990).

A Cronbach's Alpha was administered to determine internal consistency. Coefficients were .80 or higher except for the recreational reading subscale at grades one and two. The authors explain this by indicating, "It is possible that the stability of young children's attitudes toward leisure reading grows with their decoding ability and familiarity with reading as a pastime (McKenna & Kear, 1990, p. 638).

Construct validity was determined for the Garfield Elementary Reading Attitude Survey by several means. The relationship between students who had library cards and those who did not were compared on the recreational subscale. Students were asked if they had a library card and a library available to them. Students who had a library available to them were categorized into those who had cards and those who did not have cards and their recreational scores compared. Library cardholders had significantly higher scores, ($p < .001$) on the recreational measure than non-cardholders. Other measures also were examined such as number of books checked out from the school

library and number of hours watching television. Students who checked out more books from the school library scored significantly higher ($p < .001$) on recreational reading attitude than those who checked out less books. Students who watched less than one hour of television per night scored significantly higher ($p < .001$) on recreational reading than students who watched two or more hours per night (McKenna & Kear, 1990).

The academic attitude subscale validity was determined by examining the relationship of students' academic achievement, as indicated by their classroom teachers informally rating the children as high, average or low ability in reading, to their academic reading attitude subscale. The mean (M) academic attitude subscale score of high ability readers ($M=27.7$) was significantly better ($p < .001$) than the mean (M) academic attitude subscale of low ability readers ($M=27.0$) (McKenna & Kear, 1990).

Finally, to determine if the two subscales actually measure different constructs a factor analysis was performed. The results of the factor analysis indicate that the two subscales do reflect different aspects of reading attitudes (McKenna & Kear, 1990).

Procedures

The semester began by advertising the America Reads program on campus. Newsletters were sent to work-study students and posters placed in various locations across campus.

Tutors were interviewed by the graduate program coordinator and references from previous work experiences checked. Priority was given to returning tutors, education majors and students with prior experience working with children.

Tutors received a one-hour orientation training held by the graduate coordinator to discuss school procedures and rules, appropriate dress, responsibilities and procedures

for absenteeism. Next, tutors were required to attend an initial 3-hour orientation session given by the program director. This session included information on children at-risk, successful tutoring relationships and motivating children. In addition, research on the reading process, techniques for reading with children, before, during and after reading activities and tutoring strategies were demonstrated. Guidelines on how tutors should correct oral reading mistakes, tips on how to encourage children and procedures for administering initial assessments were also discussed. Children were present during the second half of the training to demonstrate to tutors how to perform various types of word-card activities in the tutoring sessions and how to administer the Garfield Survey.

Tutors were given a tutoring manual that contains information on all the subjects discussed in the training session. The manual also included sample lesson plans, resources, on-line information and types of books for beginning readers. In addition, the tutors were given index cards and rings to use in the tutoring sessions.

A third orientation lasting approximately one-hour was held at the school site. This orientation was given by the communication skills specialist or reading specialist of the school. Students were welcomed, familiarized with the school's layout, introduced to the librarian, introduced to their assigned tutees and given supplies to use in the tutoring sessions.

Each tutor tutored a total of three to five tutees. Students were tutored individually. Some sessions occurred in the classroom and some outside of the classroom in a quiet area. No tutoring sessions occurred during classroom reading instruction. Most tutoring sessions lasted 45 minutes and occurred two to three times a week.

Many tutors used materials from the classroom teacher that reinforces class work. The times of the tutors varied depending upon the tutor's availability. Tutors were required to complete checklists for every tutoring session (See appendix A). The checklists contained information on the types of activities the tutors completed during the tutoring sessions, time spent on each activity and total amount of tutoring time. The checklists were based on ideas taken from; On The Road To Reading by Koralek & Collins, 1997; Read to Succeed, Literacy Tutor's Manual by Bader, 1998 and Reading Helpers, A Training Handbook for Tutors by Corporation for National Service, 1998. The lists were turned in every two weeks with their time slips.

Moderately-trained tutors were trained every other week for one hour, totaling 12 sessions, to receive training on strategies and techniques to use with tutees, view videos on tutor training sessions and discuss problems and issues that occur in the tutoring session. This training included topics such as; the value of reading aloud to children, ten ways volunteers can help tutees become more literate, tips for choosing children's books and sample lesson plans that can be used with tutees. Other topics included the value of conversation and techniques to use for talking with children and several sessions were devoted to activities that could be used during pre-reading, during reading, and after reading activities. Tutors also were shown how to make text to self, text to text and text to world connections to increase tutee's comprehension. Using comprehension techniques to improve student understanding and effective questioning techniques were discussed, demonstrated and practiced with the tutors, along with ideas to help tutees understand main ideas, facts or details, sequence, predicting outcomes and drawing conclusions.

Many ideas for training tutors were taken from Reading to Learn in the Content Areas by Richardson & Morgan, 2000; Classrooms That Work by Cunningham & Allington, 1999; Guided Reading The Four-Blocks Way by Cunningham, Hall & Cunningham, 2000; Improving Reading: A Handbook Of Strategies by Johns & Lenski, 1997; Help America Read, A Handbook For Volunteers by Pinnell & Fountas, 1997; On The Road To Reading by Koralek & Collins, 1997; Read to Succeed, Literacy Tutor's Manual by Bader, 1998 and Reading Helpers, A Training Handbook for Tutors by Corporation for National Service, 1998.

Data Analysis

The pretest on the PALS was used to determine if the treatment and comparison groups were equivalent in kindergarten and grade one. The pretests on the STAR and Test For Higher Standards were used to determine if the treatment and control groups were equivalent in grades two and three. Due to the lack of equivalency, all pretests were covaried to statistically remove the effects of the covariate on the dependent variable and to ascertain if the remaining variance can be explained by the independent variable.

To ascertain if there was a difference in tutored versus non-tutored students' achievement in kindergarten scores on the Phonological Awareness Literacy Screening test (PALS) was used. The PALS test yielded data on six scales; group rhymes; alphabetic lower case letters, letter sounds, word identification and a total summed score. MANOVA's on the five subscales were performed with the independent variable as student status with two levels; tutored students (who received America Reads tutoring)

and comparison students at two similar schools (who did not receive America Reads tutoring).

To ascertain if there was a difference in tutored students versus non-tutored students' achievement in grade one, scores on the PALS test were used. The PALS test yielded two scores; word identification and a summed score. One-way between-groups Analysis of covariance (ANCOVA) was used on each scale, with the independent variable as student status with two levels; tutored students and comparison students at two similar schools.

To conclude if there was a difference in tutored versus non-tutored students' achievement in grade two, scores on the STAR test and the Test For Higher Standards were used. One scale of the STAR test was used in this research; grade equivalency. A one-way between-groups analysis of covariance was performed with the independent variable as student status with two levels; tutored students and a comparison group of students at two similar schools.

The Test For Higher Standards yielded two scales; comprehension and reading. A one-way between-groups analysis of covariance was performed on each scale, covarying the pretest mean scores. The independent variable was student with two levels; tutored students and a comparison of students at two similar schools.

To determine if there was a difference in tutored versus non-tutored students' achievement in grade three, scores on the STAR test, Test For Higher Standards and the SOL's was used. The STAR had one scale; grade equivalency. The Test For Higher Standards had two scales; reading comprehension a total summed score for reading. The SOL's consisted of one scale that was used in this study; reading.

Descriptive statistics were utilized to describe the types of strategies that moderately-trained and minimally-trained tutors implement in their tutoring sessions. The Tutor Checklist (see Appendix A) was used by tutors to record strategies and observations by the America Reads program were used as an implementation check to ensure reliability of data.

To determine if there were differences in achievement scores of students who were taught by moderately-trained tutors and by minimally-trained tutors a one-way between-groups Analysis of covariance was used. The independent variable was student status with two levels; tutored and a group of comparison students at two similar schools. For kindergarten and grade one the PALS test was used, examining each subscale. For grade two the STAR test and Test For Higher Standards was used and the subscales for each one compared. For grade three the STAR test, Test For Higher Standards and the SOL's subscales on each test were used to gauge reading achievement.

A one-way between-groups analysis of covariance (ANCOVA) was employed to ascertain if there is a change in reading attitudes in students who participated in the America Reads program. The Elementary Reading Attitude Survey was used to measure reading attitudes. This instrument has three scales; recreational reading, academic reading and a total composite. A Pearson Product Moment Correlation was used to determine if the student's reading attitude and reading achievement scores were related. The predictors were tutored students and a non-tutored comparison at two similar schools. The criteria were the three scales of the Elementary Reading Attitude plus the test scores for each test administered at that grade level.

Possible Limitations

The results of this study are limited to populations with similar characteristics. The tutors who participated in the America Reads program were 95% African-American university students attending an urban university who receive federal work-study awards. Tutees were 98% African-American attending predominately all-minority schools and residing in neighborhood government projects or areas of high poverty and crime. It is, therefore, possible that similar results might not be obtained with different population of tutors and tutees in different settings (Juel, 1996; McMillan, 1996).

Other limitations should be noted when interpreting the results. Most of the data analysis that were performed had small and often unequal number of participants. This makes it difficult to generalize findings to the larger population of students. Also the observed power on many data analysis performed in this research was low, making it difficult for the statistical test to detect significant differences between the two groups.

An additional limitation should be noted when interpreting the tutor strategies section. This data was dependent upon tutors turning in all checklists and accurately reporting their activities. The researcher noted that many checklists were not turned in and often the tutors recorded the information hours after the tutoring session had been completed.

CHAPTER IV

RESULTS

The purpose of this study was to determine the effect of The America Reads Tutoring Program and tutor training on the attitude and academic achievement of at-risk kindergarten through grade three participants of the program in two urban Title I schools and in two urban Title I comparison schools not receiving America Reads tutoring. Schools were chosen based upon similar minority and socioeconomic status composition as well as achievement scores on district tests. The students were chosen to participate in the study based upon teacher recommendations, grades, and bottom-quartile reading scores on reading achievement as gauged by the previous year's test. These students were considered the most at-risk for reading failure.

Numerous achievement tests were in place in the school system and were used to gauge reading progress. Kindergarten and grade one students were administered the Phonological Awareness Literacy Screening (PALS) test, grade two students were administered the Test For Higher Standards and the Standardized Test For Assessment in Reading (STAR). Grade three students were administered the Test For Higher Standards, Standardized Test For Assessment in Reading (STAR) and the Standards of Learning (SOL) test.

There were a total of 72 tutees in this study, 41 females and 31 males. There were a total of 91 comparison students, 60 females and 31 males. Ninety-nine percent of the participants in this study were African-American.

Pretests were used to determine group equivalency. It was hypothesized that there would be a significant difference in the reading achievement of participants in the America Reads Program, i.e. the America Reads participants would achieve significantly higher results on standardized tests than the comparison group on posttest measures.

This chapter is divided into sections based upon each research question and sub questions. A brief summary, table and charts follow each question with a comprehensive summary at the conclusion of the chapter.

Question One Is there a significant difference in reading achievement between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?

Question one, and all sub questions, employs the independent variable of student status with two levels, tutored and comparison. The dependent variable in each question was different depending upon the grade, the test used and the scales that comprise that particular test.

1a. Is there a significant difference in kindergarten reading achievement, as measured by the Phonological Awareness Literacy Screening (PALS) test, between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?

Question 1a. examined at-risk kindergarten students who participated in the America Reads Program and compared their beginning reading achievement scores on the Phonological Awareness Literacy Screening (PALS) with the comparison's group

reading achievement score on the PALS test to determine if the two groups were equivalent. The independent variable was student status with two levels; students who received no tutoring, (the comparison group) or tutored (students who participated in the America Reads Program). The dependent variable in this research question was measured by the Phonological Awareness Literacy Screening (PALS) test. The PALS test consists of six subscales; an overall summed score (a composite of all five scales) and five separate scales; rhymes, group letters, abc letters, letter sounds and word identification. A Multivariate Analysis of Variance (MANOVA) is the preferred statistic in this situation to avoid an inflated Type I error (Pallant, 2001). A MANOVA controls for Type I errors by creating a summary dependent variable (Pallant, 2001). However, a MANOVA has several assumptions that must be met; sample size, normality, outliers, linearity, multicollinearity and homogeneity of variance-covariance matrices (Cohen, 1988; Pallant, 2001; Stevens, 1996). Preliminary assumption testing was conducted to check for these assumptions. There were enough subjects in the study to satisfy sample size. Mahalanobis distance was within the acceptable range as outlined by Tabachnick and Fidell (1996) thus satisfying normality. To determine if the five dependent variables were conceptually related a Pearson Product Moment Correlation was conducted. Pallant (2001) indicates that dependent variables in a MANOVA should be moderately correlated with correlations below .8 or .9. The correlation results indicated that the dependent variable correlations ranged from .5 to .7, thus falling within an acceptable range to satisfy the MANOVA assumption. The results of the preliminary assumption testing indicated that no serious violations existed.

The pretest summed score was first examined separately because it was the composite score of all the dependent variables. A separate univariate analysis, an independent *t*-test, was performed between the comparison and tutored groups on the pretest means of the summed score. Using an alpha level of .05 results indicated significant differences ($p = .016$) between the two groups. The comparison group had a mean score significantly higher ($M = 29.32$) than the tutored groups mean score ($M = 16.81$). Levene's test for equality of variances was not satisfied therefore the results were interpreted under unequal variances assumed. Table 4 presents comprehensive information on this data analysis.

MANOVA results on the five pretest subscales combined indicated a statistically significant difference ($p = .047$) on the PALS pretest between the two groups. The comparison group had scored higher on pretest measures indicating non-equivalency between the two groups. Details of this data analysis are presented in Table 4.

Each pretest subscale was then considered separately in univariate analysis employing independent *t*-tests. The results on the subscale of rhymes indicated no significant differences, however the comparison group had a higher mean score of ($M = 5.48$) and tutored had a mean score of ($M = 5.06$). Again, there were no significant differences on the pretest measure of beginning group letters, however the comparison group had a higher score. The comparison group had a mean score of ($M = 4.80$) and the tutored group had a mean score of ($M = 4.00$). There were no significant differences on the scale of pre test word ID, the comparison group scores were ($M = 2.24$) and the tutored group scores were ($M = 1.75$). Once again, the comparison group had a higher pretest mean score. On this scale Levene's test for equality of variances was not satisfied,

therefore, the results were interpreted under unequal variances assumed. There were significant differences on the pretest scale of Abc lower ($p < .001$). The comparison group had a mean score of ($\underline{M} = 10.64$) and the tutored group had a mean score of ($\underline{M} = 4.25$). On this pretest scale Levene's test for equality of variances was not satisfied, therefore the results of significance was interpreted under the equal variances not assumed. Significant differences also were found on the pretest scale of letter sounds for the two groups. The comparison group score significantly higher ($p = .024$) with a mean score of ($\underline{M} = 4.40$) compared to the tutored group's mean score of ($\underline{M} = 1.81$). The data did not satisfy Levene's test for equality of variances, therefore the results were interpreted under the equal variances not assumed category. Table 4 depicts a description of the means, standard deviations and number of participants for this test.

The PALS test was administered again at the conclusion of the academic school year. An ANCOVA was performed on the overall summed score of the PALS, with the PALS pretest summed score as a covariate because pretest measures indicated significant differences between the two groups on this measure. Results indicated no statistically significant differences between the comparison groups mean score ($\underline{M} = 67.41$) and the tutored groups mean score ($\underline{M} = 67.43$).

A one-way between-groups multivariate analysis of covariance (MANCOVA) was conducted on the posttest to investigate the impact of tutoring on reading achievement as measured by the five subscales of the Phonological Awareness Literacy Screening (PALS) test. Analysis of covariance was conducted on all scales. The MANCOVA indicated no significant differences between the two groups. The means and standard deviations for pretest and posttest scores are listed in Table 4 and Figure 4

shows a graphic representation of the pretest and posttest summed scores for the two groups.

In summary, univariate results on the pretest summed score indicated that the two groups were non-equivalent at the beginning of the school year. The comparison group attained significantly higher scores on the PALS overall pretest summed score. Multivariate analysis on the pretest, using the five subscales as dependent variables, also indicated significant differences between the groups. Follow-up univariate pretest procedures, independent *t*-tests, indicated the comparison group scored significantly higher on abc lower letter knowledge and letter sounds.

An ANCOVA was performed on the posttest of summed score, covarying the pretest. Results indicated no significant differences between the two groups mean scores. A MANCOVA was performed on the posttest results of the five scales, covarying the pretest scores. Results indicated that there were no significant differences between the groups on rhymes, word identification and beginning group letters. However, the tutored group had gained 50.62 points and the comparison group had gained 38.09 points. The two groups began the school year with the comparison group performing at a significantly higher level on two scales of reading achievement as measured by the PALS test. However, during the course of the academic year, the gap in achievement was closed; by the end of the academic year the tutored group performed as well as the comparison group on reading skills as measured by the PALS test. The researcher also conducted separate univariate analysis on each subscale covarying the unequal pretest scores. No significant differences were found between the two groups.

There are some limitations to this data analysis that should be noted. The tutored group had a small number of participants. The tutored group consisted of 16 students and the comparison group consisted of 25 students. The small number of participants, unequal n size and observed power (ranging from .050 to .102) could have affected the ability of the data analysis to find statistically significant differences between the groups. Hair, Anderson, Tatham & Black (1992) define observed power as the “probability of correctly rejecting the null hypothesis when it is false, that is, correctly finding a hypothesized relationship when it exists” (p. 2). Stevens (1996) indicates that a power level of .80 is considered strong; therefore, the power levels in this analysis are weak and may explain the lack of significance found between the two groups. Numerous researchers (Cohen, 1988; Pallant, 2001; Stevens, 1996) have indicated that it is acceptable to increase the alpha level to .10 or .15 when using small sample sizes with low power, however this researcher decided to keep the alpha level .05 constant for all analysis. Means, number of participants and standard deviations are shown in Table 4.

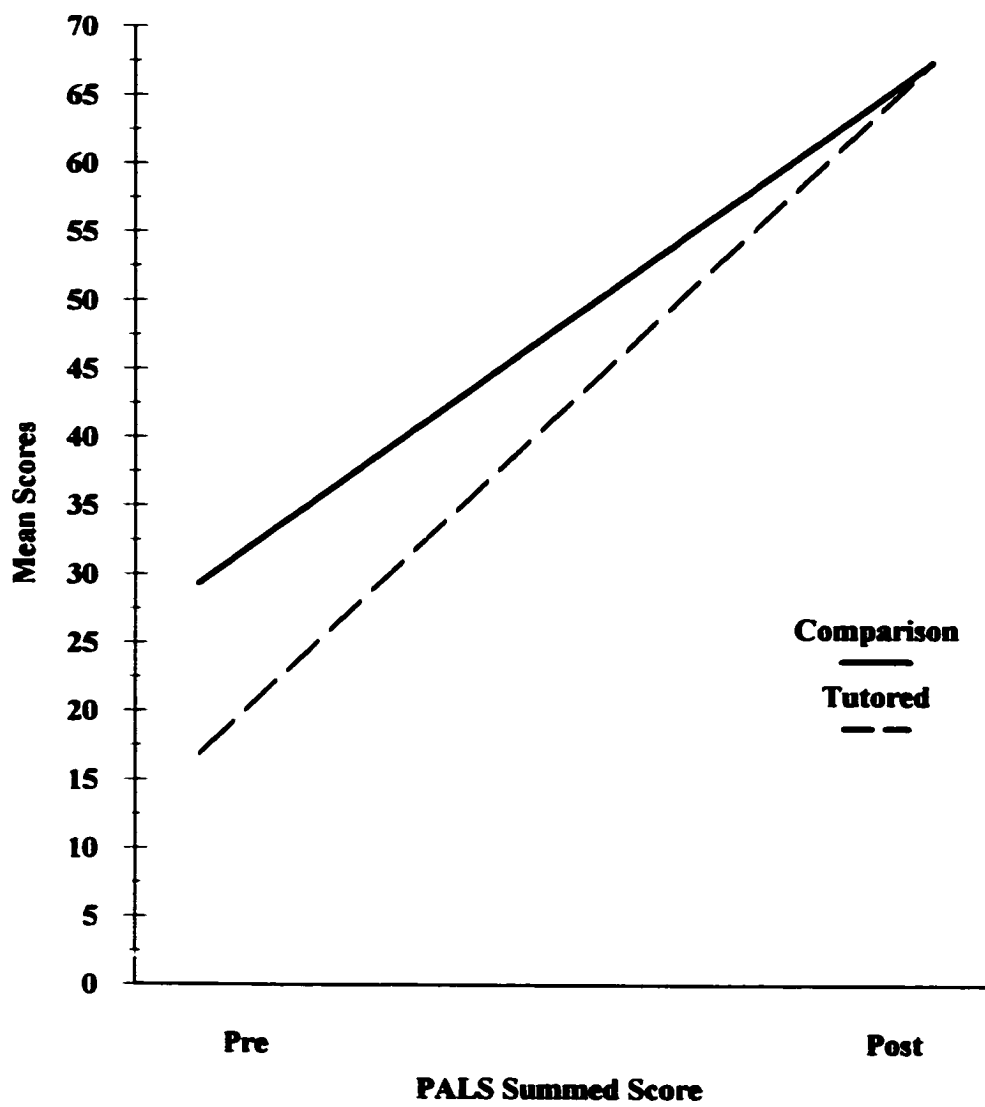
Table 4
Kindergarten
PALS Results

Groups	Phonological Awareness Literacy Screening					Summed Score
	Rhymes	Beg Group	Abc Lower Letters	Letter Sounds	Word ID	
Comparison						
Pretest	5.48	4.80	10.64**	4.40*	2.24	29.32*
Number	25	25	25	25	25	25
Std. Deviation	3.04	2.69	7.96	4.86	3.00	20.46
Tutored						
Pretest	5.06	4.00	4.25	1.81	1.75	16.81
Number	16	16	16	16	16	16
Std. Deviation	2.46	2.13	3.53	2.04	1.73	11.31
Comparison						
Posttest	8.55	8.41	21.59	17.77	9.23	67.41
Number	22	22	22	22	22	22
Std. Deviation	2.02	2.42	7.49	8.57	5.49	25.23
Tutored						
Posttest	8.93	8.71	23.43	17.00	6.07	67.43
Number	14	14	14	14	14	14
Std. Deviation	1.93	1.82	3.27	6.42	2.43	14.18

* indicates significant differences at the .05 level

** indicates significant differences at the .01 level

Figure 4
Kindergarten PALS Results



Question 1b. Is there a significant difference in grade one reading achievement, as measured by the Phonological Awareness Literacy Screening (PALS) test, between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?

This research question examined differences in reading achievement between grade one comparison and tutored groups. The independent variable was student status with two levels, the comparison group (who did not receive tutoring) and the tutored group (who received America Reads tutoring). The dependent variables are two scales of the PALS test. The researcher was able to obtain data on the summed score, a composite scaled score and on the word identification scale. The summed score was considered separately from the word identification scale because the summed score is a composite of all the scores on the PALS test, including the word identification scale.

Univariate measures were used to analyze differences on the pretest reading scores and the summed score between the comparison and tutored groups. An independent samples *t*-test was performed on the pretest of summed score to evaluate group equivalency. Results indicated no significant difference in means for the comparison group ($M = 25.54$) and the tutored group ($M = 22.00$). An independent samples *t*-test was conducted to compare the pretest score of word identification. Results indicated no significant difference in pretest scores for the comparison group ($M = 10.54$) and the tutored group ($M = 8.80$), however the scores were not equal. It should be noted that on both pretest measures the comparison group's mean scores were higher.

The PALS test was given again at the end of the school year and the data examined to determine if the reading achievement of participants in the America Reads program significantly differed from the reading achievement of the comparison group. The two scales of the PALS test, the overall summed score and the word identification were analyzed separately.

A one-way between-groups analysis of covariance (ANCOVA) was conducted to examine the impact of the America Reads tutoring program on reading achievement, as measured by the Phonological Awareness Literacy Screening (PALS) test. Participants' scores on the PALS pretest summed score given at the beginning of the year were used as the covariate in this analysis. Results indicated a statistically significant difference ($p = .046$) on the PALS summed score between the comparison group's mean ($M = 47.70$) and the tutored group's mean ($M = 58.00$).

An ANCOVA was performed on the posttest PALS word identification scale. Again, student's scores on the pretest were used as covariates. Results indicated no significant differences ($p = .53$) between the comparison group ($M = 15.56$) and the tutored group ($M = 13.85$). One possible reason for not achieving significance could be due to the low power (.094) and the unequal n size, the comparison group had more than double the number of subjects than the tutored group. Table 5 presents a complete description of the means, standard deviations and number of participants for the comparison and tutored groups. Figure 5, Charts 1 and 2 depict line graphs with the pretest and posttest scores of both scales.

In summary the grade one comparison and tutored students began the year with non-significant differences in mean scores on the overall reading score and word

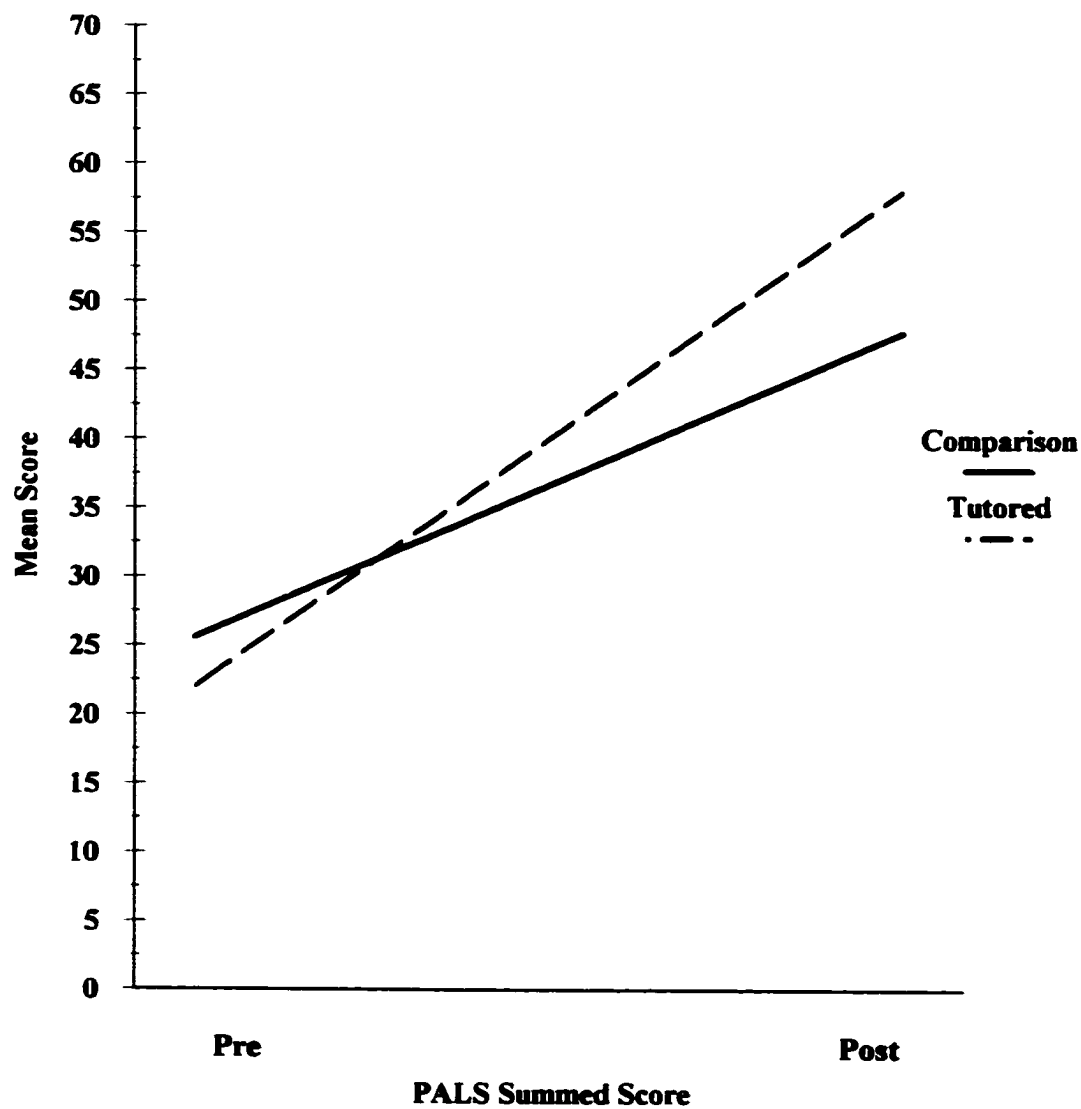
identification scale of the PALS test, although the comparison group had higher means. At the conclusion of the school year significant differences were found between the two groups on the PALS overall summed score, after adjusting for initial differences in the pretest scores. The comparison group gained 22.14 overall points and the tutored group gained 36 overall points on the scale of summed score. No significant differences were found between the groups on the scale of word identification. On this scale both groups had gained approximately five points.

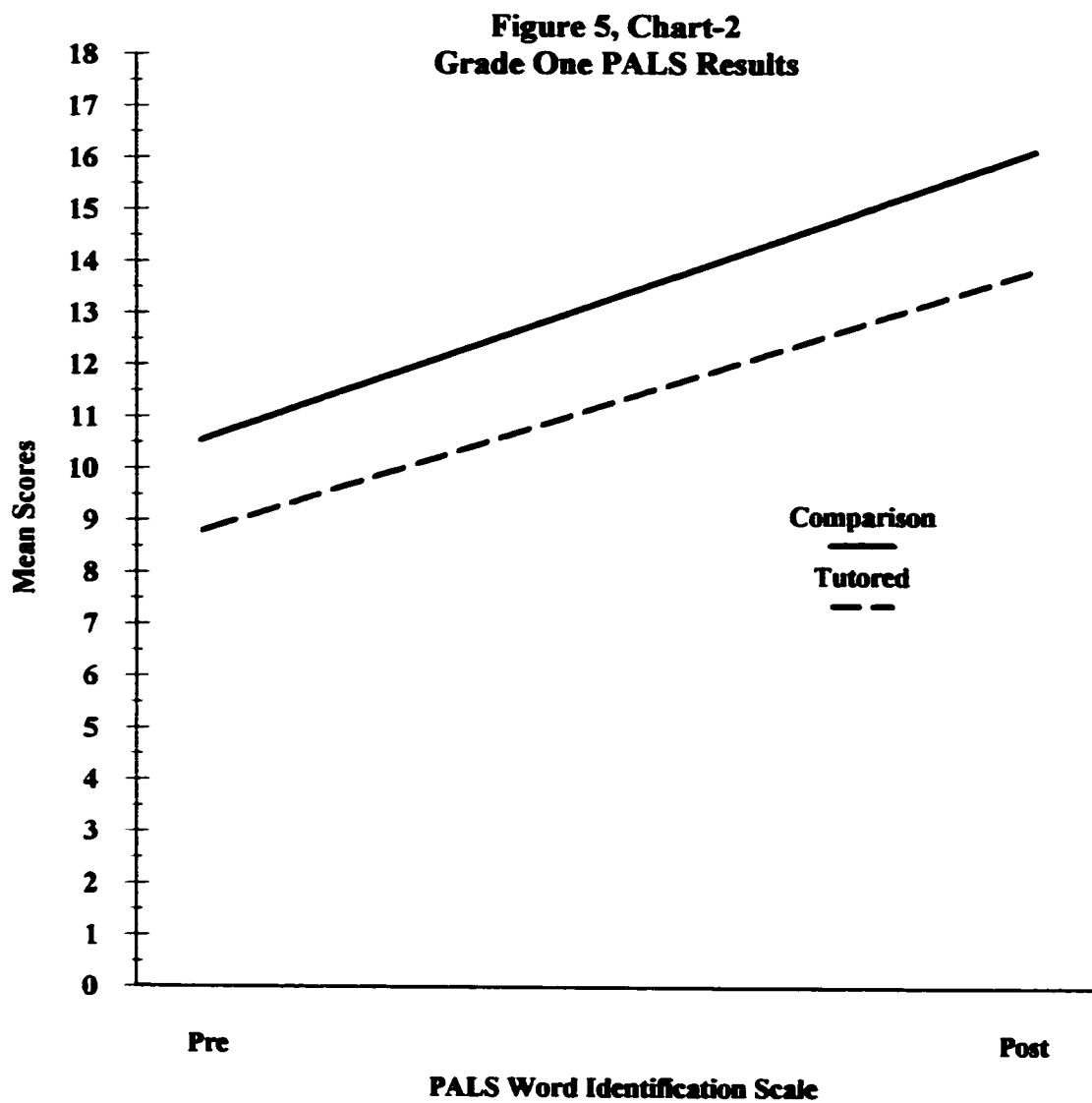
Table 5
Grade One
PALS Results

Groups	Phonological Awareness Literacy Screening			
	Pretest Word I. D.	Posttest Word I.D.	Pretest Summed Score	Posttest Summed Score
Comparison				
Mean	10.54	15.56	25.54	47.68
Number	26	25	26	25
Std. Deviation	7.51	9.27	14.41	17.55
Tutored				
Mean	8.80	13.85	22.00	58.00*
Number	15	13	15	13
Std. Deviation	5.58	5.32	14.59	19.59

*indicates statistical significance at the .05 level

Figure 5
Grade One PALS Results





Question 1c. Is there a significant difference in grade two reading achievement, as measured by the Standardized Test for Assessment in Reading (STAR), between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?

The Standardized Test for Assessment in Reading (STAR) was administered at the beginning of the second grade and again at the conclusion of the academic year. The test yielded a grade equivalency (GE) score. Grade equivalency (GE) is an indication of the typical score for a student at that grade level. The score indicates that the student is reading as well as a student at that grade level. For instance, a GE of 3.2 indicates that the student is reading as well as average students in the second month of grade three (Advantage Learning Systems, Inc., 1997).

An independent samples *t*-test was conducted to examine the impact of the America Reads tutoring program on reading achievement as measured by the STAR test. The STAR pretest results indicated that the two groups were not significantly different on reading achievement as measured by grade equivalency, however the comparison group had a higher mean score. The comparison group had a mean score of (\underline{M} = 1.3042) and the tutored group had a mean score of (\underline{M} = 1.2783).

A one-way analysis of covariance (ANCOVA) was used to determine differences in posttest scores on the STAR scale of grade equivalency. Although the pretest results did not indicate statistically significant differences the means were not equal, therefore they were covaried. ANCOVA results on the grade equivalency scale indicated no significant differences between the comparison group's mean score (\underline{M} =

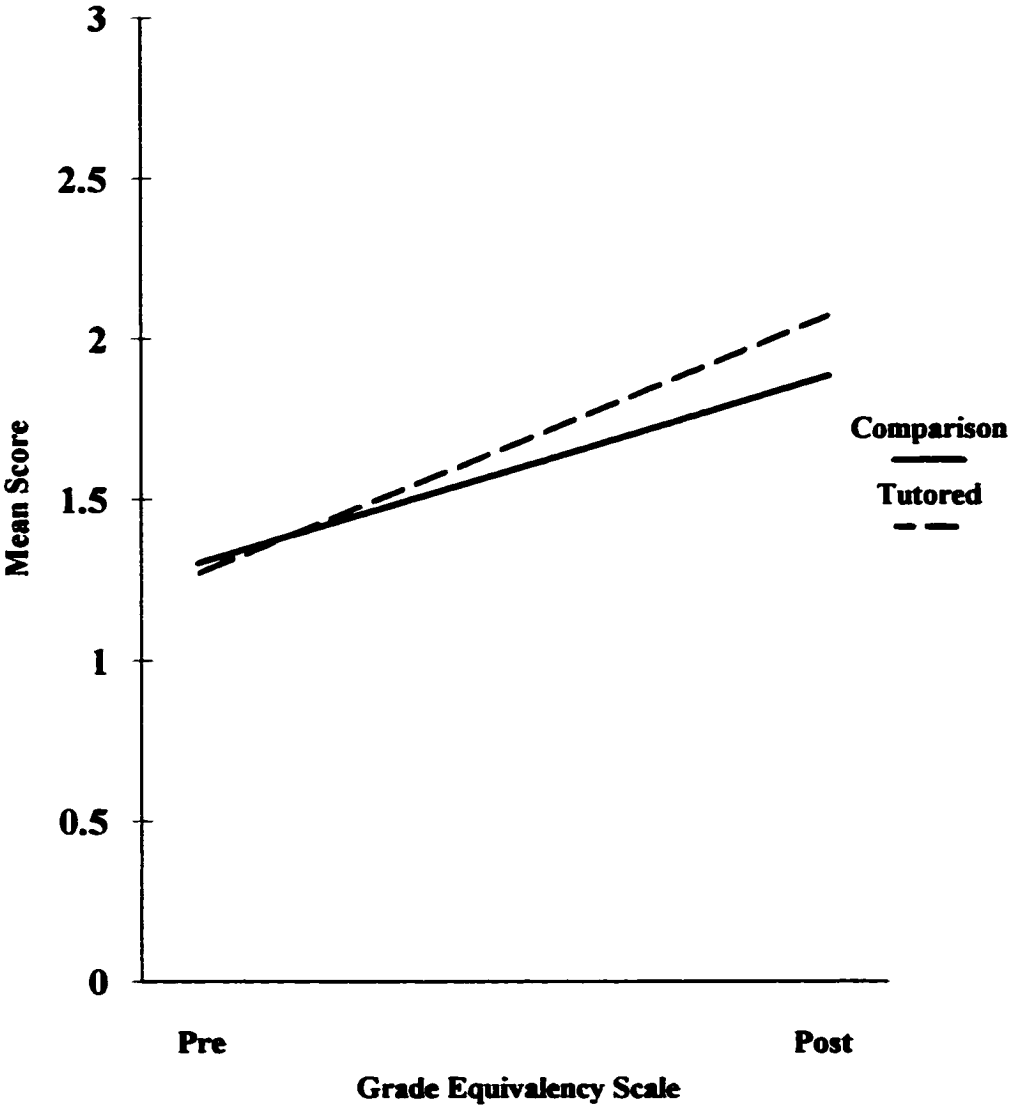
1.88) and the tutored group's mean score ($M = 2.07$). Table 6 lists the number of participants, means and standard deviations for the two groups. Figure 6 depicts a line graph of the results.

In summary, results on the grade two STAR grade equivalency scale (GE) indicated that the groups had started the school year with the comparison group achieving higher results on the STAR test. The academic year concluded with the tutored group performing at a higher level than the comparison group, although not significantly. The comparison group had gained .58 points and the tutored group had gained .8 points. See Table 6 for a detailed comparison of the mean and standard deviation scores.

Table 6
Grade Two
STAR Results

Groups	STAR	
	Pretest Grade Equivalency	Posttest Grade Equivalency
Comparison		
Means	1.30	1.88
Number	24	23
Std. Deviation	.459	.549
Tutored		
Means	1.27	2.07
Number	23	23
Std. Deviation	.466	.553

Figure 6
Grade Two STAR Results



Question 1e. Is there a significant difference in grade two reading achievement, as measured by the Test For Higher Standards, between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?

There were two scales of the Test For Higher Standards recorded by the schools; overall reading and reading comprehension.. The reading comprehension portion of the test measured passage comprehension, order of events, genres, character analysis and locating information in the paragraph. The overall reading consisted of the comprehension plus word meanings, homophones and rhymes.

The researcher sought to determine if the dependent variables, reading comprehension and word analysis, on the Test For Higher Standards were conceptually related. A Pearson Product correlation was conducted to determine the relationship of the scales. Results indicated relationships of .7 to .8, violating the assumption of a MANOVA (Pallant, 2001). Therefore, univariate analysis was performed on each scale.

An independent *t*-test was performed on the pretest reading scale of the Test For Higher Standards to determine group equivalency between the comparison group and the tutored group. Pretest results indicated no significant differences in the comparison groups mean score (\underline{M} = 49.05) and the tutored groups mean score (\underline{M} = 52.26), however the tutored group had higher means than the comparison group. An independent sample *t*-test was conducted on the comprehension scale. Results indicated that the comparison group's mean (\underline{M} = 57.73) and the tutored group's

mean (\underline{M} = 61.30) were not significantly different, however again the tutored group had a higher mean.

A one-way between-groups analysis of covariance on the Test For Higher Standards Posttest was conducted to determine the effectiveness of the America Reads tutoring intervention program. Posttest results on the reading scale indicated that the tutored group's mean score (\underline{M} = 67.04) was significantly higher ($p = .034$) than the comparison group's mean score (\underline{M} = 53.95). An analysis of covariance was performed on the Posttest scale of comprehension, covarying the pretest mean scores. Results indicated that there were no significant differences between the comparison group (\underline{M} = 64.50) and the tutored group (\underline{M} = 70.00) on the comprehension Posttest. Table 7 gives a complete listing of the number of participants, standard deviations and means for each group. Figure 7, Charts 1 and 2 illustrate the pretest and posttest scores of the two groups in a line graph.

In summary the grade two tutored group scored significantly ($p = .034$) higher on the Test for Higher Standard's posttest reading total scale than the comparison group. Significant differences were not found on grade equivalent scale of the STAR or on reading comprehension levels as measured by the Test For Higher Standards.

Table 7
Grade Two
Test For Higher Standards Results

Groups	Reading		Comprehension	
	Reading Pretest	Reading Posttest	Comp. Pretest	Comp. Posttest
Comparison				
Mean	49.05	53.95	57.73	64.50
Number	22	20	22	20
Std. Deviation	13.54	18.84	22.66	22.82
Tutored				
Mean	52.26	67.04*	61.30	70.00
Number	23	23	23	23
Std. Deviation	18.84	18.28	28.17	21.32

* indicates statistical significance at the .05 level

Figure 7 ,Chart 1
Grade 2 Test For Higher Standards

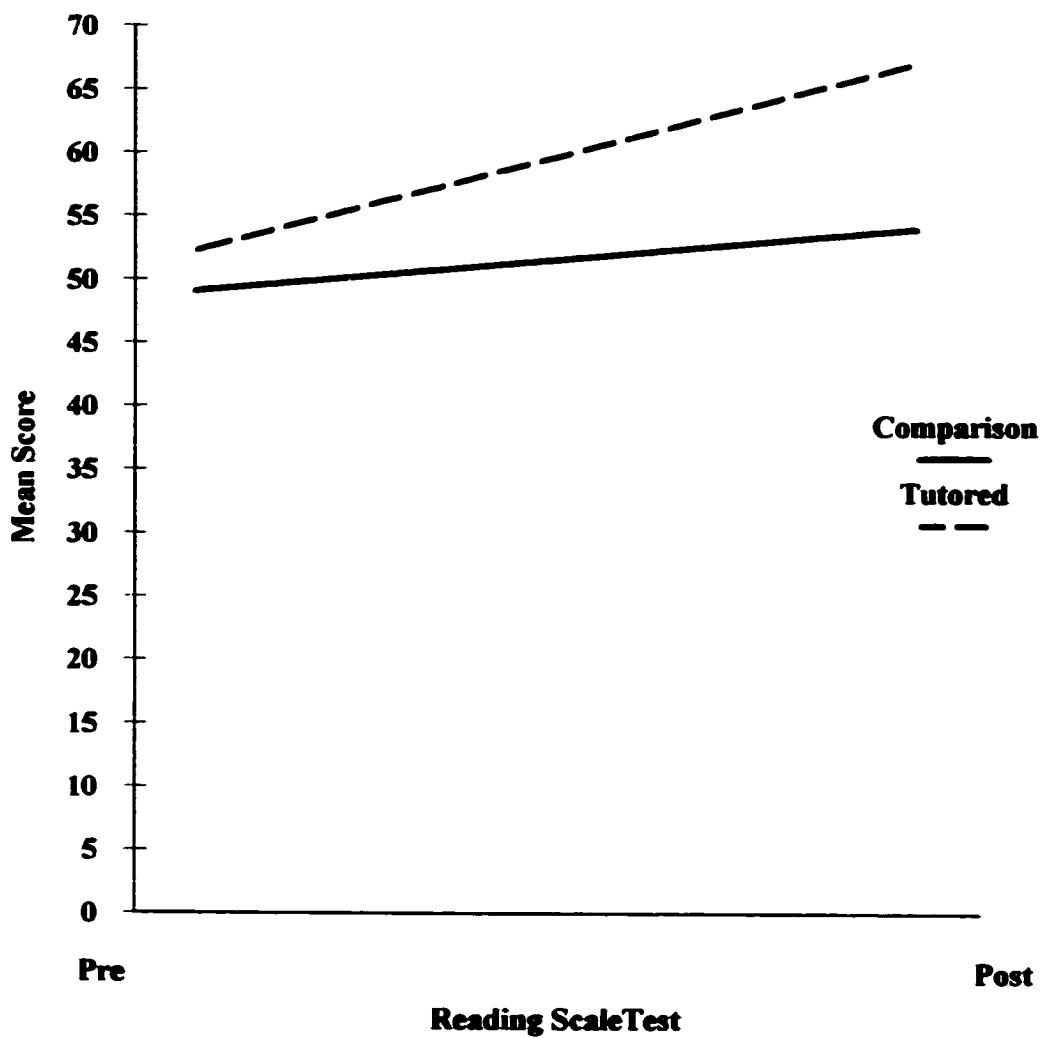
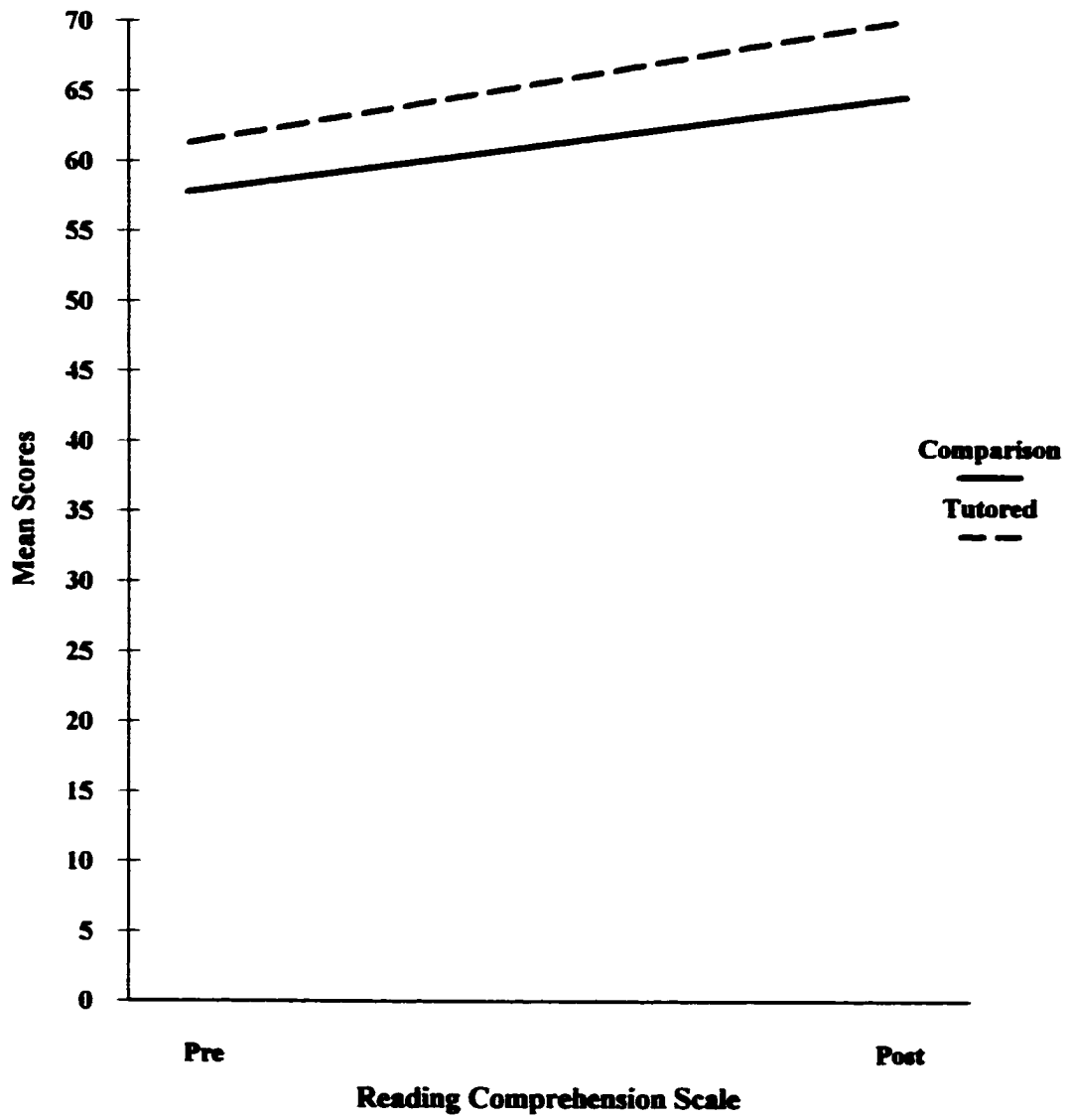


Figure 7, Chart 2
Grade 2 Test For Higher Standards



Question 1f. Is there a significant difference in grade three reading achievement, as measured by the Standardized Test For Assessment in Reading, between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?

This question examines the comparison and tutored student's reading achievement as measured by the grade equivalency scale of the Standardized Test for Assessment in Reading (STAR). An independent t-test on the pretest was performed to compare the grade equivalency of the comparison group and the tutored group as measured by the STAR. The pretest results indicated that the comparison group's mean ($\underline{M} = 2.37$) and the tutored group's mean ($\underline{M} = 2.03$) were not significantly different, however the comparison group had a higher mean. Table 8 provides information on the results of this test.

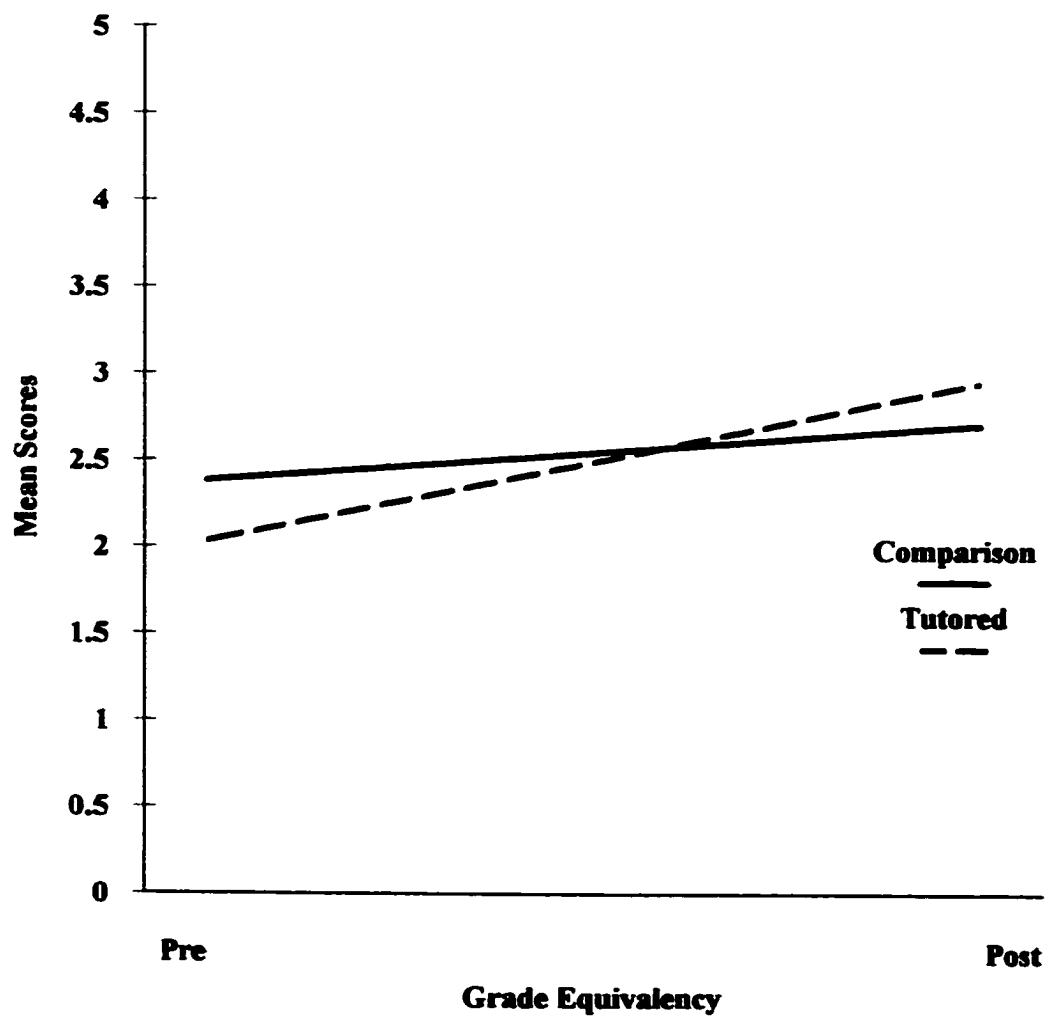
A one-way between-groups univariate analysis of covariance (ANCOVA) was performed on the grade equivalency scale of the STAR Posttest, covarying the pretest scores. Results on the grade equivalency scale indicated the tutored group's mean ($\underline{M} = 2.95$) was significantly higher ($p = .026$) than the comparison group's mean ($\underline{M} = 2.70$). Refer to Table 8 for a complete details of the STAR results and Figure 8 portrays a graphic representation of the pretest and posttest scores.

Table 8
Grade Three
STAR Results

Groups	Grade Equivalency G.E. Pretest	G.E. Posttest
Comparison		
Means	2.378	2.70
Number	19	22
Std. Deviations	.763	.708
Tutored		
Means	2.035	2.95*
Number	17	17
Std. Deviations	.488	.492

* indicates statistical significance at the .05 level

Figure 8
Grade Three STAR Results



Question 1g. Is there a significant difference in grade three reading achievement, as measured by the Test For Higher Standards, between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?

This question examines student achievement on the Test For Higher Standards. The independent variable is student status with two levels, tutored, i.e. students participating in the America Reads Program and comparison, i.e. students at two similar comparison schools. The dependent variables are the mean score on the reading scale of the Test For Higher Standards and the mean score on the reading comprehension scale.

An independent t-test was conducted to determine group equivalency between the comparison and tutored groups on the pretest administration of the Test For Higher Standards given at the beginning of the academic year. Pretest results on the scale of reading comprehension indicated that there were no significant differences between the two groups. The comparison group had a mean score of ($\underline{M} = 36.67$) and the tutored group had a mean score of ($\underline{M} = 29.35$).

An independent t-test was conducted to examine the differences between the two groups on the scale of total reading. Pretest results indicated that there were no significant differences between the two groups. The comparison group had a higher mean score of ($\underline{M} = 37.08$) than the tutored group's mean score of ($\underline{M} = 33.78$).

Due to the unequal mean scores on the pretest, covariance procedures were used on the post test. A one-way between-groups analysis of covariance (ANCOVA) on the

scale of reading comprehension indicated that the tutored group's mean ($\underline{M} = 41.00$) was significantly higher ($p = .011$) than the comparison group's mean ($\underline{M} = 30.71$). A one-way between-groups analysis of covariance (ANCOVA) on the post test scale of reading also indicated that the tutored group's mean ($\underline{M} = 44.82$) was significantly higher ($p = .013$) than the comparison group's mean ($\underline{M} = 36.05$). Table 8 provides a complete description of the means and standard deviations and number of students. Figure 9, Charts 1 and 2 illustrate the pretest and posttest means of the two groups in a graphic representation.

In summary, the comparison group and the tutored group began the school year with non-significant differences on the scales of reading and comprehension as measured by the Test For Higher Standards, although the comparison group had higher means on both scales. At the conclusion of the academic year the tutored group began the school year with non-significant differences on the scales of reading and comprehension as measured by the Test For Higher Standards, although the comparison group had higher means on both scales. At the conclusion of the academic year the tutored group had significantly higher means than the comparison group on both the reading portion and the comprehension portion of the Test For Higher Standards.

Table 9
Grade Three
Test For Higher Standards Results

Groups	Higher Standards Reading Pretest	Higher Standards Reading Posttest	Higher Standards Comp. Pretest	Higher Standards Comp. Posttest
Comparison				
Mean	37.08	36.05	36.67	30.71
Number	24	21	24	21
Std. Deviation	15.36	13.18	15.49	16.58
Tutored				
Mean	33.78	44.82*	29.35	41.00**
Number	23	22	23	22
Std. Deviation	11.84	13.11	11.92	15.16

* indicates statistical significance at the .05 level

** indicates statistical significance at the .01 level

Table-9, Chart-1
Grade Three Test For Higher Standards

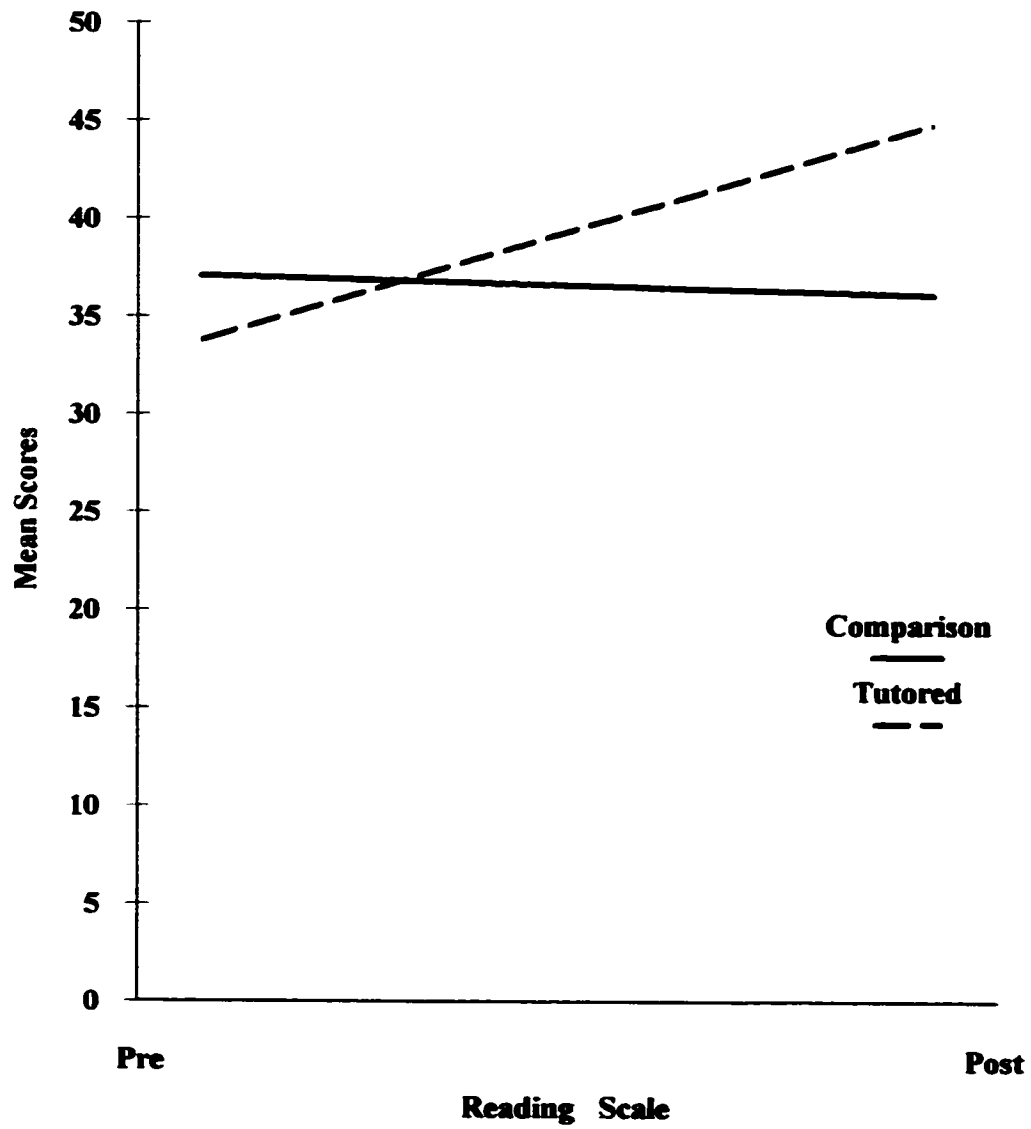
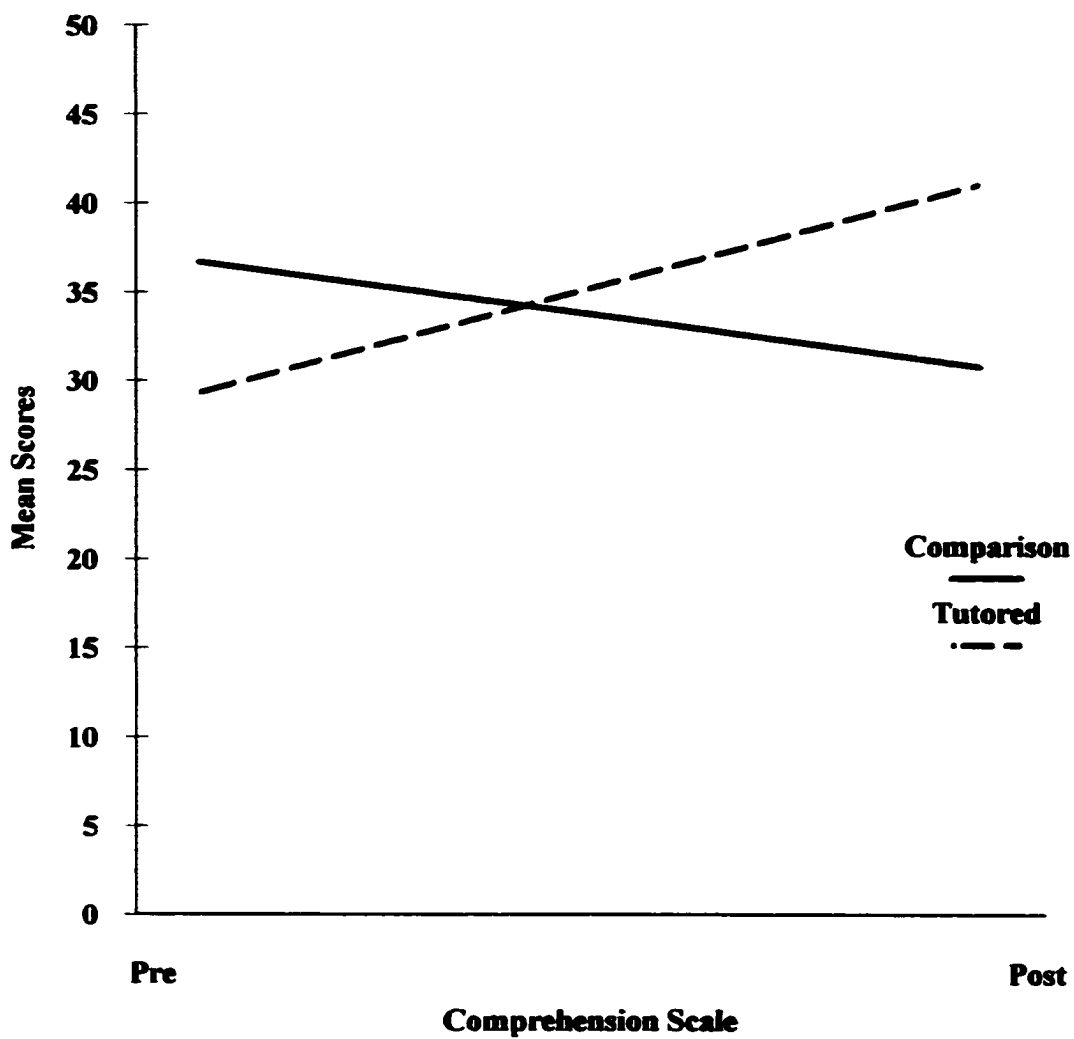


Figure 9, Chart-2
Grade Three Test For Higher Standards



Question 1h. Is there a significant difference in grade three reading achievement, as measured by the Standards of Learning test, between students who received America Reads tutoring and a comparison group of similar students who did not receive America Reads tutoring, after controlling for their pretest scores?

This question examines grade three reading achievement as measured by the Standards of Learning test. The independent variable is student status with two levels; tutored and comparison. The dependent variable is performance on the reading portion of the Standards of Learning Test (SOL). The Standards of Learning test is only given at the conclusion of the academic year. An independent t-test was conducted to compare the reading achievement scores for tutored and comparison students. There were no significant differences between the comparison group's mean score ($\underline{M} = 27.05$) and the tutored group's mean score ($\underline{M} = 28.68$). Table 10 gives a complete description of the means, standard deviations and number of participants.

In summary grade three pretest measures indicated that the tutored and comparison group began the year with no statistically significant differences, however, the comparison group means were higher on all measures. The academic year concluded with the tutored group achieving significantly higher means than the control group on all reading measures with the exception of the SOL test.

Table 10
Grade Three
SOL Results

Groups	SOL Reading
Comparison	
Mean	27.05
Number	21
Std. Deviation	5.54
Tutored	
Mean	28.68
Number	19
Std. Deviation	5.27

Question 2. Is there a difference between the pretest and posttest reading scores of students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors?

This research question compared the achievement scores of tutees who were tutored by tutors who had received the initial three hours of training plus an additional twelve hours of ongoing comprehensive training in reading theory and strategies and methods of teaching reading throughout the academic year. Moderately-trained tutees achievement was compared to tutees whose tutors who had only received three hours of training at the beginning of the school year. Reading achievement was measured by tests already in place in the school district.

2a. Is there a difference between the pretest and posttest reading scores of kindergarten students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the PALS test?

The Phonological Awareness Literacy Screening (PALS) test was used to gauge reading achievement in kindergarten. It consisted of a composite summed score. The summed score was made up of five subscales; rhymes, beginning group letters, Abc lower letters, letter sounds, and word identification. The composite score of summed scales was analyzed separately. Results from the summed score pretest, employing an independent t-test, indicated no significant differences between the minimally-trained tutor's tutees mean reading achievement score ($M = 11.50$) and the moderately-trained tutees mean reading achievement score ($M = 20.00$), however the moderately-trained group's mean was considerably higher.

As noted in research question one, the five dependent variables on the PALS test were conceptually related, therefore a MANOVA was performed. A one-way multivariate analysis of variance was conducted to determine differences in achievement on the five scales of the PALS between minimally-trained and moderately-trained tutors' groups. Results indicated no significant differences between the minimally-trained group and the moderately-trained group. Table 11 lists the results of this analysis and Figure 11 graphically illustrates the results in a line chart.

A posttest PALS test was administered at the conclusion of the academic school year. A one-way univariate analysis of covariance was performed on the posttest of the summed scale score of the PALS test. Results on the scale of summed score indicated no significant differences between the two groups.

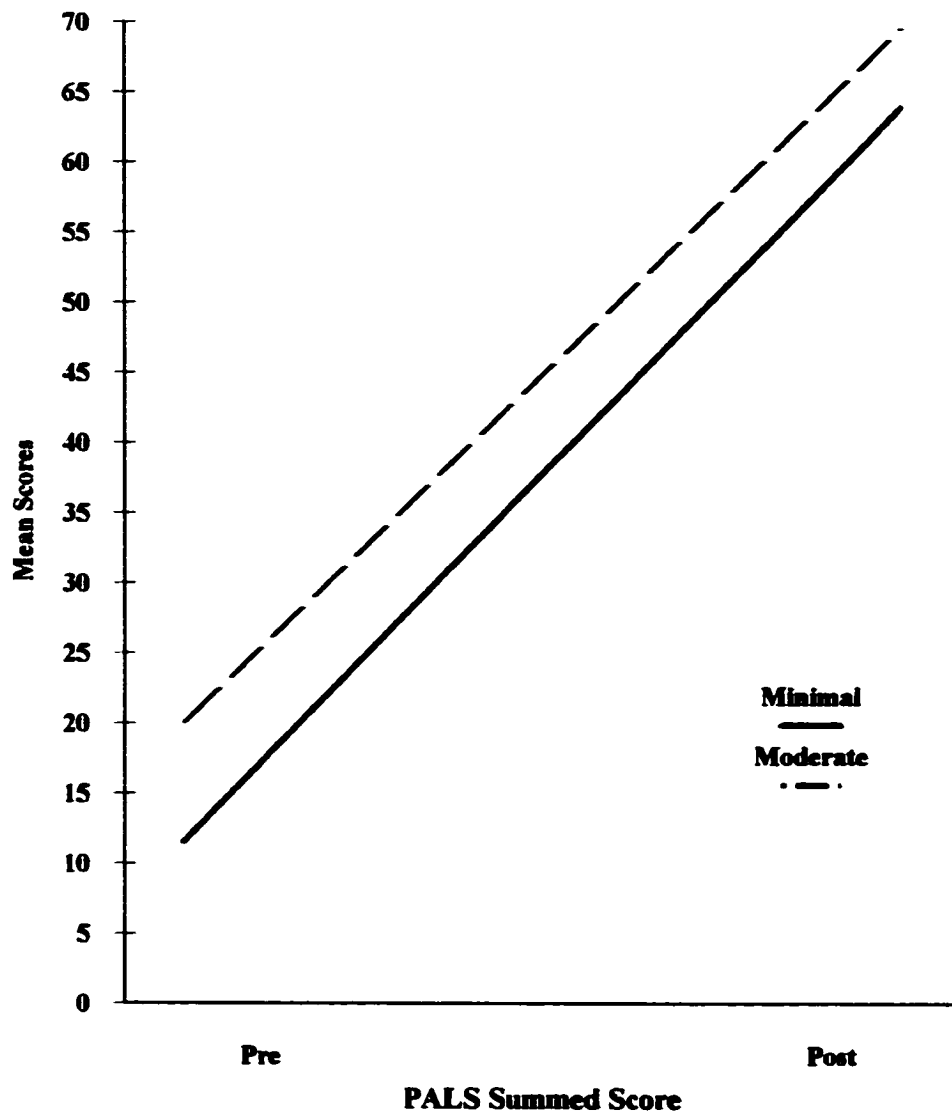
A multivariate analysis of covariance was employed to determine differences between the minimally-trained group's achievement and the moderately-trained group's achievement covarying the pretest scores. Results indicated no significant differences

between the two groups. Refer to Table 11 for the mean scores of each scale on the pretest and posttest scores, plus the standard deviations and number of participants.

Table 11
Kindergarten
PALS Training Results

Groups	Rhymes	PALS				Summed Score
		Beg Group	Abc Letter	Letter Sounds	Word I.D.	
Minimally						
Pretest	4.33	3.17	2.67	1.17	1.33	11.50
Number	6	6	6	6	6	6
Std. Deviation	2.73	2.32	3.14	1.60	1.97	9.95
Moderately						
Pretest	5.50	4.50	5.20	2.20	2.00	20.00
Number	10	10	10	10	10	10
Std. Deviation	2.32	1.96	3.55	2.25	1.63	11.32
Minimally						
Posttest	8.40	8.00	23.00	16.60	6.40	63.80
Number	5	5	5	5	5	5
Std. Deviation	3.05	2.24	4.24	6.58	3.85	14.55
Comprehensively						
Posttest	9.22	9.11	23.67	17.22	5.89	69.44
Number	9	9	9	9	9	9
Std. Deviation	1.09	1.54	2.87	6.72	1.45	14.43

Figure 11
Tutor Training Kindergarten PALS Results



Question 2b. Is there a difference between the pretest and posttest reading scores of grade one students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the PALS test?

Independent t-tests were conducted to determine if the minimally-trained group and the moderately-trained group results were significantly different on the pretest administration of the PALS test. Pretest results on the summed score scale indicated statistically significant differences ($p = .046$) between the minimally-trained group's mean ($M = 29.86$) and the moderately-trained group's mean ($M = 15.12$). Results on the scale of word identification scale indicated that the minimally-trained group ($M = 11.86$) had significantly higher scores ($p = .042$) than the moderately-trained group ($M = 6.13$). The minimally-trained group had significantly higher means than the moderately-trained group on both pretest measures of the PALS test.

The PALS test was administered again at the conclusion of the school year. At this point the moderately-trained group had received twelve more hours of training than the minimally-trained group. The posttest results, using an ANCOVA to covary the pretest scores indicated no significant differences on the overall summed score. An ANCOVA was employed on the scale of word identification, covarying the pretest scores. Results indicated that the moderately-trained group ($M = 16.67$) had significantly ($p = .010$) higher means than the minimally-trained group ($M = 11.43$). Table 12 contains details of the results of this analysis.

In summary the group receiving tutoring from minimally-trained tutors had began the school year with significantly higher scores on the PALS scales of word

identification and overall summed score, and ended the school-year with significantly lower scores than the moderately-trained group on the word identification scale of the PALS test and with no significant differences on the overall summed score. See Table 12 for more details on means, standard deviations and numbers and Figure 12, Charts 1 and 2 for a graphic illustration of the scores. It should be noted that both groups had a very small number of participants, the minimally-trained group had seven participants and the moderately-trained group had eight participants. In addition, the observed power of the ANCOVA analysis of summed score was .400. The low statistical power and small number of participants may have caused the analysis to be unable to detect significant differences.

Table 12
Tutor Training
Grade One
PALS Results

Groups	PALS word list pretest	PALS word list Posttest	PALS summed score pretest	PALS summed score Posttest
Minimally Trained Group				
Mean	11.86*	11.43	29.86*	54.43
Number	7	7	7	7
Std. Deviation	4.85	5.83	15.45	25.14
Moderately Training Group				
Mean	6.13	16.67*	15.12	62.17
Number	8	6	8	6
Std. Deviation	4.97	3.08	10.26	11.13

* indicates statistical significance at the .05 level

Figure-12,Chart-1
Tutor Training Grade One PALS Results

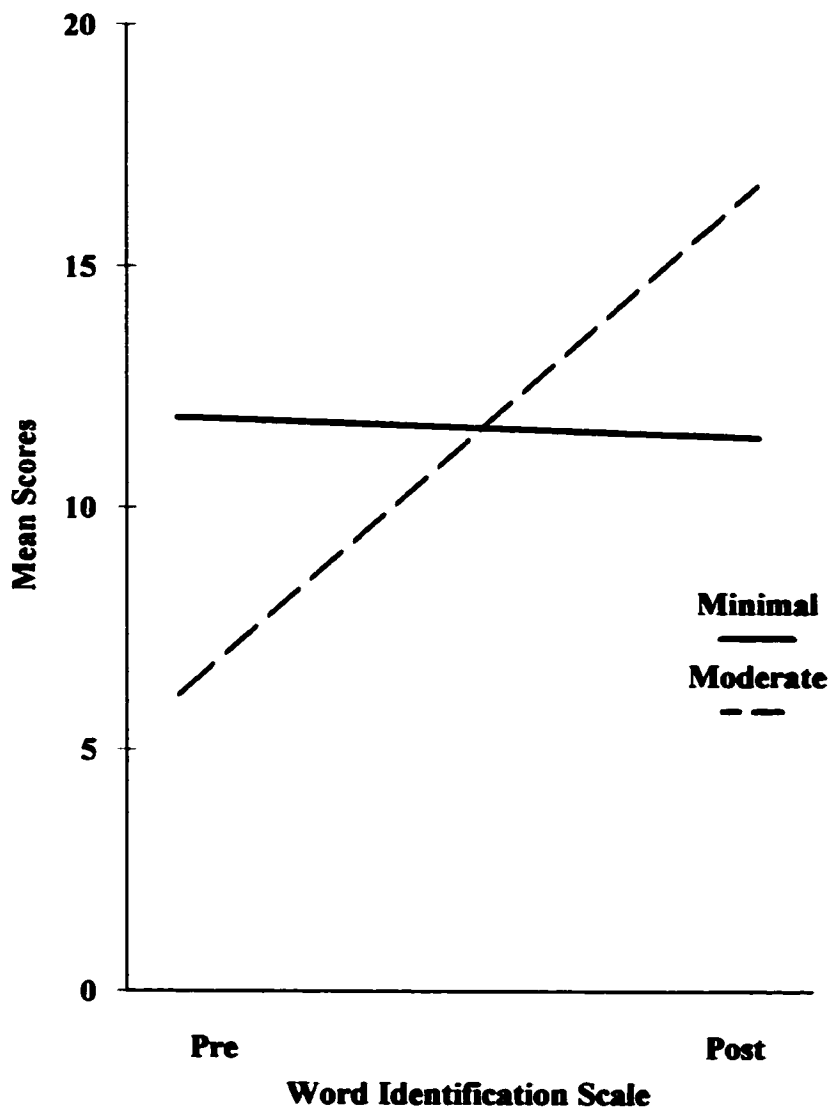
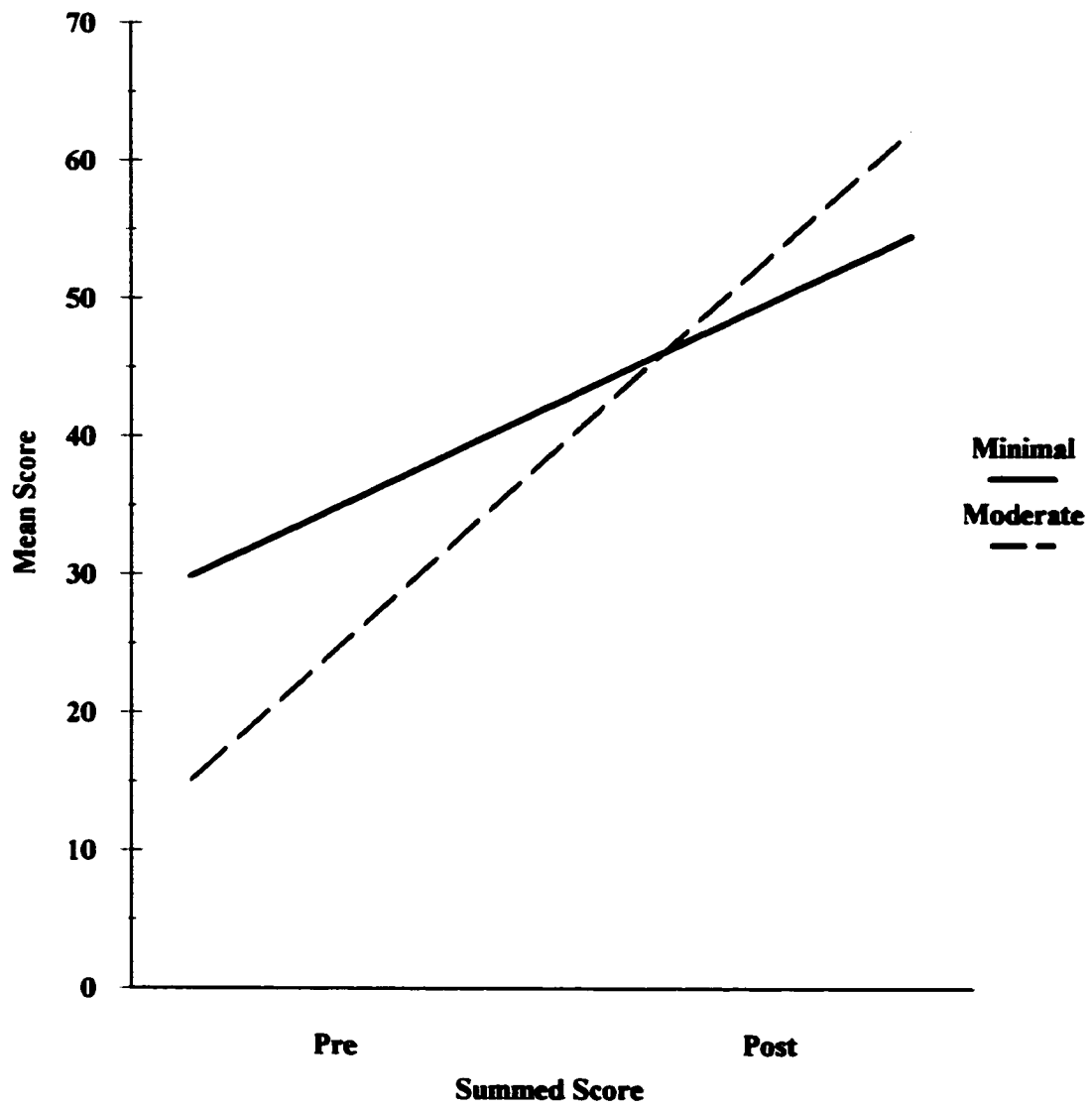


Figure-12, Chart-2
Tutor Training Grade One PALS Results



Question 2c. Is there a difference between the pretest and posttest reading scores of grade two students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the STAR test?

The Standardized Test for Assessment in Reading (STAR) yielded a grade equivalency score. To compare the pretest administration at the beginning of the year pretest results were analyzed with an independent t-test. Results indicate no significant differences on the scale of grade equivalency between the minimally-trained group's mean score ($M = 1.3$) and the moderately trained group's mean score ($M = 1.22$). Table 13 provides complete details of the results.

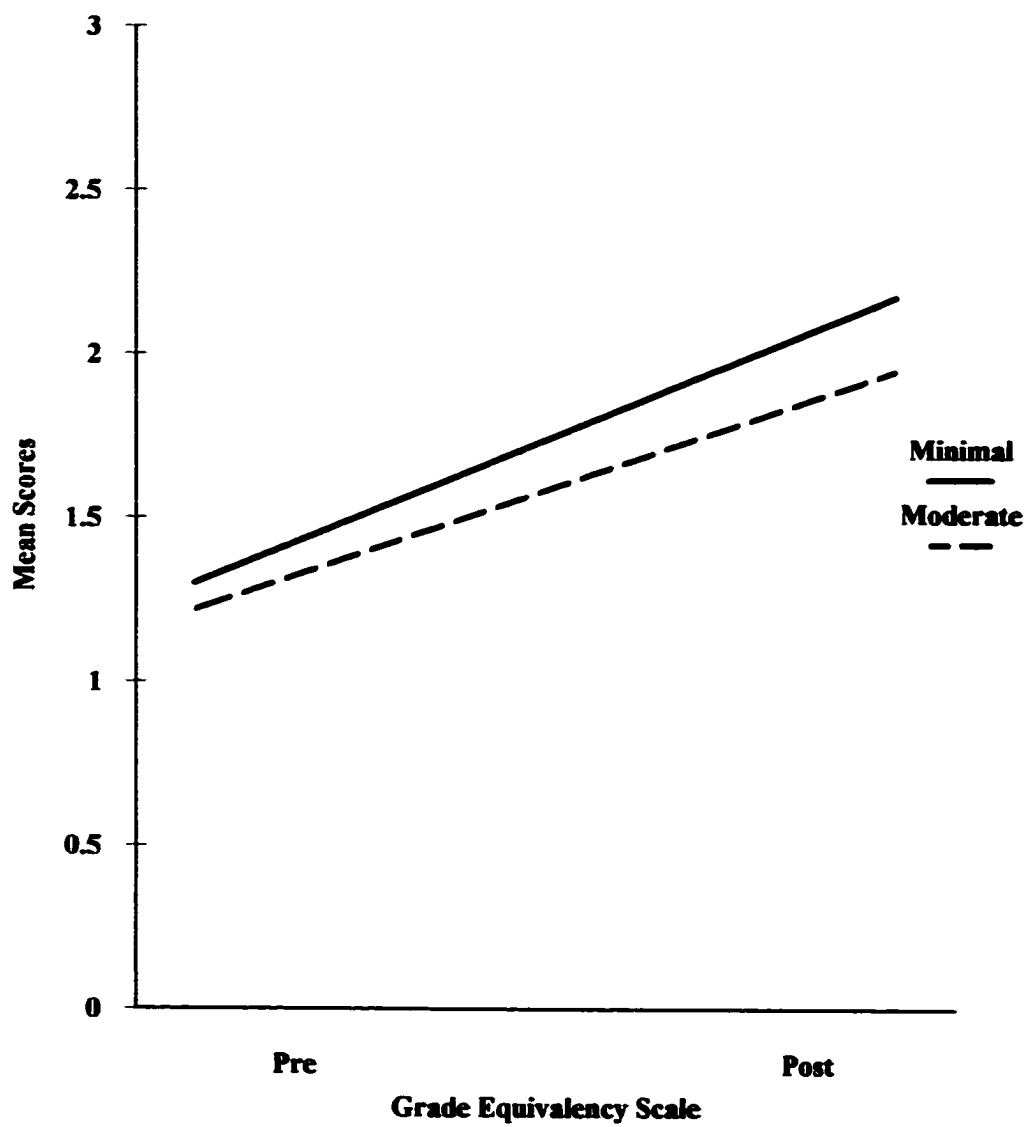
The STAR was administered again at the conclusion of the academic school year. A one-way between-groups analysis of covariance was conducted to test the differences between the two groups on the grade equivalency scale, covarying the pretest scores. Results indicated that there were no significant differences between the minimally-trained group's mean ($M = 2.175$) and the moderately-trained group's mean ($M = 1.950$), however the minimally-trained group still had higher means. Table 13 gives a complete description of the means, standards deviations and number of participants. Figure 13, Charts 1 and 2 portray a graphic illustration of the scores between the two groups.

Limitations to the interpretations of these results should be noted. Both groups contained small numbers of participants which reduced the power of the statistical tests to find significant differences between the two groups.

Table 13
Training Results
Grade Two
STAR Test

Groups	G.E. Pretest	STAR	G.E. Posttest
Minimally Trained			
Mean	1.300		2.175
Number	12		12
Std. Deviation	.406		.5172
Moderately Training			
Mean	1.220		1.950
Number	10		10
Std. Deviation	.559		.625

Figure 13
Tutor Training Grade Two STAR Results



Question 2d. Is there a difference between the pretest and posttest reading scores of grade two students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the Test For Higher Standards?

The Test For Higher Standards was administered at the beginning of the academic year and again at the conclusion of the year. The Test For Higher Standards in grade two consisted of a reading scale and a comprehension scale. To determine group equivalency an independent t-test was conducted on both scales. Pretest results indicated no significant differences on the reading scale between the minimally-trained group's mean ($M = 57.25$) and the moderately trained group's mean ($M = 46.50$), although the minimally-trained group's mean was higher. An independent t-test on the comprehension scale indicated no significant differences between the minimally-trained group's mean ($M = 66.67$) and the moderately trained group's mean ($M = 53.00$). However, the minimally-trained group's mean was higher.

Posttests for the Test For Higher Standards was administered at the conclusion of the academic school year. An ANCOVA was performed on the reading scale, covarying the pretest. Results indicated a significant difference ($p = .006$) between the minimally-trained and moderately-trained group's mean score. The moderately-trained group's mean score ($M = 65.40$) had increased significantly more than the minimally-trained group's mean score ($M = 71.00$). Posttest results on the comprehension scale of the Test For Higher Standards indicated no significant differences between the minimally-trained group's mean score ($M = 75.83$) and the moderately-trained group's

mean score ($M = 66.00$). Although the minimally-trained group had a higher mean score, the minimally-trained group had increased 11 points from the pretest score and the moderately-trained group had increased 13 points from the pretest score. Table 14 gives more details on the Test For Higher Standards Results and Figure 14, Charts 1 and 2 graphically represent the scores on each scale by line graphs.

Limitations to the results should be noted. There were a small number of participants in each group and the observed power was .146 on the scale of comprehension and .153 on the reading scale, making the statistical analysis difficult to detect differences between the groups.

Table 14
Training Results
Grade Two
Test For Higher Standards

Groups	Test For Higher Standards			
	Reading Pretest	Reading Posttest	Comprehension Pretest	Comprehension Posttest
Minimally Trained				
Mean	57.25	71.00	66.67	75.83
Number	12	12	12	12
Std. Deviation	20.53	12.45	25.35	17.30
Moderately Training				
Mean	46.50	65.40*	53.00	66.00
Number	10	10	10	10
Std. Deviation	16.79	22.29	31.64	24.13

* indicates statistical significance at the .05 level

Figure-14, Chart-1
Tutor Training Grade Two Test For Higher Standards Results

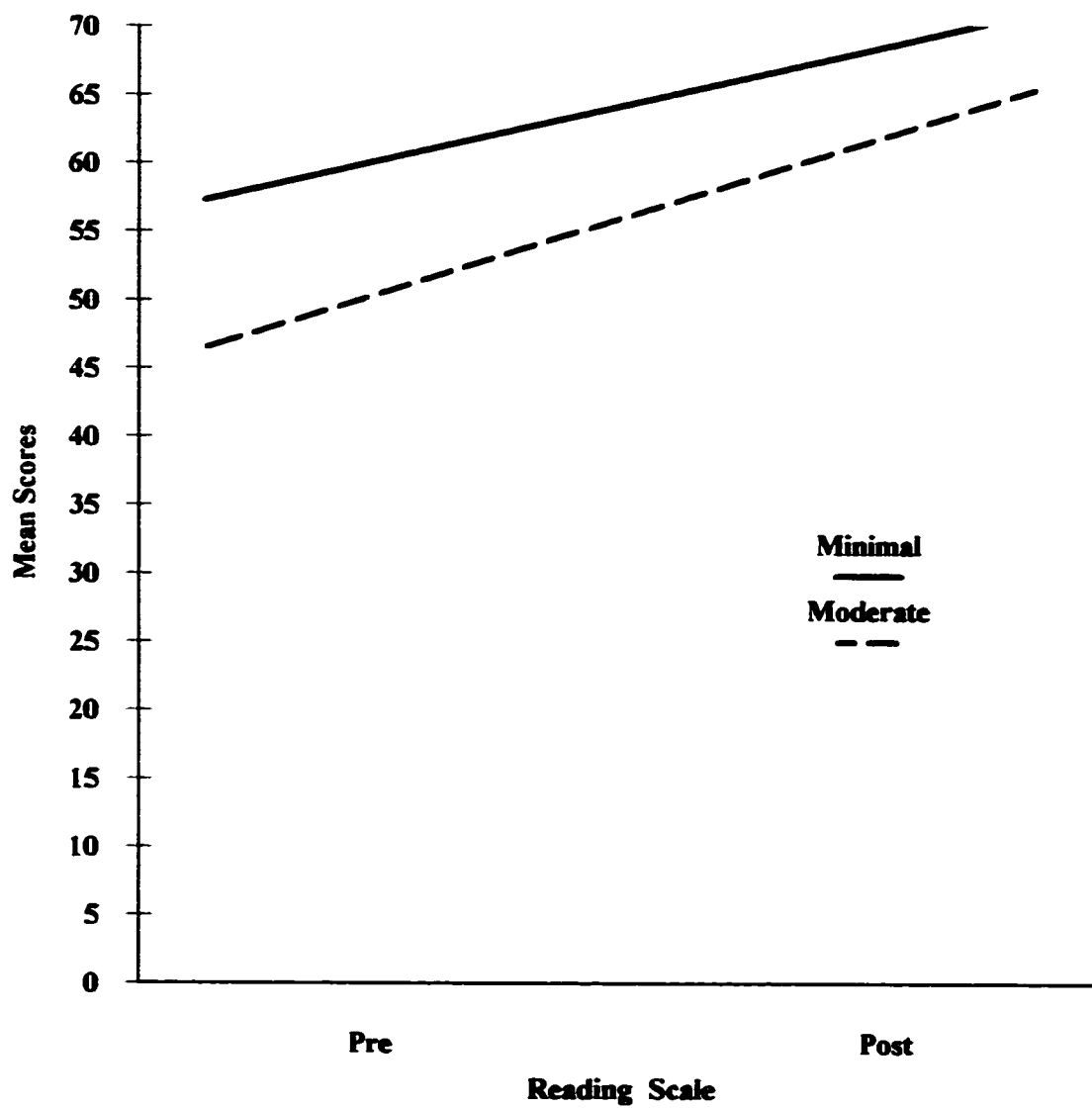
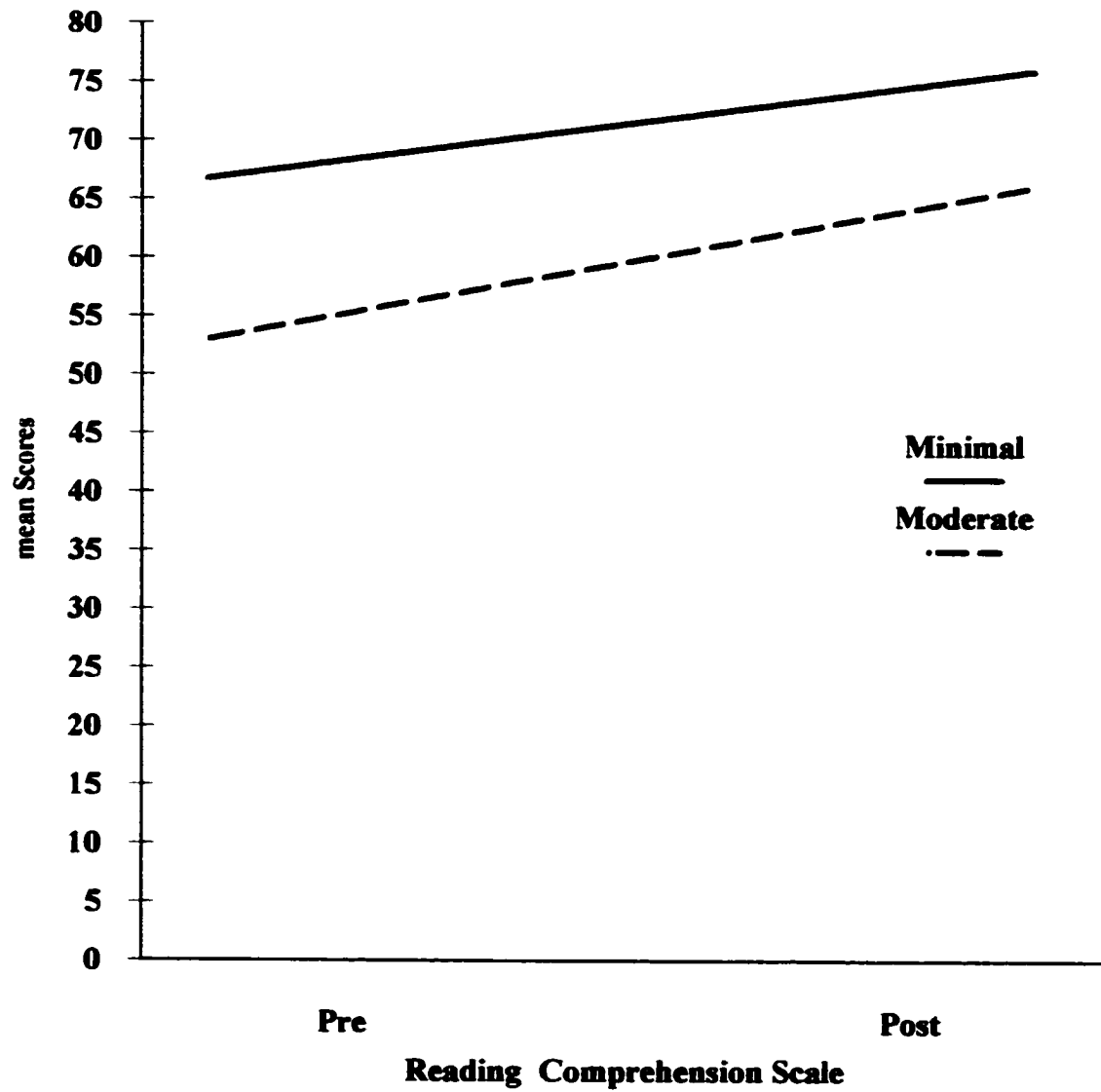


Figure-14, Chart-2
Tutor Training Grade Two Test For Higher Standards Results



Question 2e. Is there a difference between the pretest and Posttest reading scores of grade three students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the STAR test?

This research question examined the effect of moderate tutor training on grade three reading achievement as measured by the Standardized Test for Assessment in Reading (STAR). The STAR consisted of the grade equivalency scale. An independent t-test was conducted on the pretest results of the grade equivalency scale. Results indicated that the minimally-trained group's mean score ($M = 2.275$) and the moderately-trained group's mean score ($M = 1.822$) were not significantly different, however the minimally-trained group had a higher mean score.

An ANCOVA was performed on the grade equivalency scale covarying the pretest. Posttest results on the grade equivalency scale indicated that the minimally-trained group's mean ($M = 3.33$) was significantly higher ($p = .002$) than the moderately-trained group's mean ($M = 2.52$). Refer to Table 14 for a detailed comparison of means, standards deviations and number of participants. Figure 15 illustrates the scores in a line graph.

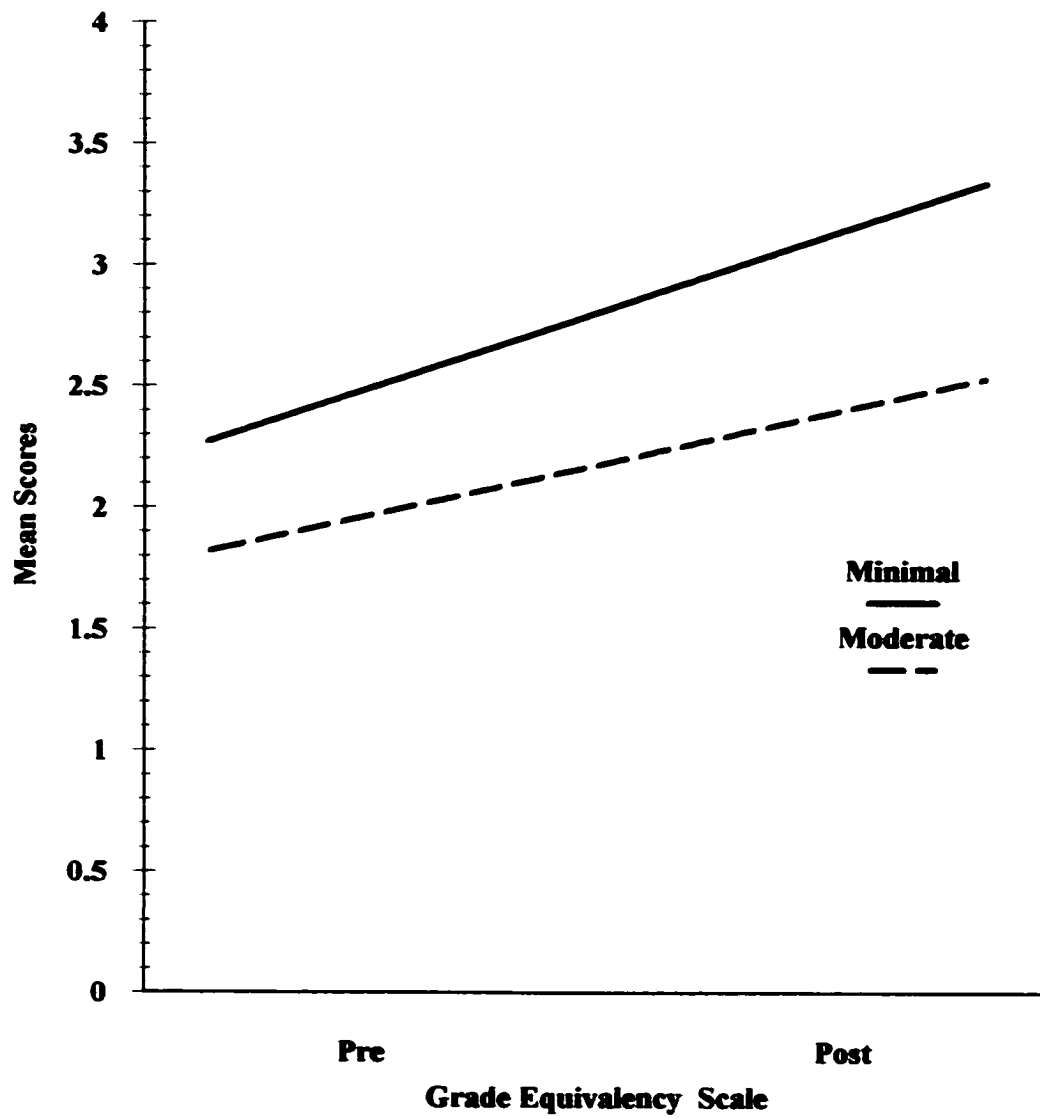
In summary, clearly the moderate tutor training did not have significant effects on grade two tuttee achievement, as measured by the STAR test, in this study. A discussion and possible explanations are explored in more detail in chapter five.

Table 15
Training Results
Grade Three
STAR Test

Groups	STAR Grade Equivalency Scale	
	Pretest	Posttest
Minimally Trained		
Mean	2.27	3.33*
Number	8	8
Std. Deviation	.544	.358
Moderate Training		
Mean	1.82	2.53
Number	9	10
Std. Deviation	.330	.373

* indicates statistical significance at the .05 level

Figure-15
Tutor Training Grade Three STAR Results



Question 2f. Is there a difference between the pretest and posttest reading scores of grade three students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the Test For Higher Standards?

The Test For Higher Standards was administered at the beginning of the academic year and again at the conclusion of the academic year. The grade three reading component of the Test For Higher Standards consisted of two scales; reading and comprehension. An independent t-test was used to compare the pretest scores. Results on the reading scale of the Test For Higher Standards indicated that the minimally-trained group's mean score ($M = 33.33$) and the moderately-trained group's mean score ($M = 34.27$) were not significantly different at the beginning of the year. Pretest results on the comprehension scale of the Test For Higher Standards indicated that the minimally-trained group's mean score ($M = 25.08$) and the moderately-trained group's mean score ($M = 34.00$) were not significantly different, however, the moderately-trained group had higher means.

ANCOVA's were performed on the posttest, covarying the pretest results. Posttest results on the scale of reading indicated no significant differences between the minimally-trained group's mean score ($M = 47.45$) and the moderately-trained group's mean score ($M = 42.18$), however the minimally-trained group had a higher mean. Posttest results on the scale of comprehension indicated no significant differences between the minimally-trained group's mean score ($M = 43.45$) and the moderately-trained group's mean score ($M = 38.55$), however, again the minimally-trained group had

a higher mean. Table 16 lists a description of the results and Figure 16, Charts 1 and 2 illustrate the mean scores of the two groups in line charts.

In summary, it appears that the moderate training component of this study did not have a significant impact on grade three tutees achievement as measured by the Test For Higher Standards.

Table 16
Training Results
Test For Higher Standards
Grade Three

Groups	Test For Higher Standards			
	Reading Pretest	Reading Posttest	Comprehension Pretest	Comprehension Posttest
Minimally Trained				
Mean	33.33	47.45	25.08	43.45
Number	12	11	11	11
Std. Deviation	13.73	9.54	12.57	13.04
Moderate Training				
Mean	34.27	42.18	34.00	38.55
Number	11	11	11	11
Std. Deviation	10.03	15.96	9.64	17.30

Figure-16 ,Chart-1
Tutor Training Grade Three Test For Higher Standards Results

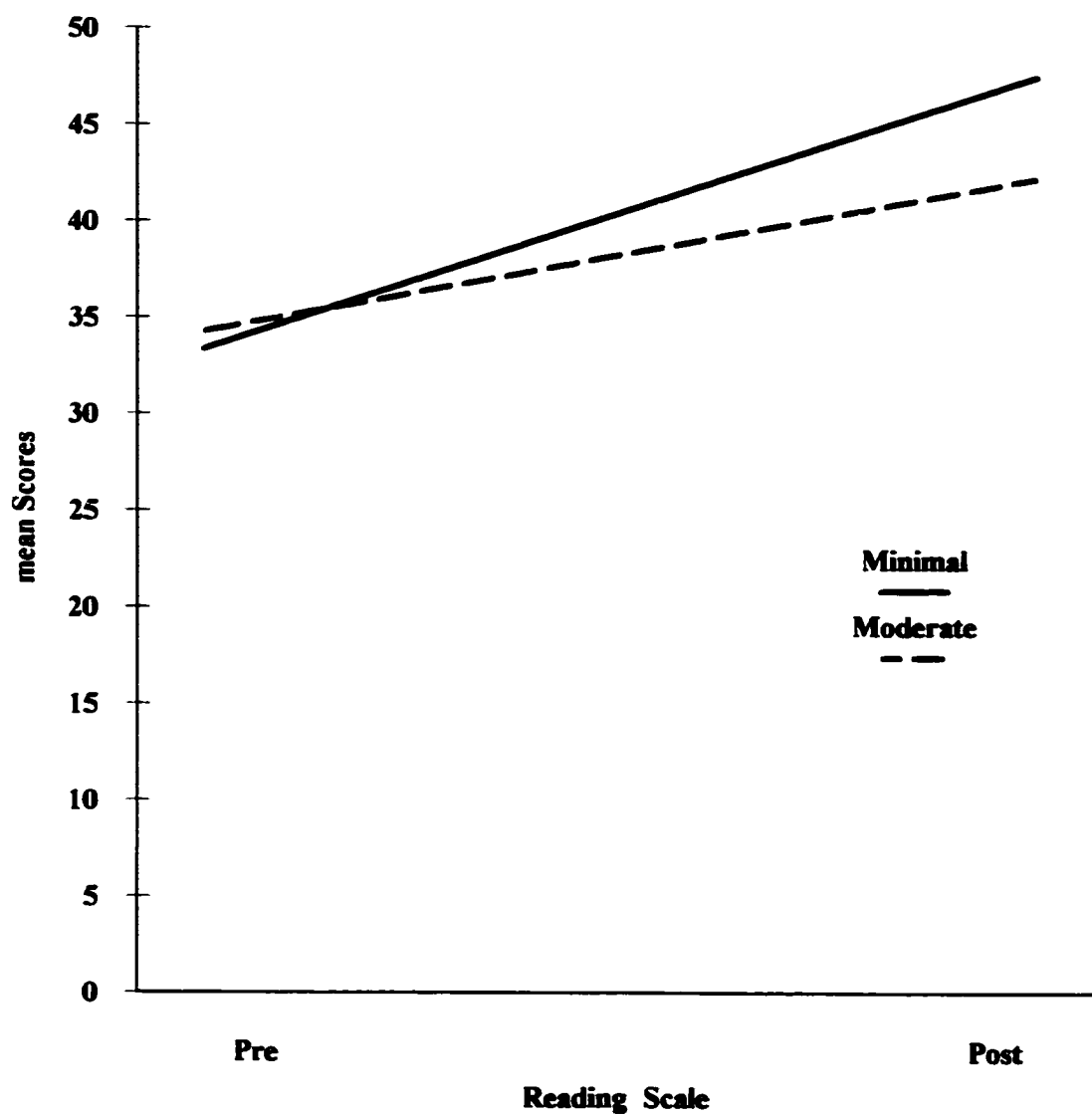
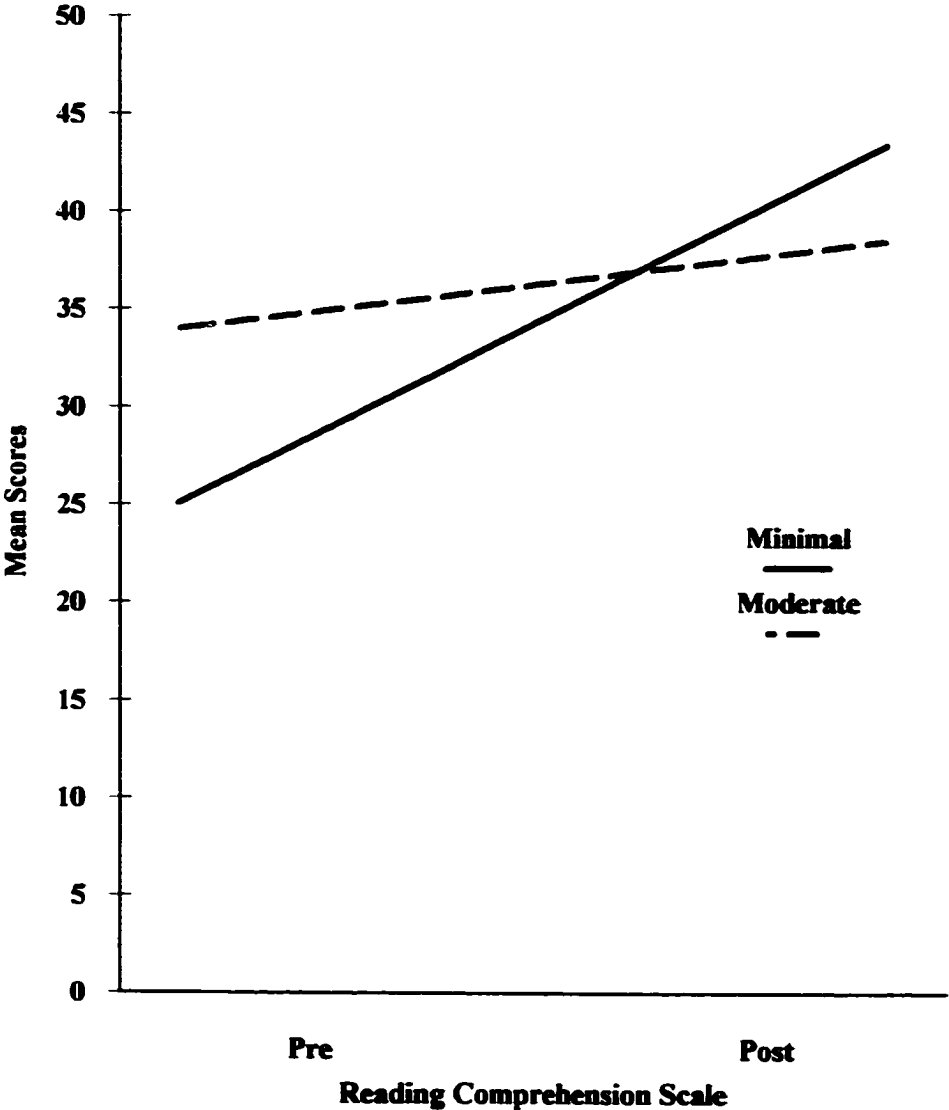


Figure-16, Chart-2
Tutor Training Grade Three Test For Higher Standards Results



Question 2g. Is there a difference in the pretest and posttest reading scores of grade three students who were taught by moderately-trained tutors and those who were taught by minimally-trained tutors as measured by the SOL test?

The Standards of Learning Test is administered at the end of the school year in grade three. Results for the reading component consists of two scales; word analysis and reading. An independent t-test was conducted for both scales. The pretest results of the word analysis component indicated no significant differences between the minimally-trained group's mean score ($M = 33.67$) and the moderately-trained group's mean score ($M = 28.10$). The pretest results of the reading component also indicated no significant differences between the two groups; minimally-trained group's mean score ($M = 30.33$) and moderately-trained group's mean score ($M = 28.68$). See Table 17 for a visual comparison of the results.

In summary 12 hours of moderate tutor training did not have significant effects for the tutees reading achievement on most tests. The only significance found for the tutees were on the grade two Test for Higher Standards and the grade one word identification scale of the PALS Test. It should be noted that in grade three the minimally-trained tutees performed significantly higher on the grade equivalency scale of the STAR test.

Table 17
Training Results
SOL's
Grade Three

Groups	Standards of Learning	
	Word Analysis	Reading
Minimally Trained		
Mean	33.67	30.33
Number	9	9
Std. Deviation	6.69	3.20
Moderate Training		
Mean	28.10	27.20
Number	10	10
Std. Deviation	9.45	6.43

In summary, tutoring training across all grade levels appeared to have little impact on tutee achievement. Due to the unequal amounts of tutoring time that the tutor checklists indicated between the minimally-trained group (1176 hours) and the moderately-trained group (366 hours), the data analysis for each grade level was also performed covarying tutoring time. The results indicated no significant differences in tutee achievement with time covaried. It should be noted that both groups were

comprised of small number of participants. The observed power on most of the data analysis could have made it difficult for the analysis to determine significance.

Question 3. Is there a change over the course of an academic year in the America Reads tutees' attitude as measured by the Elementary Reading Attitude Survey as compared to the comparison group?

This research question investigated the reading attitudes, as measured by the Elementary Reading Attitude, of participants in the America Reads Tutoring program compared to the attitudes of the comparison group. The Elementary Reading Attitude consisted of two scales, recreational reading and academic reading and a total summed score.

Question 3a. Is there a change over the course of an academic year in the America Reads tutee's reading attitude in kindergarten as measured by the Elementary Reading Attitude Survey compared to the comparison group?

An independent samples t-test was conducted to examine group differences on the summed score of the survey. Results indicated that the comparison group ($M=63.32$) had significantly higher scores ($p=.041$) than the tutored group ($M=54.07$). An independent t-test on the academic scale indicated that the comparison group ($M=31.88$) had significantly higher scores ($p=0.17$) than the tutored group ($M=26.00$). An independent t-test was performed on the recreational scale, results indicated that there were no significant differences between the comparison group ($M=31.36$) and the tutored group ($M=28.07$).

The Elementary Reading Attitude Survey was administered again at the conclusion of the academic year. An ANCOVA was performed on the posttest summed

score. Results indicated no significant differences between the comparison group (M=64.92) and the tutored group (M=69.00). Results of an ANCOVA on the recreational scale indicated no significant differences between the comparison group (M=32.69) and the tutored group (M=34.82). Results of an ANCOVA on the academic scale indicated no significant differences between the comparison group (M=32.23) and the tutored group (M=69.00). Table 18 lists the results from this analysis and Figure 18 portrays the results in a line graph.

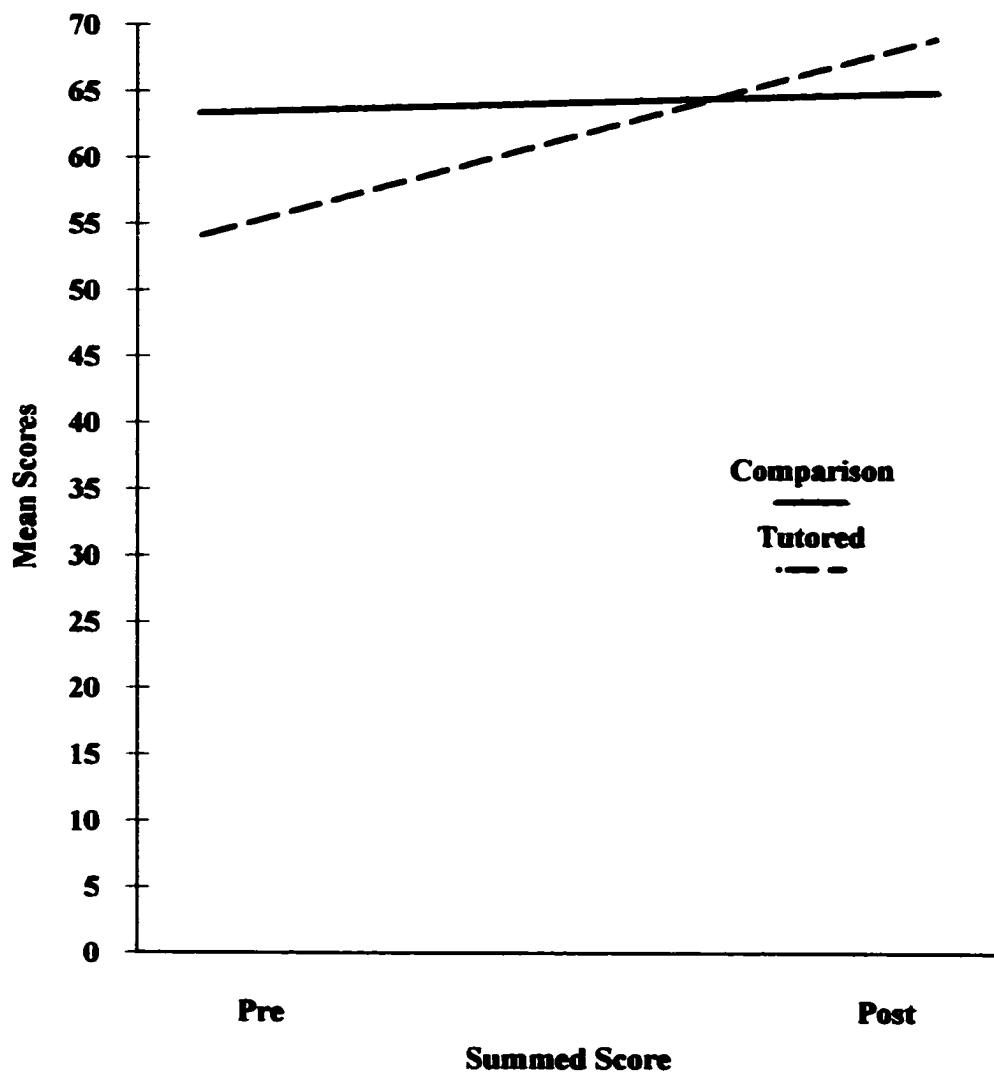
In summary, the results indicated that kindergarten students' participation in the America Reads Tutoring program did not significantly improve tutees attitude when compared with a comparison group, however the tutored groups' attitude improved 14.93 points and the comparison groups' attitude improve 1.60 points. There are several possible explanations as to why to statistical test failed to find significance between the scores. The two groups had unequal *n* sizes and small number of participants. On the pretest measure the comparison group had 25 students while the tutored group only had 15 and on the posttest the comparison group lost twelve students. It is unclear what effect this loss had on the final results. In addition, the power was (.149) which is considered low power for a statistical procedure.

Table 18
Attitude Survey Results
Kindergarten

Groups	Attitude Survey Rec. Pretest	Attitude Survey Rec. Posttest	Attitude Survey Acad. Pretest	Attitude Survey Acad. Posttest	Attitude Survey Summed Pretest	Attitude Survey Summed Posttest
Comparison						
Mean	31.36	32.69	31.88 *	32.33	63.32*	64.92
Number	25	13	25	13	25	13
Std. Deviation	7.05	4.71	6.64	6.10	13.59	10.51
Tutored						
Mean	28.07	34.82	26.00	34.45	54.07	69.00
Number	15	11	15	11	15	11
Std. Deviation	7.53	4.77	7.37	8.78	13.05	12.07

* indicates statistical significance at the .05 level

Figure-18
Attitude Survey Results
Kindergarten



Question 3b. Is there a change over the course of an academic year in the America Reads tutees' reading attitude in grade one as measured by the Elementary Reading Attitude Survey as compared to the comparison group?

The Elementary Reading Attitude Survey was administered at the beginning of the academic year and again at the conclusion of the year. An independent t-test was conducted on the summed score of the survey. Results indicated no significant differences between the tutored ($M=66.43$) and the comparison group ($M=57.50$) at the .05 level. A one-way multivariate analysis was conducted on the pretest scales of recreational and academic attitude. Results indicated that the comparison group ($M=34.11$) had a significantly higher score ($p=.025$) on academic attitude than the tutored group ($M=29.33$). There were no significant differences on the recreational attitude scale. See Table 19 for more details.

A one-way analysis of covariance on the posttest administration of the Elementary Reading Attitude Survey indicated no significant differences between the comparison and tutored group on the summed scale. A one-way multivariate analysis of covariance indicated no significant differences between the two groups on the scale of recreational or academic reading attitudes. See Table 19 for more details and Figure 19 for a graphic representation of the mean scores of the two groups.

In summary, the comparison group began the school year with a significantly higher score on academic reading attitude and concluded the school year with no significant differences. It should be noted that the comparison group began the year with a 9 point higher mean than the tutored group. Most of the difference in the scores were in the academic reading attitude. During the course of the school year the group's attitude

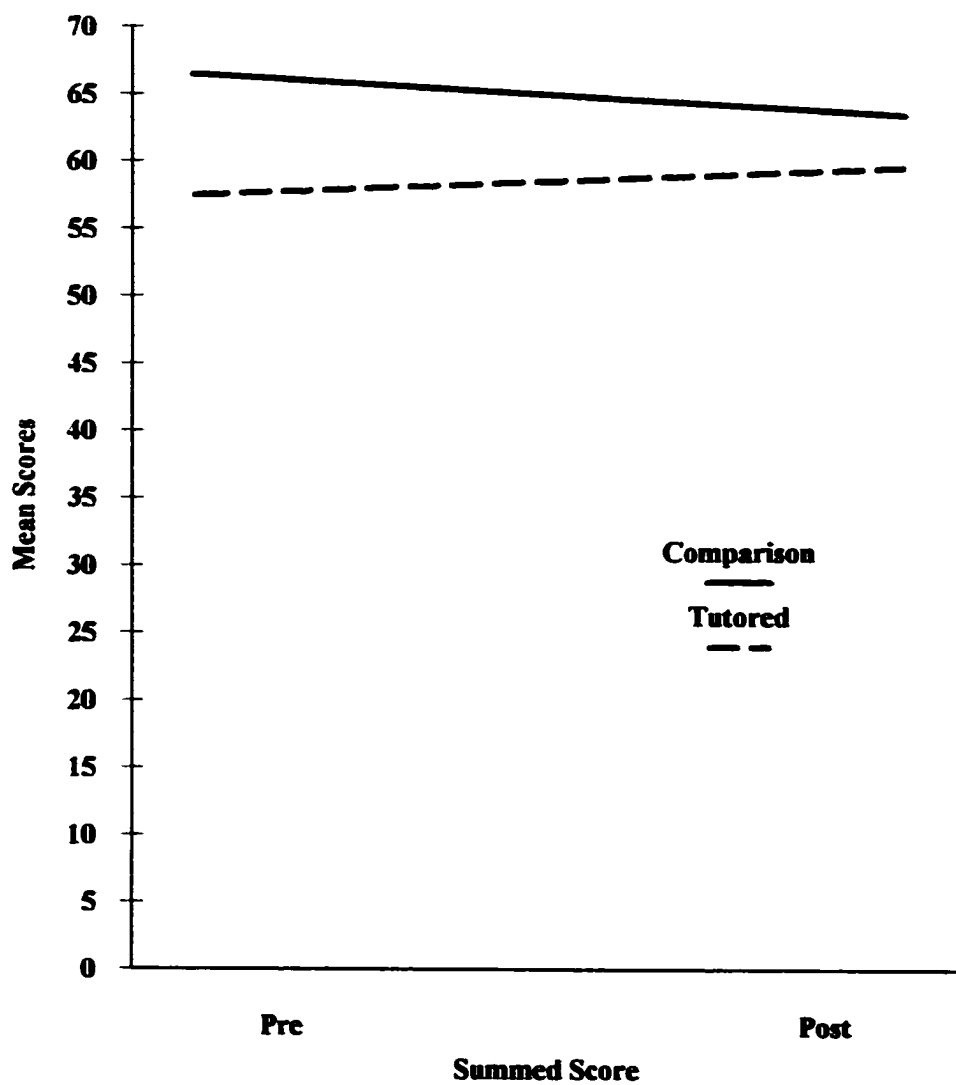
dropped by 3 points and the tutored group increased by 2 points, however the comparison group still had a higher mean score. Limitations to these results should be noted. The number of participants in each group were unequal. The tutored group only contained a small number of participants in contrast to the comparison group. This created low power in the statistical analysis.

Table 19
Grade One
Attitude Survey Results
Grade One

Groups	Elementary Reading Attitude Survey					
	Recre. Pretest	Recre. Posttest	Acad. Pretest	Acad. Posttest	Summed Pretest	Summed Posttest
Comparison						
Mean	32.49	30.63	34.11*	32.93	66.43	63.44
Number	35	27	35	27	35	27
Std. Deviation	5.43	6.77	4.56	7.10	9.76	13.35
Tutored						
Mean	27.83	30.83	29.33	28.75	57.50	59.58
Number	6	12	6	12	6	12
Std. Deviation	6.79	7.70	5.13	8.72	12.11	15.97

* indicates statistical significance

Figure-19
Attitude Survey Results
Grade One



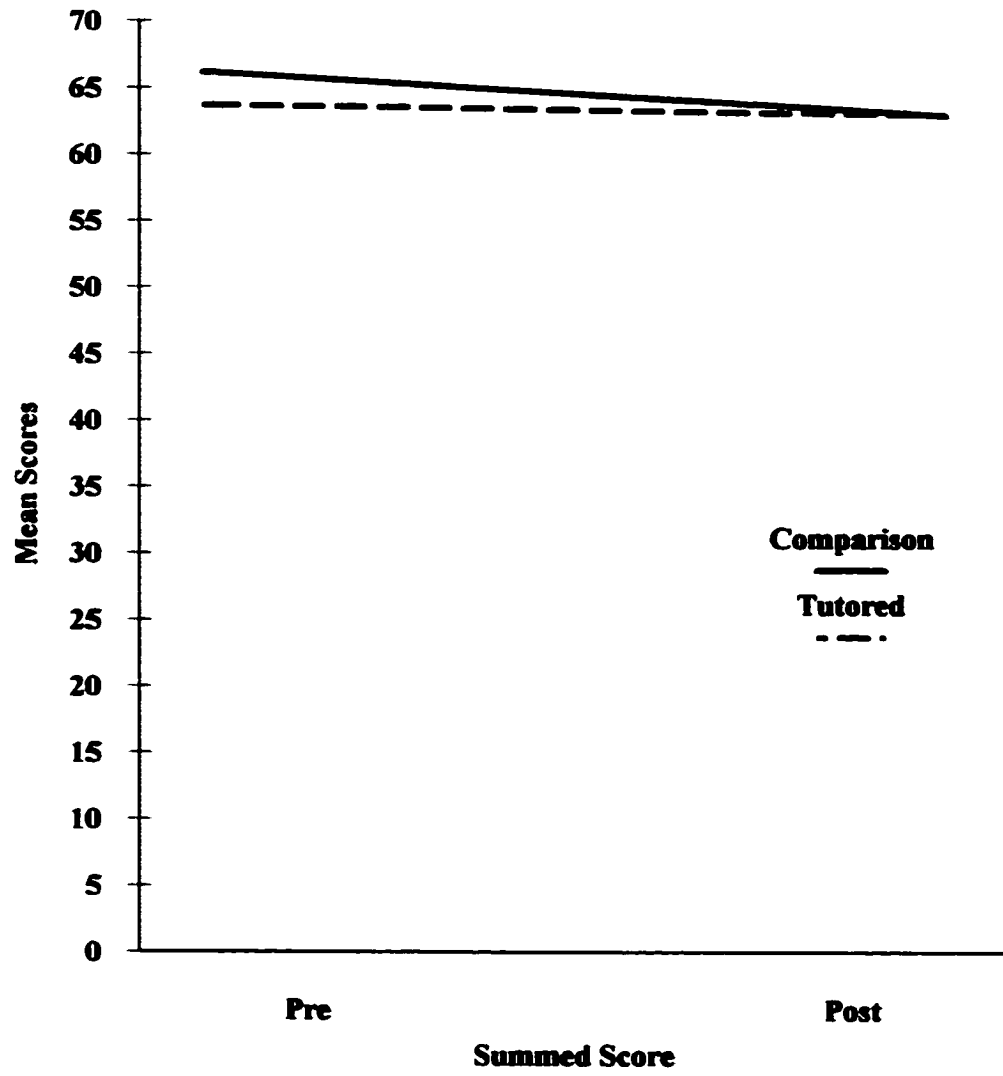
Question 3c. Is there a change over the course of an academic year in the America Reads tutees' reading attitude in grade two as measured by the Elementary Reading Attitude Survey as compared to the comparison group.

An independent samples t-test was administered on the pretest summed scale of the survey. Results indicated no significant differences between the comparison group (M=32.09) and the tutored group (M=31.65). A one-way multivariate analysis indicated no significant differences between the two groups on recreational reading attitude and academic reading attitude. A one-way analysis of covariance was employed on the overall summed scale with results indicating no significant differences between the tutees in the America Reads program and the comparison group. A one-way multivariate analysis of covariance also indicated no significant differences between the groups on posttest measures of recreational and academic attitude. See Table 20 for means, standard deviations and number of participants and Figure 20 for a graphic representation of the scores.

Table 20
Attitude Survey Results
Grade Two

Groups	Elementary Reading Attitude Survey					
	Recre. Pretest	Recre. Posttest	Acad. Pretest	Acad. Posttest	Summed Pretest	Summed Posttest
Comparison						
Mean	32.09	31.47	34.04	31.37	66.13	62.84
Number	23	19	23	19	23	19
Std. Deviation	5.14	6.74	4.51	7.57	9.31	13.27
Tutored						
Mean	31.65	29.58	32.06	33.11	63.71	62.95
Number	17	19	17	19	17	19
Std. Deviation	6.53	6.39	5.67	6.29	11.02	11.08

Figure-20
Attitude Survey Results
Grade Two



Question 3d. Is there a change over the course of an academic year in the America Reads tutees' reading attitude in grade three as measured by the Elementary Reading Attitude Survey as compared to the comparison group?

This analysis employed an independent t-test to analyze the overall pretest summed score. Results from this analysis indicated that the comparison group had an overall pretest score of (M=66.13) and the tutored group a score of (M=63.71). A one-way multivariate analysis of variance was performed on the scales of recreational attitude and academic attitude. No significant pretest differences were found between the two groups. Refer to Table 21 for more details.

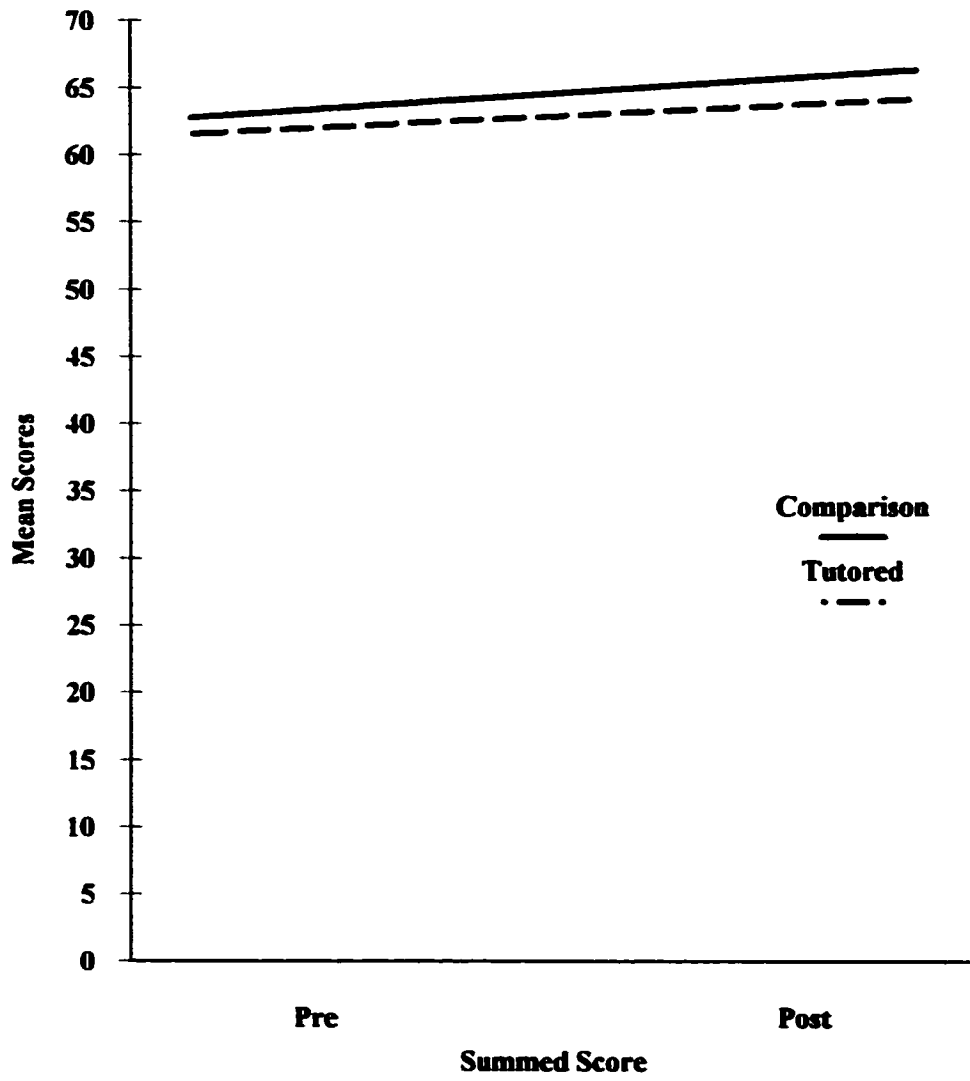
An analysis of covariance was performed on the posttest summed score. Results administered at the conclusion of the school year. Results indicated no significant differences between the comparison group (M=62.85) and the tutored group (M=62.95). A one-way multivariate analysis of covariance was performed on the posttest scales of recreational attitude and academic attitude. No significant differences in attitude were found between the two groups. See Table 21 for means, standard deviations and number of participants. See also Figure 21 for a graphic representation of the two group's mean scores.

In summary, no significant differences in grade three students' reading attitudes existed between the two groups at the beginning of the school year. At the posttest administration of the Elementary Reading Attitude Survey, America Reads participants did not change their reading attitudes significantly when compared to a comparison group of students.

Table 21
Attitude Survey Results
Grade Three

Groups	Elementary Reading Attitude Survey					
	Recre. Pretest	Recre. Posttest	Acad. Pretest	Acad. Posttest	Summed Pretest	Summed Posttest
Comparison						
Mean	29.87	32.33	32.87	33.92	62.75	66.25
Number	16	12	16	12	16	12
Std. Deviation	3.26	3.50	5.45	4.68	7.67	7.50
Tutored						
Mean	29.85	32.43	31.55	31.71	61.55	64.14
Number	20	14	20	14	20	14
Std. Deviation	5.86	4.43	5.49	5.99	10.26	9.66

Figure-21
Attitude Survey Results
Grade Three



An overall comparison on reading attitudes was conducted for all grade levels combined. An independent samples t-test was conducted on the pretest administration of the Elementary Reading Attitude given at the beginning of the academic year and an ANCOVA on the posttest administration of the survey given at the end of the year. Results for all levels combined indicated no significant changes in the America Reads participants' attitudes after participating in the program.

Question 4. Is there a relationship between the students reading attitude and reading achievement?

This question examined the relationship of student's reading attitude, as measured by the Elementary Reading Attitude, and reading achievement, as measured by the standardized tests already in place in the school system for each grade level. Analysis for homoscedasticity, linearity and normality were performed for each achievement test to ensure no violations.

Question 4a. Is there a relationship between the student's reading attitude and reading achievement in kindergarten?

The predictor variable was student (this category included both tutored and comparison students). The criterion variable was the overall summed score on the Phonological Awareness Literacy Screening (PALS) test. Results from the correlation indicated a non-significant negative (-.054) correlation between the reading attitudes and reading attitude in kindergarten. See Table 22 for a description of the results.

Question 4b. Is there a relationship between the student's reading attitude and reading achievement in grade one?

The PALS test was used to measure reading achievement in grade one. The test consisted of a summed score and a scale of word identification. Results on the correlation on the summed scale indicated a negative non-significant (-.176) relationship between reading attitude and reading achievement in grade one. Results on the correlation on the word identification scale indicated a non-significant (.069) relationship between reading attitude and reading achievement. See Table 22 for more details.

In grade two, reading achievement was measured by the STAR test and the Test For Higher Standards. For the purposes of this research the STAR scale of grade equivalency was analyzed. The Test For Higher Standards consisted of a reading scale and a comprehension scale.

Results of a correlation on the STAR grade equivalency scale indicated a non-significant relationship (.308) between reading attitude and reading achievement. Please Table 22 for full details.

Results of the correlation on the Test For Higher Standards reading scale indicate a non-significant relationship (.161) between reading attitude and reading achievement. Results of the correlation on the comprehension scale also indicated a non-significant relationship (.030).

Grade three reading achievement was measured by the Test For Higher Standards, STAR and the SOL test. The Test For Higher Standards consisted of two scales, comprehension and reading. The grade equivalency scale of the STAR test was analyzed. The SOL consisted of one measure that directly measured reading, the reading scale.

Correlation results on the Test For Higher Standards comprehension scale indicated a non-significant negative (-.339) relationship between reading attitude and reading achievement. Results on the correlation for reading indicated a significant ($p=.019$) negative correlation (-.475) between reading achievement and reading attitude. A non-significant negative relationship (-.343) was found between reading achievement and reading attitude as measured by the reading scale of the SOL test. A non-significant relationship (-.169) was found on the STAR grade equivalency scale. Table 22 lists the results for all grade levels.

In summary most of the correlations performed in this study indicated no significant relationships between reading attitude and reading achievement, with the exception of grade three students. A significant negative relationship was found between reading attitude and reading achievement on the SOL test and on the reading portion of the Test For Higher Standards.

Table 22
Reading Attitudes and Reading Achievement
Correlation Results
Grades Kindergarten – Grade Three

Grades	r level	p level	number
Kindergarten PALS	-.054	.793	26
Grade One PALS Summed	-.176	.311	35
Word ID	-.069	.694	35
Grade Two STAR GE	-.308	.064	37
Higher Standards Reading	.161	.343	37
Comprehension	.030	.860	37
Grade Three STAR GE	-.169	.453	22
Higher Standards Reading	-.475*	.019	24
Comprehension	-.339	.105	24
SOL	-.343	.109	23

* indicates statistical significance at the .05 level

Question 5. Is there a difference in female students attitudes and male students attitudes after participating in a tutoring intervention program?

This research question examined reading attitudes, as measured by the Elementary Reading Attitude Survey and compared female attitudes versus male attitudes that participated in the America Reads Program. The Elementary Reading Attitude Survey consisted of a total summed score. This total summed score was comprised of a recreational score and an academic score.

Question 5a. Is there a difference in kindergarten female students attitudes and male students attitudes after participating in a tutoring intervention program?

An independent samples t-test was employed on the pretest summed score of the Elementary Reading Attitude Survey at kindergarten level. Results indicated no significant differences between female ($M=54.38$) and male ($M=53.71$) attitudes. A correlation was performed on the two dependent variables, recreational attitude and academic attitude. A significant correlation at the .01 level was found ($r=.709$). Pallant (2001) indicates that dependent variables with correlations below .8 do not create a situation called multicollinearity which would violate an assumption of the MANOVA. Therefore a multivariate analysis of variance was performed on the pretest scores of the two variables. Results on the MANOVA indicated no significant differences between the two groups. Table 23 lists the means and other details of this data analysis.

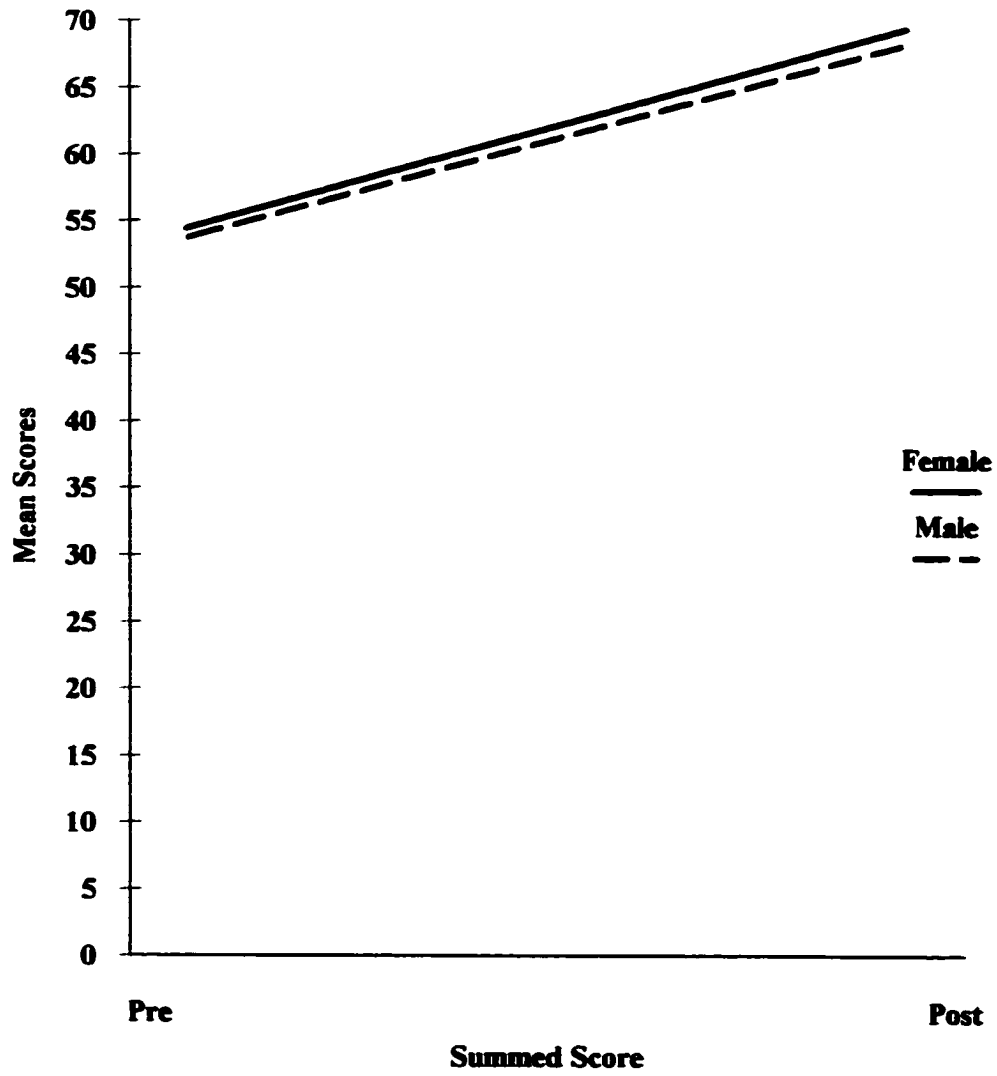
A one-way between-groups ANCOVA was employed on the summed score posttest covarying the pretest scores. Results indicated no significant difference between females ($M=69.43$) and males ($M=68.25$). A multivariate analysis of covariance was

performed on the scales of recreational and academic attitudes, covarying the pretest scores. Results indicated no significant differences between female and male attitudes. Table 23 contains the means, number of participants and standard deviations for this data analysis and Figure 23 depicts a graphic representation of the mean scores. It should be noted that the *n* size in this data analysis is small, however this probably did not affect the result of the data analysis since the difference in the mean scores of the two groups were small.

Table 23
Female and Male Reading Attitudes
Kindergarten Results

Groups	Elementary Reading Attitude Survey					
	Rec Pretest	Rec Posttest	Acad Pretest	Acad Posttest	Summed Pretest	Summed Posttest
Female						
Means	27.75	35.86	26.63	33.57	54.38	69.43
Number	8	7	8	7	8	7
Std. Deviation	6.34	4.10	6.67	6.88	11.66	10.61
Male						
Mean	28.43	33.00	25.59	36.00	53.71	68.25
Number	7	4	7	4	7	4
Std. Deviation	6.34	5.94	8.58	12.54	15.43	16.09

Figure-23
Female and Male Attitudes
Kindergarten Results



Question 5b. Is there a difference in grade one female students attitudes and male students attitudes after participating in a tutoring intervention program?

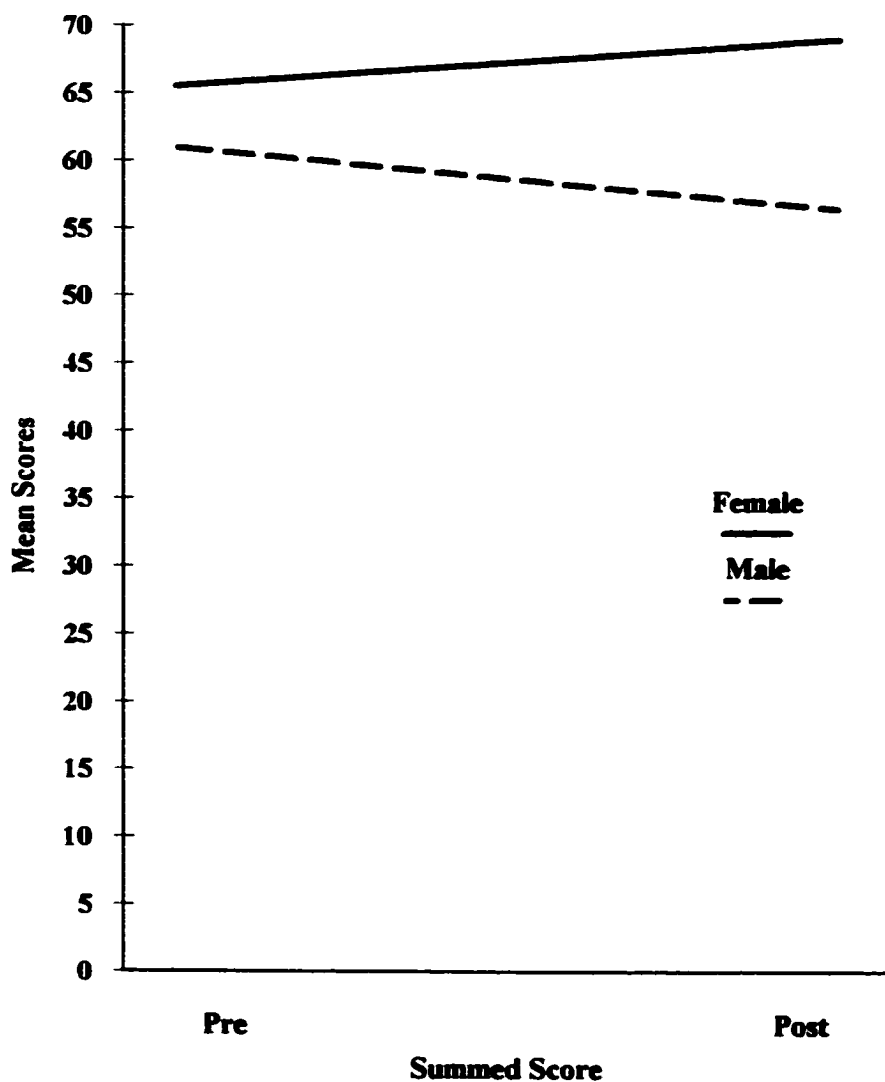
An independent samples t-test was performed on the pretest summed score of the Elementary Reading Attitude Survey. Results indicated that female (M=28.00) and the male (M=27.67) participants in the America Reads tutoring program did not have significantly different attitudes upon entering the program. A multivariate analysis of variance (MANOVA) was performed on the two dependent variables, recreational and academic attitudes. Results indicate no significant differences between female and male attitudes. Please see Table 24 for more details.

A one-way analysis of covariance was performed on the posttest summed score. Results indicated no significant differences between the female (M=58.00) and the male (M=57.00). A one-way multivariate analysis of covariance was performed on the posttest scales of recreational and academic attitude. The findings from this analysis indicates no significant differences between the two groups on either scale. Please see Table 24 for more details and Figure 24 for a graphic illustration of the mean scores of the two groups.

Table 24
Female and Male Reading Attitude
Grade One Results

Groups	Elementary Reading Attitude Survey					
	Rec Pretest	Rec Posttest	Acad Pretest	Acad Posttest	Summed Pretest	Summed Posttest
Female						
Mean	28.00	34.33	29.33	34.67	58.00	69.00
Number	3	3	3	3	3	3
Std. Deviation	4.58	8.14	5.77	7.57	11.36	15.72
Male						
Mean	27.67	29.67	29.33	26.78	57.00	56.44
Number	3	9	3	9	3	9
Std. Deviation	9.71	7.66	5.69	8.53	15.39	15.64

Figure-24
Female and Male Reading Attitudes
Grade One Results



Question 5c. Is there a difference in grade two female students attitudes and male students attitudes after participating in a tutoring intervention program?

An independent samples t-test was performed on the pretest scale of summed score. Results indicated a significant difference ($p=.015$) between females ($M=62.07$) and males ($M=71.33$). A one-way multivariate analysis was performed on the recreational and academic scales. Posttest results indicated no significant differences between females and males on either scale. Please see Table 25 for more details.

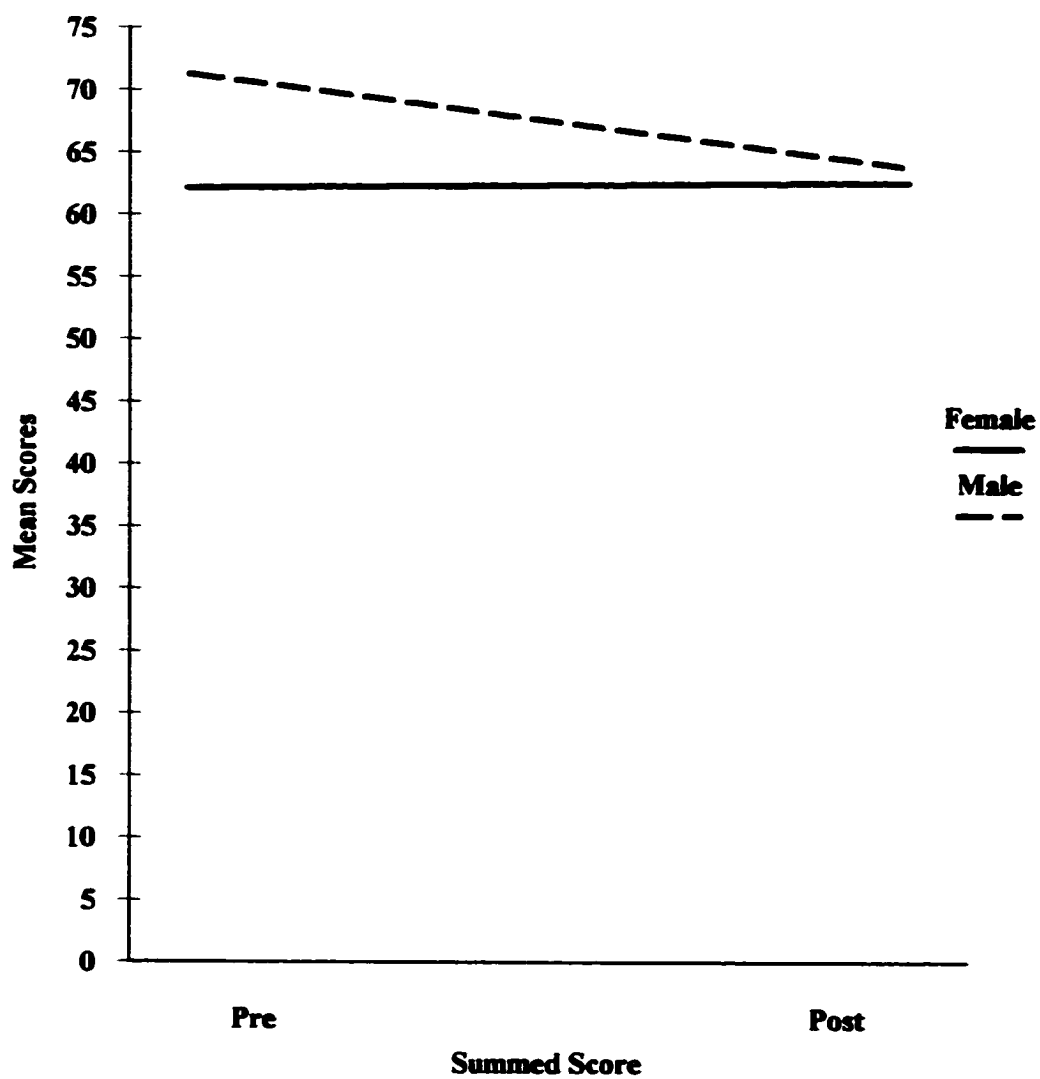
A one-way analysis of covariance was performed on the summed scale posttest, covarying the pretest. Results indicated no significant differences between females ($M=62.54$) and males ($M=63.83$). A one-way multivariate analysis of covariance was performed on the posttest scales of recreational and academic attitudes. Results indicated no significant differences between males and females on either scale. Please see Table 25 for more details. See also Figure 25 for a line graph depicting the mean scores of the two groups.

Table 25
Female and Male Reading Attitude
Grade Two Results

Groups	Elementary Reading Attitude Survey					
	Rec Pretest	Rec Posttest	Acad Pretest	Acad Posttest	Summed Pretest	Summed Posttest
Females						
Mean	30.64	29.15	31.43	33.00	62.07	62.54
Number	14	13	14	13	14	13
Std. Deviation	6.70	7.73	5.94	6.40	11.51	12.69
Males						
Mean	36.33	30.50	35.00	33.33	71.33*	63.83
Number	3	6	3	6	3	6
Std. Deviation	3.06	1.38	3.46	6.62	2.31	7.36

* indicates statistical significance at the .05 level

Figure-25
Female and Male Reading Attitudes
Grade Two Results



Question 5d. Is there a difference in grade three female students attitudes and male students attitudes after participating in a tutoring intervention program?

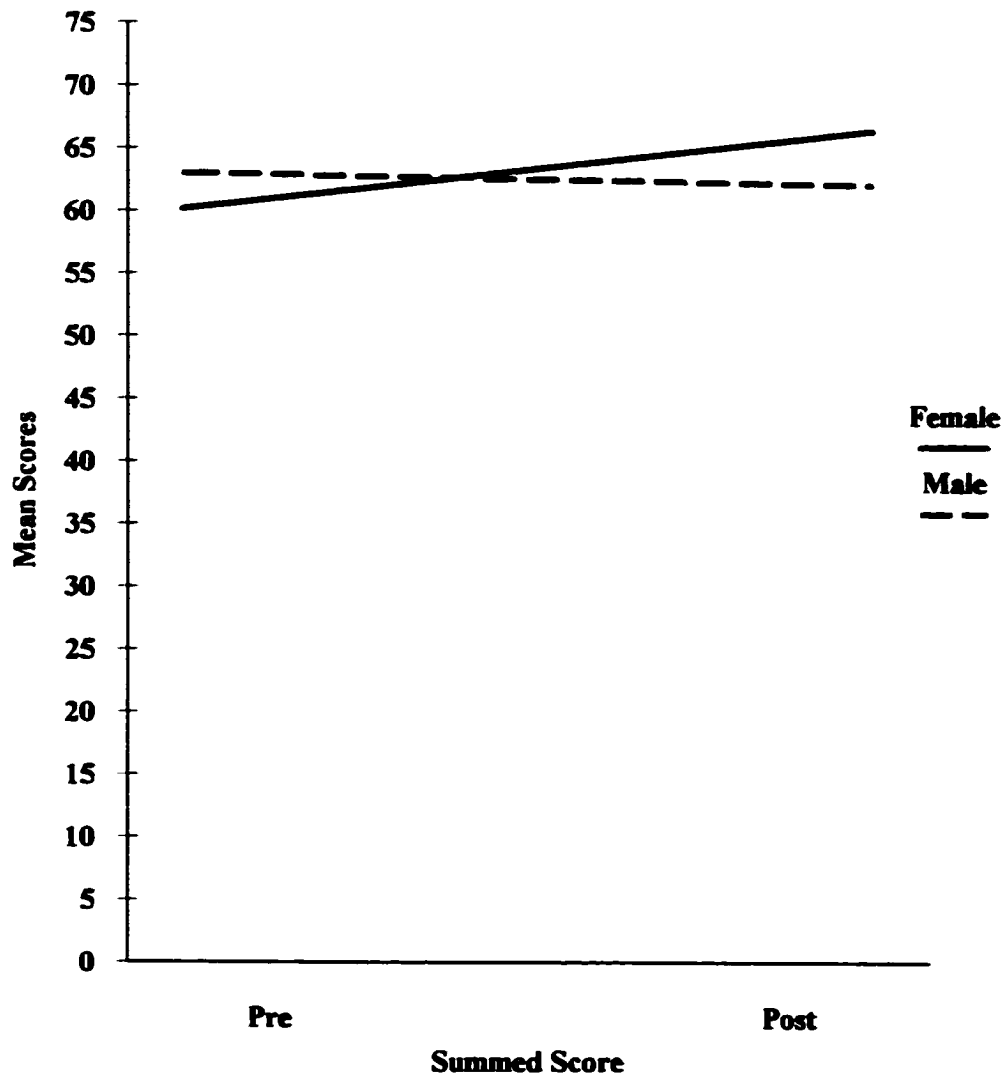
An independent samples t-test was performed on the summed scale pretest of the Elementary Reading Attitude Survey. Results indicated no significant differences between female attitudes (M=29.30) and male attitudes (M=30.40). A one-way multivariate analysis of variance was performed on the scales of recreational and academic attitudes. No significant differences were found between pretest scores of female and male attitudes. Please see Table 26 for more details.

A one-way analysis of covariance was performed on the posttest scale of summed score, covarying the pretest score. Results indicated no significant differences between the two groups; females (M=66.29) and males (M=62.00). A one-way multivariate analysis of covariance was performed on the posttest administration of the recreational and academic attitude scale. Results indicated no significant differences between the two groups. See Table 26 for number of participants, standard deviations and mean scores. See also Figure 26 for a line graphic illustrating the mean scores of the two groups.

Table 26
Female and Male Reading Attitudes
Grade Three Results

Groups	Elementary Reading Attitude Survey					
	Rec Pretest	Rec Posttest	Acad Pretest	Acad Posttest	Summed Pretest	Summed Posttest
Female						
Mean	29.30	32.71	30.00	33.57	60.10	66.29
Number	10	7	10	7	10	7
Std. Deviation	5.98	5.38	6.70	5.83	11.44	10.87
Male						
Mean	30.40	32.14	32.60	29.86	63.00	62.00
Number	10	7	10	7	10	7
Std. Deviation	6.00	3.67	4.03	5.98	9.32	8.56

Figure-26
Female and Male Reading Attitudes
Grade Three Results



Question 6: Is there a difference in the strategies that moderately-trained and minimally-trained tutors implement in their tutoring sessions?

In order to obtain data on the activities that occurred during tutoring sessions a tutor checklist was created (see Appendix A). Two types of checklists were available for the tutor to use. One checklist was specifically for grades kindergarten and grade one and a second checklist was for second and third grade. The difference between the checklists were that the kindergarten and grade one checklist placed more emphasis on alphabetic activities and phonics, while the grades two and three checklist focused on guided reading activities such as pre-reading, during reading and post-reading. The checklist also served as a reminder of the various activities that the tutor could use with the tutee during tutoring sessions. The tutors were given an explanation key for the various activities and the checklists were explained at the initial orientation for all tutors. Tutors were requested to complete an observational checklist at the conclusion of every tutoring session (see Appendix A). Number of minutes spent in each activity and total amount of time engaged in each activity was calculated.

These checklists were created based on other checklists the researcher had seen in tutoring manuals such as; Help America Read, A Handbook For Volunteers by Pinnell & Fountas, 1997; On The Road To Reading by Koralek & Collins, 1997; Read to Succeed, Literacy Tutor's Manual by Bader, 1998 and Reading Helpers, A Training Handbook for Tutors by Corporation for National Service, 1998.

Moderate training focused on pre-reading, during-reading and post-reading activities.

Tutors were taught new activities, shown a demonstration of the activity and given the opportunity to practice the activity in “mock tutoring sessions” with other tutors. Ideas and activities were taken from published reading books such as Reading to Learn in the Content Areas by Judy S. Richardson and Raymond F. Morgan; Guided Reading by Irene C. Fountas and Gay Su Pinnell; Help America Read, A Handbook For Volunteers by Pinnell & Fountas, 1997; On The Road To Reading by Koralek & Collins, 1997; Read to Succeed, Literacy Tutor’s Manual by Bader, 1998 and Reading Helpers, A Training Handbook for Tutors by Corporation for National Service, 1998.

Examining the tutor checklists (see Appendix A for a sample checklist) it was obvious that most moderately-trained tutors did not implement the strategies they learned. Most tutors did not use pre-reading activities such as picture walks or previewing books (both groups only spent approximately 3% of their time on this activity), even though both groups had been introduced to numerous pre-reading activities to use with their students. The minimally-trained group spent 30.6% of their time on reading (that is the familiar books, new books and during reading activities columns combined) while the moderately-trained group spent 42% of their time reading. The minimally-trained group spent 20.9% of their time on skills activities such as phonics, alphabetic and word activities. The moderately-trained group spent 13% of their time on this activity. Both groups spent very little time engaged in post-reading activities such as discussions and questioning of the reading material.

Table 27 lists a breakdown of the number of hours tutors spent engaged in activities and the percentage of time. It should be noted that the minimally-trained group tutored 1176

hours in comparison to the moderately-trained group's 366 hours. This was due, in part, to the number of work-study hours awarded to the tutor by the university.

From examining the tutor checklists it appears that training did influence the moderately-trained tutors to spend more time engaged in actual reading activities and less time on skills, however tutors were still hesitant to use pre and post-reading activities as taught, demonstrated and practiced during moderate training. Regardless of the differences in activities the tutors engaged in there were few significant differences in the tutees reading achievement. Refer to Table 27 for a detailed breakdown on the time tutors spent on various activities.

Table 27
Tutor Strategies

Strategies	Minimally-trained hours / percentage of time	Moderately-trained
Familiar Books	68 hours/ 5.8%	28 hours / 7.6%
Intro. New Books	101 / 8.5%	48 / 13%
Alphabetic & Phonics	117 / 8.3%	28 / 7.6%
Word Activities	129 / 11%	20 / 5.5%
Pre-reading Activities	46 / 3.9%	13 / 3.6%
During Reading Activities	191 / 16.2%	78 / 21%
Post Reading Activities	77 / 6.5%	31 / 9.6%
Writing	177 / 15%	55 / 15%
Other	270 / 23%	65 / 17.8%
Total Hours	1176	366

Note: The first number indicates the number of hours tutors spent engaged in the specific activity. The second number indicates the percentage of time. The totals are approximate due to tutor mistakes and occasionally tutors checking the word items or double checking items. Calculations are based on Tutor Checklists that were returned to the researcher. (See Appendix A for a sample Tutor Checklist).

Summary of Results

In summary, statistical procedures and results have been presented for each research question. Research question one examined the differences in reading achievement between America Reads participants and a comparison group. The results of various standardized achievement tests were examined separately for kindergarten, grades one, two and three.

Results of reading achievement for kindergarten students, as measured by the Phonological Awareness Literacy Screening Test (PALS), indicated that the comparison group began the academic year with significantly higher means on the overall summed score, abc lower letters and letter sounds. The year concluded with no significant differences between the groups. In other words the gap in achievement had closed, the tutored group now performed as well as the comparison group (see Figure 4).

Limitations to this data analysis were noted; unequal *n* sizes, low statistical power and significant differences in standard deviations.

Pretest measures of reading achievement for grade one students, as measured by the PALS test, indicated no significant differences between the two groups. The posttest administration of PALS at the conclusion of the academic year indicated that the America Reads participants had a significantly higher mean than the comparison group on overall summed score. The results on the scale of word identification indicated no significant differences.

Grade two students reading achievement was measured by the Standardized Test For Assessment in Reading (STAR) and the Test For Higher Standards. The STAR grade equivalency scale was used in this research study. A pretest administration of the

STAR was given at the beginning of the school year with results indicating no significant differences between the two groups. Posttest results also indicated no significant differences on the grade equivalency scale between the two groups. The Test For Higher Standards consisted of two scales; reading and comprehension. Pretest results indicated no significant differences between the two groups. Posttest results, administered at the conclusion of the school year, indicated no significant differences between the two groups on comprehension, however, the tutored group had significantly higher means than the comparison group on the reading scale.

Grade three students reading achievement was measured by the STAR test, Test For Higher Standards and the Standards of Learning Test (SOLs). The grade equivalency scale of the STAR test was used for data analysis in this research study. Pretest measures at the beginning of the academic school year indicated no significant differences between the two groups. Posttest results indicated that the America Reads participants had significantly higher means than the comparison group on the grade equivalency scale.

The grade three Test For Higher Standards consisted of two scales; reading and comprehension. The pretest administration indicated no significant differences between the two groups, however the comparison group had higher means. Results from the posttest at the end of the academic year indicated that the tutored group had significantly higher means than the comparison group on both scales.

The Standards of Learning (SOL) is only administered one time in grade three, at the conclusion of the school year. The SOL contained one scale related to reading achievement; reading. Results indicated no significant differences between the tutored

and comparison groups. Table 28 summarizes all posttest scores for both groups and lists the number of points that the group gained over the course of the year. It is interesting that the tutored group had significantly higher means on five of the ten achievement tests used in the school district and the tutored group gained more points than the comparison group on every achievement test in place in the school system. See Table 28 for a complete list of posttest scores, points changed from the pretest and significance for question one.

Table 28
Question One
Comparison and Tutored
Reading Achievement Results
Grade Kindergarten through Grade Three

Test	Posttest Results		Tutored	Change
	Comparison	Change		
Kindergarten				
PALS				
Summed Score	67.41	(+38.09)	67.43	(+50.62)
Grade 1				
PALS				
Summed Score	47.68	(+22.14)	58.00*	(+36.00)
Word Identification	15.56	(+ 5.02)	13.85	(+ 5.05)
Grade 2				
STAR				
G.E.	1.88	(+ .58)	2.07	(+ .8)
Test For Higher Standards				
Reading	53.95	(+ 4.90)	67.04*	(+ 6.77)
Comprehension	64.50	(+ 6.77)	70.00	(+ 8.70)
Grade 3				
STAR				
G.E.	2.62	(+ .32)	2.95*	(+ .92)
Test For Higher Standards				
Reading	36.05	(-1.03)	44.82*	(+11.04)
Comprehension	30.71	(-5.96)	41.00*	(+11.65)
SOL	27.05	no pretest	28.68	no pretest
Total Change		(70.83)		(131.55)

Note: Change indicates difference from pretest to posttest administration of the reading achievement test.

* indicates statistical significance at the .05 level

Question two in this research study examined the differences in reading achievement of students who were taught by minimally-trained tutors and moderately-trained tutors. The minimally-trained tutors received three hours of initial training at the beginning of the school year. The moderately-trained tutors received the initial three hours of training plus an additional twelve hours of ongoing training in reading theory, teaching strategies and reading-related activities to use in tutoring sessions. Each grade level was examined separately using the tests already in place in the school system to gauge reading achievement.

The kindergarten students reading achievement was examined using the PALS test. Pretest results indicated that the two groups were not significantly different. Posttest results also indicated no significant differences between the two groups. In other words, moderate training appeared to have no effect on kindergarten achievement.

The grade one students were given the PALS test at the beginning of the academic year and again at the conclusion. Pretest scores indicated that the minimally-trained group had a significantly higher mean score on the Test For Higher Standards summed score than the moderately-trained group. Posttest results indicated that the moderately-trained group had significantly higher score on the word identification scale than the minimally-trained group, however the overall total, as reported by summed score, was not significantly different. Limitations must be noted to these results. Both groups had few participants, the minimally-trained group had seven students and the moderately-trained group had six students, this could have caused a low observed power, thus preventing the statistical test from detecting statistical differences between the two groups. There were also significant differences between the variances of the two groups.

The minimally-trained group gained a total of 25 points, while the moderately-trained group gained a total of 47 points on the overall summed score.

Grade two students were measured by the Test For Higher Standards and the STAR test. The STAR test yielded a grade equivalency scale. Posttest measures, after covarying the pretest, indicated no significant differences between the two groups on the comprehension scale. Posttest results on the Test For Higher Standards reading scale indicated that the moderately-trained group had a significantly higher mean than the minimally-trained group.

Grade three results indicated no significant differences between the minimally-trained and moderately-trained group on the Test For Higher Standards and the SOL test. However, the results of the grade equivalency scale of the STAR test indicated that the minimally-trained group had significantly higher scores than the moderately-trained group.

Results indicate that the moderate tutor training had very little effect on tutee achievement as measured by standardized tests in place in the school system. Possible explanations for this are discussed in Chapter V. See Table 29 for more details.

Table 29
Question Two
Minimally-trained and Moderately-trained
Posttest Reading Achievement
Grade Kindergarten through Grade Three

Test	Posttest Results			
	Minimally-trained		Moderately-trained	
	Posttest	Change	Posttest	Change
Kindergarten				
PALS				
Summed Score	63.80	+52.30	69.44	+49.44
Grade 1				
PALS				
Summed Score	54.43	+24.57	62.17	+47.06
Word Identification	11.43	- .43	16.67*	+10.54
Grade 2				
STAR				
GE	2.18	+ .88	1.95	+ .73
Test For Higher Standards				
Reading	71.00	+13.75	65.40*	+18.90
Comprehension	75.83	+ 9.16	66.00	+13.00
Grade 3				
STAR				
GE	3.33*	+ 1.06	2.53	+ .71
Test For Higher Standards				
Reading	47.45	+14.12	42.18	+ 7.91
Comprehension	43.45	+18.37	38.55	+ 4.55
SOL	30.33	no pretest	27.20	no pretest
Total gain points		+133.78		+152.84

* indicates statistical significance at the .05 level

Question three in this research study, examined the change in attitude over the course of an academic year between students who participated in the America Reads Tutoring Program and students at two comparison schools not receiving America Reads tutoring. Attitude was measured by the Elementary Reading Attitude Survey examining the overall summed score and two scales, recreational and academic attitude, which made up the summed score.

Pretest administration of the attitude survey in kindergarten at the beginning of the academic year indicated that the comparison group began school with significantly better overall reading attitudes. When the two scales of the survey were analyzed separately, it was found that the comparison group had significantly higher scores on academic reading attitude upon entering kindergarten than the tutored students. Posttest results, covarying the unequal pretest, at the conclusion of the academic year indicated no significant differences, however it should be noted that the tutored group had higher mean scores on all scales. The tutored group had gained 15 points on overall score while the comparison group had gained 1 point. Limitations must be noted, the number of participants in the groups was small and the observed power was only .149, thus deterring the statistical analysis in detecting any significant differences between the groups.

The pretest attitude survey administered in grade one indicated that the comparison group had a significantly higher mean than the comparison on academic reading attitude. Posttest results indicated no statistically significant differences between the two groups. Limitations to these results must be noted. The comparison group had from twenty-seven to thirty-five participants while the tutored group only had from six to

twelve participants. There were only six tutored children for the pretest administration of the survey, however twelve students were available to take the survey at the end of the academic year. The unequal numbers between the groups and unequal numbers from pretest to posttest could have affected the posttest conclusions.

Grade two survey results indicated no significant pretest differences between the comparison and tutored groups in reading attitude. Posttest results confirmed no significant differences at the conclusion of the school year between the two groups.

Pretest attitude results from grade three indicated no significant differences between the comparison and tutored group. Posttest results also indicated no significant differences between the two groups on reading attitude at the conclusion of the school year.

All grade levels were also analyzed together in a separate analysis. Pretest results indicated that the comparison group scored significantly higher on all scales of the Elementary Reading Attitude Survey. However, results on the posttest, covarying the pretest, indicated no significant differences between the two groups. Results for this analysis are depicted in Table 30.

Results indicated that participation in the American Reads Tutoring program did not significantly change or improve students attitudes toward reading, neither academically nor recreationally. These results were found at every grade level (K-3) and with all grades combined.

Table 30
Elementary Reading Attitude Survey
Grades K-3 Combined
Comparison vs. Tutored

Groups	Elementary Reading Attitude Survey					
	Rec Pre	Rec Post	Academic Pre	Academic Post	Summed Pre	Summed Post
Comparison						
Mean	31.69*	31.52	33.33**	32.55	64.98*	64.03
Number	99	71	99	71	99	71
S.D.	5.55	5.93	5.30	6.64	10.46	11.86
Tutored						
Mean	29.71	32.02	30.00	32.71	59.83	64.78
Number	58	45	58	45	58	45
S.D.	6.60	5.88	6.41	6.88	11.78	11.24

* indicates statistical significance at the .05 level

** indicates statistical significance at the .01 level

Question four examined the relationship between the student's reading attitude and reading achievement. Reading attitude was measured by the Elementary Reading Attitude Survey and reading achievement was measured by standardized tests in place for each grade level.

A Pearson product moment correlation was performed for each test at every grade level to determine the relationship between reading achievement and reading attitude. Most of the correlations performed in this study indicated non-significant relationships between reading attitude, as measured by the Elementary Reading Attitude Survey, and reading achievement, as measured by the reading scales of standardized tests in use in the school system. Results from most of the relationships reported between reading attitude and reading achievement were non-significant with the exception of grade three students. Results on the grade three Test For Higher Standards indicated a significant negative relationship between reading attitude and reading achievement. Refer to Table 22, earlier in Chapter IV, for r levels, correlations and complete details of the results.

Question five examined differences in female and male attitudes after participating in a tutoring intervention program. Results were examined separately for each grade level. Reading attitude was measured by the Elementary Reading Attitude Survey. Pretest results of the survey indicated that the two groups began the school year with non-significant differences in attitudes. A significant difference in attitude was only found in grade two scores on the overall summed pretest score, males had significantly better attitudes than females on the posttest results. Female and male attitudes also were analyzed together across all grade levels. No significant differences were found between female and male reading attitudes after participating in the America Reading tutoring program. Results for females and males combined across all grade levels are presented in Table 31.

Table 31
Elementary Reading Attitude Survey
Grades K-3 Combined
Female vs. Males

Groups	Elementary Reading Attitude Survey					
	Rec Pre	Rec Post	Academic Pre	Academic Post	Summed Pre	Summed Post
Females						
Mean	29.37	31.86	29.89	33.28	59.40	65.31
Number	35	29	35	29	35	29
S.D.	6.13	6.86	6.34	6.21	11.40	11.90
Males						
Mean	30.22	32.31	30.26	31.69	60.48	63.81
Number	23	16	23	16	23	16
S.D.	7.27	3.66	6.66	8.08	12.56	10.25

Question six examined differences in strategies that minimally-trained tutors and moderately-trained tutors implemented in their tutoring sessions. To obtain data on the activities that tutors engaged in during tutoring sessions, tutors were requested to fill out checklists (see Appendix A). When the checklists were reviewed and calculated some differences in strategies between the minimally-trained and moderately-trained tutors emerged (refer to Table 27). Moderately-trained tutors spent the majority of their time, 41.6%, engaging tutees in actual reading. Minimally-trained tutors spent 30.5% of their time engaged in actual reading. The moderately-trained tutors spent more time on during reading activities and post-reading activities and considerably less time on skill-related

activities. Both groups of tutors spent very little time on pre-reading activities (3.6% - 3.9%), phonics (7.6% - 8.3%) and post-reading activities (6.5% - 9.6%).

Chapter V

Summary, Discussion, Conclusions, and Recommendations

Summary of the Study

Reading is the foundation upon which all other school success is built (Moss, Schwartz, Obeidahhah & Greene, 2001). Students who do not acquire this skill in the early school years often meet academic failure in later grades (Slavin, Karweit, Wasik, Madden & Dolan, 1994). Some students come from literacy-rich home environments that adequately prepare them to meet the challenges of school (Barton, 1994). Other students come from literacy-impooverished backgrounds and need additional instruction to meet the demands of school (Nardini & Antes, 1991; Wasik & Slavin, 1990).

In recent years reading tutoring intervention programs have become a popular method used by schools to help support struggling readers at-risk of reading failure. The America Reads Program is one of the latest government sponsored programs to help struggling readers. The government has pledged \$2.75 billion to implement this program in America (America Reads Challenge, 1997). Due to this large investment of resources, research is necessary on the efficacy of tutoring programs (Wasik & Slavin, 1993) and the amount of tutor training that non-certified or non-professional tutors require to be effective with struggling readers (Wasik, 1997).

The research to date has been inconclusive on the effectiveness of tutoring programs. Numerous studies by researchers (Fitzgerald, 2001; Gupta, Robinson & West, 2001; Morris, Shaw & Perney, 1990; Morris, 2001) have indicated gains when employing

non-professional tutors while other researchers (Manzo & Sack, 1997; Short, 1997) have indicated no significant gains.

Many schools are faced with budget restrictions that necessitate implementing tutoring programs that utilize non-professional volunteer tutors. There has been a limited amount of research on the amount of training required when using tutors. This study also examined the effect of twelve hours of moderate training on tutor strategies and tutee achievement.

In an attempt to add to the body of knowledge on the effectiveness of tutoring programs that employ non-professional tutors this study focused on the effect of the America Reads tutoring program on tutees reading achievement and reading attitude when compared to a similar comparison group of students.

To gauge reading achievement kindergarten through grade three was examined individually using the results from tests already in place in the school system. To determine reading attitude The Elementary Reading Attitude Survey, a forty-item questionnaire depicting Garfield faces, was used. The use of tutee strategies was determined by analyzing tutor checklists (see Appendix A) and random observational checks.

The hypotheses of this study were that the America Reads participants would significantly outperform the comparison group on reading achievement and that tutees whose tutors had received more training would achievement significantly higher reading results. After reviewing the literature it also was hypothesized that participants in the America Reads program would have significantly better reading attitudes than the comparison group not receiving tutoring.

The purpose and significance of the study along with the review of the literature, research questions and results of the study were discussed in previous chapters. This chapter discusses the results, conclusions drawn from the research, implications to educators and recommendations for future research.

Discussion of the Results

Question one compared the reading achievement of participants of the America Reads Tutoring Program and a similar group of students at two comparison schools not receiving America Reads tutoring. Kindergarten pretest scores on reading achievement indicated that the comparison group had significantly higher scores on Abc letter knowledge and letter sounds.

The researcher is unsure why the comparison group had significantly more knowledge of letter sounds and alphabet letters before entering kindergarten. The comparison group was comprised of students from two schools. Both schools were made-up almost entirely of students living in nearby housing projects. There is a possibility that some of the students participated in some type of preschool program offered to the project. However, whatever advantage the comparison group began with was not significant by the conclusion of the school year. Posttest results indicated that the gap in alphabet knowledge and phonemic awareness between the comparison group and the tutored group had closed. Posttest results, covarying pretest scores, indicated that the America Reads tutoring participants did not score significantly higher on reading achievement measures than the comparison group. However, the tutored group gained 50.62 points and the comparison group gained 38.09 points. A possible explanation for the lack of statistical significance could be due to limitations of the statistical data

analysis to find significant results. The two groups had unequal n sizes and significant differences in standard deviations creating low statistical power. Another possible explanation is that the PALS test at kindergarten level tests mostly phonemic and alphabetic knowledge. Tutor checklists indicate that tutors (both minimally-trained and moderately-trained combined) only spent 9.7% of their time on alphabetic knowledge and phonemic awareness. This limited amount of time spent on phonemic awareness may not have been sufficient time to make a difference in tutee achievement. Refer to Table 32 for information on approximate number of total tutoring hours and time spent on each activity.

In grade one an independent t-test was employed on the overall summed score of the PALS pretest: no significant differences were found. At the conclusion of the school year posttest results indicated no significant difference on the word identification scale, however, on the overall summed score of the PALS the tutored group had a significantly higher mean. It appears that in grade one tutoring improved the tutees overall reading ability but not specifically word identification ability. The tutor checklists for grade one indicated that the tutors spent most of their time engaged in having children read predictable books and easy readers. The activity that they spent the second most amount of time on was reviewing phonics and using alphabetic books to reinforce phonics. The researcher does not have the number of hours or percentage of time spent on each activity for each grade level, however, all tutors combined indicated that they spent 33.33% of their time actually engaged in reading and only 9.7% of time engaged in word-related activities such as vocabulary building.

The researcher feels that the grade one tutors spending a large percentage of time actually engaged in reading may have accounted for the significant difference in overall achievement. However, since the tutors were using predictable books one would have expected the tutees' word identification knowledge to have increased, unless the words contained in the predictable books did not overlap the words tested on the PALS test.

The comparison of achievement in grade two was measured by the Test For Higher Standards and the STAR test. The STAR scale used in this research was the grade equivalency scale. The results indicated that both groups had improved on grade equivalency (the grade reading level) but the tutored group had improved almost one year's level while the comparison group had only improved half a year, however the results were not significant. Posttest results on the Test For Higher Standards, using an ANCOVA indicated a significant improvement for the tutored group compared with the comparison group on overall reading but not on comprehension.

An informal examination of the grade two tutor checklists indicated that grade two tutors spent considerably more time on during reading activities, almost three times as much time as any other activity. The during reading activities that were checked most frequently were; reading with the child, echo reading, unison reading and the child reading alone. Considering that the tutors spent approximately three times as much time on reading than on post reading comprehension activities could be why the tutored group failed to achieve a significant difference in reading comprehension compared to the comparison group.

Pretest measures on the Test For Higher Standards, SOL and STAR indicated that the grade three comparison and tutored students began the school year with non-significant

differences on all reading measures in place in the school system. Posttest measures, using ANCOVAs, at the conclusion of the school year indicated that the tutored group had significantly higher means than the comparison group on all reading measures with the exception of the reading portion of the SOL test.

The researcher is unable to explain why the grade three America Reads students achieved significant differences on almost all reading achievement tests in comparison to the comparison group. In the Virginia educational system the state mandated SOL test is given in grade three. To help students pass this test schools offer extra tutoring programs in various subjects including reading. In this study all four schools utilized extra tutoring programs for grade three. No school offered more tutoring than another school in this study. The tutor checklists indicated that grade three received approximately the same number of tutoring hours as grades two and kindergarten. Informal observation of the grade three tutor checklists indicated that the grade three tutors spent most of their time on during reading activities, writing activities as a follow-up to reading and post reading activities. Perhaps the combination of these activities helped produced significantly better results than at the other grades.

The findings of significantly higher scores on achievement tests are consistent with results reported by other researchers who studied non-professional tutoring programs (Fitzgerald, 2001; Gupta, Robinson & West, 2001; Morrow & Woo, 2000). It is interesting to note that in kindergarten through grade three, ten achievement tests were in place to measure reading ability. The tutored children scored significantly higher on five of the ten achievement tests (refer to Table 28 in the summary section of Chapter IV). The tutored students appear to achieve higher scores on scales that tested overall

reading ability rather than separate skills like phonics or word identification. This could be due to the amount of time tutors spent on each activity. Table 32 depicts total tutor times (both minimally-trained and moderately-trained combined) that were spent engaged in each activity. When reading activities are combined (the familiar books, introduction to new books and the during reading activities column) the tutors spent 33.33% of their time engaging the tutees in actual reading. Other researchers have indicated that tutoring is more effective when students spend most of their time engaged in reading for meaning (Cunningham & Allington, 1997; Wasik & Slavin, 1993). This could explain the significant results from the tutoring program. When the skills columns are combined (alphabetic, phonics and word activities) the tutors spent approximately 19% of total tutoring time on skills. It should be noted that not all tutors turned in checklists as they were requested to and all times are approximate.

Another explanation for lack of significance when the mean scores appeared significantly different between the groups were the small numbers in the groups when they were broken down by grade levels. The small numbers often created low power in many of the data analysis.

Table 32
Tutor Strategies
Minimally-trained & Moderately-trained Combined
All grade levels

Activity	Hours /	Percentage of time
Familiar Books	96	6.2%
Introduce New Books	149	9.7%
Alphabet & Phonics	145	9.4%
Word Activities	149	9.7%
Pre-reading Activities	59	3.8%
During reading Activities	269	17.4%
Post-reading Activities	108	7%
Writing	232	15%
Other	335	21.7%

Question two examined the reading achievement of tutees that had been taught by minimally-trained tutors and moderately-trained tutors. The independent variable in this study was tutor with two levels; minimally-trained (receiving only an initial 3 hours of training) and moderately-trained (receiving the initial 3 hours plus an additional 12 hours of training in reading theory, strategies and activities). Reading achievement was examined individually for each grade level.

America Reads tutors were informed that a research study was being conducted during the academic year. They were told that a random selection of tutors would be chosen to receive an additional 12 hours of ongoing training throughout the year. Tutors made up missed training sessions by viewing a videotape of the training. All tutors were informed if they were chosen, participation was not optional. Tutors were paid for their training time.

Moderate training focused on guided-reading strategies such as activities to use in pre-reading, during-reading and post-reading stages. Tutors were taught strategies and techniques to use with tutees, how to help motivate children and develop background knowledge before reading. They also were shown various types of reading techniques to use during reading such as echo reading, unison reading, choral reading, readers theater, etc. Tutors were introduced to types of comprehension questions and encouraged children to retell the story every time the child finished reading a book.

During the training, the moderately-trained tutors met to discuss problems and requested more information on certain problems they were having in the tutoring sessions. Tutors often were concerned about keeping the tutee from becoming bored. To help meet this request the tutors spent several sessions making reading games that could be used in the tutoring sessions. These games included; word checkers, the snake game, word bingo, old-maid card games, and various other reading games. The tutors appeared to really enjoy this part of the training because they could actually take the games with them and use them. The tutors reported that the children liked these games and it gave them variety to use in the sessions.

Results indicated that the moderate training had little effect on tutees academic achievement. Significant differences only were found in grade one on the word identification scale and in grade two on the reading scale. The minimally-trained tutors group achieved a significantly higher score on the grade three STAR grade equivalency scale.

Participating in twelve hours of extra training appears not to have influenced the strategies that tutors implemented in the tutoring sessions. This finding agrees with Fitzgerald (2001a) that training by an experienced reading specialist did not influence the strategies that the tutor employed in the tutoring session. The findings from this study also agree with research by Hospodar (1972) that the tutored group made significantly higher gains than the comparison group, but no difference was found between the trained and untrained group.

There were several factors that could have influenced the outcome of this research question. The majority of the tutors were not enthusiastic about attending training sessions. The tutors were paid for their time and given a free lunch at every session, however their morale and attention span was very low. The researcher had to make phone calls to all the tutors every week the night before the training or many would not attend the next day.

Another important aspect of this study was the difference in the number of tutoring hours each group spent with the tutees. The minimally-trained tutors tutored a total of 1176 hours while the moderately-trained tutors tutored a total of 366 hours. In essence, according to the checklists the researcher received, the minimally-trained group of tutees received more than triple the amount of tutoring. However, in a separate

analysis tutoring time was covarried to determine the influence of time on tutee achievement. No significant differences were found between the two groups with time covarried. This finding is consistent with findings by Elbaum, Vaughn and Moody (2000) that amount of instructional time had no effect on effect size. It should also be noted that the tutoring times are approximate. Many tutors disliked completing the checklists and simply refused. Several other tutors turned in one or two checklists every pay period and insisted that the other checklists were lost. The researcher made numerous phone calls to tutors requesting more accurate information but these attempts often failed to produce more checklists. This difference in tutoring time could have accounted for the lack of significant differences between the two groups.

Another factor that could have influenced the results was the, “John Henry” effect. Students in the comparison group knew that a random selection of tutors were receiving additional training in reading theory, strategies and techniques. There may have been a conscious attempt on the part of the minimally-trained tutors to attempt more variety of strategies outlined on the tutor checklists. At one point during the academic year one of the minimally-trained tutors called the researcher asking for more ideas because he was concerned that he was not doing as good of a job as the moderately-trained group.

An additional reason these results should be interpreted with caution is the limitations of the analysis. Limitations in number of participants, seven in minimally-trained group and six in the moderately-trained group, and large differences in standard deviations reduced the observed power which reduced the statistical power to detect differences between the groups.

Research question number three examined the change in reading attitudes of students who participated in the America Reads program and a comparison group of students who received no tutoring. Reading attitudes were measured by the Elementary Reading Attitude Survey. The survey consisted of an overall summed score comprised of two scales; academic attitude and recreational attitude. Each scale was examined in separate univariate analysis. Each grade level was examined individually for differences in reading attitude. A pretest administration was given at the beginning of the academic year and a posttest at the conclusion of the school year.

Pretest administration of the survey in kindergarten was analyzed using an independent t-test on the overall score. Results indicated that the comparison group had significantly higher reading attitudes than the tutored group. Univariate analysis on the separate scales indicated that the significance was in the academic scale. Posttests were analyzed using an ANCOVA, covarying the pretest scores. Results indicated no significant differences between the two groups.

The same procedures were used on each of the remaining grade levels, one through three. No significant differences were found on pretest or posttest measures. These findings agree with findings by Quinn and Jadav (1987) and Swanson (1984). However, these findings do not agree with findings by Rains (1993) that reading attitude improves significantly after participation in a reading program. These are several possible explanations for the difference in findings. Many tutors noted that they felt as if the tutee responses were not indicative of the tutee's attitude. Some tutors expressed concern that the child was circling the positive Garfield face to please the tutor. The researcher noted that many tutees circled responses based on their friend's responses or

based on the face that Garfield was making (i.e., they liked the smiley face). Some tutees just wanted to use a crayon to make interesting and unusual shapes while circling the Garfield figures. One tutee was obviously making a pattern on his paper in a diagonal shape by circling the fourth Garfield, then the third Garfield, then the second Garfield, then the first Garfield. Another plausible explanation is the type of survey used. Smith and Ryan (1997) found a main effect due to the type of attitude survey used. They found different responses on attitude when they used a number format than when they used Garfield faces.

Question four examined the relationship between students reading attitude and reading achievement. This question employed the Elementary Reading Attitude Survey and the reading achievement measures in place in the school system. Each grade level was examined individually. Pretest measures were given on both the attitude survey and the reading achievement tests at the beginning of the school year and posttest measures were administered at the conclusion of the school year.

Extensive details of each analysis are listed in Chapter IV. Pearson product moment correlations were used in this research question to determine the relationship of reading attitudes and reading achievement. Only statistical data analysis in grade three indicated a significant relationship. Grade three reading attitude had a significant negative relationship between reading achievement on the Test For Higher Standards reading scale and reading attitude. The researcher is unable to explain why only grade three had a significant negative relationship between reading achievement and reading attitude. However, the researcher did participate in administering the SOL's and talked with numerous students who expressed a "fed up" feeling over constant testing and

having to read all the time. Many students expressed anxiety over the SOL's and the high-stakes testing environment that surrounds this state mandated test.

This finding of a non-significant relationship between reading attitude and reading achievement in most students is consistent with numerous published studies. A study by Ball (1971) indicated no correlation between reading attitude and reading achievement. Researchers Askov & Fishback (1973), Deck and Barnette (1976), Nielson (1978) and Roettger, Szymezuk & Millar (1979) also have reported no correlation between reading achievement and reading attitudes. Quinn & Jadav (1982) suggested that a significant negative relationship between reading attitude and reading achievement could be due to the student's dislike of frequent testing. Elbaum (1992) suggests that better reading attitude may help students sustain their interest in reading and prompt them to continue to read more throughout their life. However, actual differences in achievement may not appear until later in life.

Question five explored the difference in female students and male students reading attitudes after participating in a reading tutoring intervention program. The results of this study indicated no significant differences between females and males with the exception of grade two. Grade two results indicated that males scored significantly higher on the overall summed score of the pretest administration of the Elementary Reading Attitude than females. However, on the posttest administration no significant differences were found.

The findings of no significant improvement of female attitudes do not agree with the findings by Thames & Reeves-Kazelskis (1992) and by Poter (1996) that female attitudes improve significantly after participation in a tutoring intervention program. The

only explanation that the researcher has is that the format of the survey, Garfield faces, may have reflected the child's preference for the smiley face rather than the actual attitude of the student.

Question six asked; Is there a difference in the strategies that moderately-trained and minimally-trained tutors implement in their tutoring sessions?

To verify strategies used in tutoring sessions all tutors were requested to complete a tutor checklist at the end of each tutoring session (see Appendix A). The checklists were intended as a reminder of various strategies that tutors could use with their tutees and as a record of the tutoring session.

Tutor checklists were turned in to the America Reads program coordinator throughout the academic year. At the conclusion of the year, all checklists were tallied for each tutor. Frequency counts indicated some differences between the strategies that moderately-trained tutors used and the minimally-trained tutors implemented. The moderately-trained tutors spent more time on during reading activities than the minimally trained group. During reading activities consisted of various types of reading such as echo reading, unison reading, alternate reading, etc. (refer to Appendix A for a complete description of the activities that fall under this category). The moderately-trained group also spent half again as much time on follow-up or post discussion activities as did the minimally-trained group. The moderately-trained group also spent considerably more time introducing new books to the tutee than the minimally-trained group. This suggests that the moderately-trained tutees had more exposure to a variety of material than the minimally-trained group. The minimally-trained tutors spent double the amount of time engaged in word activities as the moderately-trained tutors. Word activities were defined

as using word cards (see Appendix A under Word Card Activities). The minimally-trained group also spent more time on alphabetic activities. In other words, the moderately-trained group concentrated on actual reading and writing activities while the minimally-trained group focused on word skills.

Very few tutors engaged substantial time in any type of pre reading activities, phonemic awareness, or post-reading activities. Most tutors at the kindergarten and grade one level consumed the majority of time on alphabetic knowledge and word activities. Most tutors at the grade two and grade three level had the children read books alone or reviewed unfamiliar words. The researcher was surprised to find that tutors in both groups spent a considerable amount of time on writing activities even though the America Reads program had not specifically emphasized writing. Very few moderately-trained tutors tried any of the strategies they had been taught. Many tutors who had received moderate training did not try a variety of post-reading activities and rarely engaged in pre-reading activities.

Both groups of tutors spent a large percentage of their time engaged in “other” activities. Some tutors wrote on the checklists that they were administering tests, helping the tutee finish homework, completing worksheets and other materials given to the tutor by the classroom teacher. Some tutors were given games by the classroom teacher to use during tutoring sessions. The moderately-trained tutors often used reading games they created during training.

Some notes to this research question should be added. Several tutors had to request a change of teachers because the classroom teachers wanted to use the tutors as assistants to grade papers and help with classroom work. Other tutors complained that

they did not have a quiet environment to work, working in hallways or noisy classrooms. All of these factors together may have influenced the strategies used and recorded. Numerous tutors contacted the researcher to complain that the teacher requested them to engage in activities such as grading papers, working with other students than the ones assigned and working with tutees on other subjects such as math and science. The researcher made numerous phone calls to the schools to try to rectify the situation. It is unclear whether the situation was rectified or if the tutors stopped reporting the situation considering the large amount of time spent on the “other” category. However, it would be interesting to know how much of this time was used on activities not related to reading and if this were spent on reading, would the results from the achievement tests be significantly different?

Some tutors did not like completing the checklists and many tutors indicated that they completed the lists after tutoring sessions were over and sometimes late at night, thus putting into question the accuracy of the checklists. Many moderately-trained tutors started the academic year tutoring but found that they did not like going to the schools, it was not what they expected. Many moderately-trained tutors were lost in the first part of the academic semester and new tutors had to be randomly chosen from the tutors available. Therefore, many moderately-trained tutors actually did not begin tutoring until January.

Conclusions and Implications

There are several conclusions that can be inferred from this study. First, it can be concluded that a program that uses non-professional volunteer tutors can have a noteworthy impact on at-risk children’s reading achievement. This affect was seen at

almost every grade level and on five out of ten reading measures in place in the school system. The implications of the results suggests that school districts which are unable to afford expensive tutoring programs like Reading Recovery and Success For All may find using non-professional tutors a viable alternative.

Second, in this study 12 hours of moderate training in reading strategies, theories and activities produced few significant effects on tutees reading achievement in comparison with tutors who had only received three hours of training. Although this study found few significant results between the minimally-trained and moderately-trained tutees, the researcher does not feel it can be inferred that training has no effect. Numerous circumstances may have caused this particular study to find few significant results in training. One of the most substantial problems was the difference in amount of tutoring hours the tutees received. The minimally-trained tutors spent approximately triple the amount of time engaged in tutoring sessions than the moderately-trained tutors. Although an analysis of covariance was conducted, covarying tutoring time, the small number of participants in each group and the low observed power of the data analysis could have resulted in the lack of significance. Another problem was the small numbers of tutors in each group. It is hard to generalize results with such small number of participants.

However, this research does suggest that tutors need to be monitored more closely. The researcher feels that tutors would have implemented more strategies and spent more time on tasks related to reading rather than spend the majority of time under the "other" category had they been monitored and mentored at school. The current configuration of the America Reads program makes it is impossible for the graduate

assistant to be at both schools constantly and still keep up with the paper work and hold office hours. One possible solution would be for the university to allocate an additional graduate assistant, that way one assistant could do the paper work and office duties and the other assistant could spend time in the schools monitoring the tutors. Another alternative is for each of the schools to give their reading specialist release time to monitor, mentor, and help train the tutors. Fitzgerald (2001a) suggests that having an experienced reading specialist to mentor the tutors may be more effective than extensive training at seminars.

Results also indicate that tutoring significantly improved some aspects of tutee reading achievement but not all aspects. It is possible that tutors are spending time on skills or activities that are not emphasized in the curriculum. Perhaps tutors should spend tutoring time exclusively to supplement classroom work. This could be accomplished by having their lessons coordinated or developed by either the reading specialist or the classroom teacher. Another recommendation is for tutors to use a traveling notebooks. The teachers could jot down the areas for the tutor to work on with the child during the tutoring session (Cunningham & Allington, 1997). The tutors could spend more time extending or supporting lessons learned in class and deepening comprehension of classroom stories by using various post-reading activities.

A third conclusion that can be reached from this research is that students (tutees) who participated in this study did not significantly improve their reading attitudes after participation in a reading tutoring intervention program. The results from this question were unambiguous; there were no significant changes at any grade level in reading attitudes after participating in the America Reads program. However, the researcher feels

that the survey format created problems and may have influenced the students responses. Tutors reported numerous problems of the tutees circling Garfield faces because they liked the smiling face or just like making diagonal patterns on the paper.

If the survey format was not the problem in this research, this implies that tutoring programs should examine how enjoyable their tutoring sessions are for the tutees. Perhaps if tutors were taught to engage the tutee in fun activities, encourage student selection of reading materials and to ensure that the tutee did not feel additional pressure to perform or feel any additional stress, then the tutee's attitude toward reading might improve.

Fourth, in this study no significant relationships were found between reading achievement and reading attitudes, with the exception of a high negative correlation in the third grade. The results from this analysis suggest that schools should examine how they are presenting reading and reading activities to the students. Instructional techniques that encourage students input and choice could be implemented in schools along with specific features added to the school curriculum to improve attitude in addition to improving achievement. If students are forced to read a predetermined number of books to achieve a reward, then perhaps students are extrinsically motivated rather than internally motivated. How much are students actually reading for pleasure and learning the joys of a good book? Many students in the school system are required to read numerous books without learning the pleasures of reading.

Fifth, no significant differences were found between female and male tutees reading attitudes after participation in this reading intervention program. This finding implies that it is not necessary to gear programs specifically for male or female readers.

Sixth, tutor training did have some effect on the strategies that tutors implemented in their tutoring sessions, however these differences did not always produce significant differences in reading achievement. Due to the small number of tutors in each group and the various problems that occurred during the study, the researcher feels that this conclusion is not generalizable to other studies.

Recommendations for Future Research

This study examined numerous issues that are inconclusive in the literature; non-professional tutors effectiveness, minimal tutor training versus moderate ongoing training and reading attitudes in relationship to reading achievement. However, this research is limited in its scope and depth of the issue. This research did not involve the use of extensive observations of tutoring sessions by the researcher, however, more insight could be gained by intensive observation of strategies used by tutors, amount of scaffolding and the effect of the relationship between the tutor and the tutee (see Juel, 1996).

Another area in need of research is the effectiveness of tutoring when a reading specialist designs the lessons and mentors the tutors in comparison to tutors who only receive training. Results from this type of study would help guide tutoring programs in making effective decisions regarding training. Refer to Fitzgerald (2001a) and Morris (1990) for more ideas on this research topic.

Another area of tutoring that requires more study is to compare tutors who spend tutoring sessions supplementing classroom work and tutors who use materials independent of classroom work. Researchers have suggested that intervention programs

should supplement material learned in class (refer to Cunningham & Allington, 1997 for more information on this topic).

Results from this study indicated no relationship between reading attitudes and reading achievement. Future research is needed on the type of survey format used. Does the survey format affect student's responses? For further reading on this subject refer to Smith and Ryan (1997).

Research was also unclear on the long term effects of tutoring programs. Do students continue to require intervention services the following year? To help add to the body of knowledge longitudinal research is required to track students the following year to ascertain if students maintained the gains they achieved while participating in the tutoring program.

In summary, the findings of this study support the concept that volunteer tutoring programs that employ non-professional tutors can have a significant impact on the reading skills of children at-risk for academic failure. Based on the findings of this study the researcher recommends that schools give serious consideration to implementing tutoring programs using trained volunteers. However, the researcher recommends that urban tutoring programs: are based on a philosophy of reading and that philosophy is clearly expressed to tutors; that tutors receive initial and ongoing training and are given a comprehensive tutoring manual; that tutors are given checklists with times suggested for each activity; that reading strategies are taught, modeled by a reading specialist and then practiced by the tutor; that the content of the tutoring session supplement classroom work; that tutoring sessions occur after school hours so that students will not miss

valuable instructional time in the classroom; and finally that the tutoring program is overseen on a daily basis by an experienced reading specialist.

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APPENDIX A

AMERICA READS TUTOR CHECKLISTS
TUTOR CHECKLIST
Grades K – 1

To be completed after every tutoring session and turned in with time slips.

Date: _____ Site: _____ Child: _____
 Tutor: _____ Age _____ Grade _____

Approximate number of minutes of the tutoring session _____

(Check all that apply. Double check if covered twice or more.)

Alphabet # Minutes _____

- ___ recite
- ___ letters/sounds
- ___ match letter with picture
- ___ match letter with word
- ___ upper case
- ___ lower case
- ___ other

Phonics # Minutes _____

- ___ initial sounds
- ___ ending sounds
- ___ clusters
- ___ short vowels
- ___ long vowels
- ___ consonants

Words # Minutes _____

- ___ word cut-up
- ___ word sort
- ___ reviewed known words
- ___ introduced new words

Books # Minutes _____

- ___ alphabet books
- ___ easy readers
- ___ predictable
- ___ rhyming
- ___ favorite book

Oral/Language # Minutes _____

- ___ rhymes/songs
- ___ eliciting oral language
- ___ oral sharing

Reread Familiar Book # Minutes _____

Introduced New Book # Minutes _____

Added to Word Bank # Minutes _____

Pre-reading Activities # Minutes _____

- ___ activate background knowledge
- ___ predictions
- ___ previewing
- ___ picture walk

During Reading Activities # Minutes _____

- ___ child read alone (independent)
- ___ silent reading
- ___ tutor reads to child
- ___ child reads with support
- ___ echo reading
- ___ alternate reading
- ___ unison/shared reading
- ___ rehearsed reading
- ___ review unfamiliar words

Post-Reading Activities # Minutes _____

- ___ story retelling/summarizing
- ___ discussion
- ___ problem solving
- ___ connections with student's life

Writing # Minutes _____

- ___ writing words
- ___ writing sentences
- ___ book/publishing book
- ___ journals

Other Activities

Word Analysis by Tutee

- ___ used picture clues
- ___ used contextual clues
- ___ decoded phonetically
- ___ used root word/prefix/suffix

Tutee's Comprehension

Excellent Good Fair Poor Very Poor
 5 4 3 2 1

Story Retelling

Excellent Good Fair Poor Very Poor
 5 4 3 2 1

Tutor Checklist Grades 2-3

To be completed after every tutoring session and turned in with time slips.

Date: _____ Site: _____ Child _____
Tutor _____ Age _____ Grade _____

Approximate number of Minutes of the tutoring session _____

(Check all that apply. Double check if covered twice.)

___ Reread Familiar Book # Minutes _____

___ Introduced New Book # Minutes _____

___ Added to Word Bank # Minutes _____

Word Card Activities # Minutes _____

- ___ pick up
- ___ concept sort
- ___ sound sort
- ___ open sort
- ___ build a sentence
- ___ word sort

Pre-Reading Activities # Minutes _____

- ___ activate background knowledge
- ___ predictions
- ___ previewing
- ___ picture walk

During Reading Activities # Minutes _____

- ___ child read alone
- ___ silent reading
- ___ read with support (from tutor)
- ___ echo reading
- ___ alternate reading
- ___ unison reading
- ___ rehearsed reading
- ___ review unfamiliar words

Post-Reading Activities # Minutes _____

- ___ main ideas
- ___ facts or details
- ___ sequence
- ___ story retelling/summarize
- ___ discussion
- ___ writing new endings
- ___ problem solving
- ___ connections with student's life

Writing # minutes _____

- ___ drafts
- ___ topic book
- ___ journals
- ___ child's story
- ___ editing
- ___ written response to literature
- ___ other _____

Spelling # Minutes _____

___ activity _____

Phonics/Beginning letters # minutes _____

- ___ initial sounds
- ___ ending sounds
- ___ clusters
- ___ short vowels
- ___ long vowels
- ___ consonants

Tutor's Comprehension Strategy

Tutor questioning

- ___ literal
- ___ inferential
- ___ critical level

Other Activities # Minutes _____

- ___ rhyming word families
- ___ cut up sentences/words
- ___ other Activities _____

To be completed at every tutoring session

Word Analysis by Tutee

- ___ used picture clues
- ___ used contextual clues
- ___ decoded phonetically
- ___ used root word/prefix/suffix

Tutee's Comprehension

Excellent	Good	Fair	Poor	Very Poor
5	4	3	2	1

Story Retelling

Excellent	Good	Fair	Poor	Very Poor
5	4	3	2	1

Tutor Checklist Grades 2-3 Explanation Key

Word Card Activities

Pick up – place several word cards on the table face up. Tell the tutee to pick up the word that says _____. Reverse roles.

Concept sort - ask the tutee to select words that are similar in some way. EX: green/blue are both colors.

Sound sort – ask the tutee to sort cards according to sounds. EX: words that begin with “s”, or words that have “at” in them.

Open sort – ask the tutee to select cards that go together and explain why they go together.

EX: duck/horse/cat - they are all animals

Build a sentence - ask the tutee to select words from the word bank and create a sentence.

Cut- up sentences/words – take a sentence from the book that you are reading and cut it into separate words. Ask the child to put the sentence back correctly and read it to you. (This can be prepared before tutoring.)

Pre-reading activities

Activate Background Knowledge – the tutor examines the content of the reading material and then tries to tie it in with the tutee’s previous experiences or knowledge. Ex: The subject of the book is an animal. The tutor would ask if the tutee has any pets or has seen this animal before.

Predictions – the tutor and tutee examine the cover of the book and makes predictions about what the book will be about.

Previewing – the tutor and tutee flip through and examine the book. Perhaps looking at the cover, table of content, chapter titles and any information written on the flap of the book. This will help give the tutee a framework to understand what the book will be about.

Picture walk – the tutor and tutee flip through and examine the pictures in the book. They could almost narrate or predict the story by looking at the pictures. Discussion could center around the illustrator, colors, quality and meaning of the pictures.

During Reading Activities

Echo reading – the tutor reads first and the child follows the words with her/his fingers. Next the child reads the same sentence. This is used to encourage the new reader who only knows a few words.

Unison reading – the tutor and child read a sentence or passage together. The tutor’s voice leads at first with her/his finger pointing to the words. As the child becomes more confident the child’s voice leads and points to the words.

Alternate reading – the child and tutor takes turns reading aloud. When the child is insecure the tutor can begin reading the text. By reading the text together the child has an opportunity to rest and enjoy hearing someone else read. Tutor should pay particular attention to intonation, phrasing and comprehension.

Rehearsed reading – the child first practices the passage silently and then reads aloud to the tutor. This gives the child time to build confidence and comprehension.

Post Reading Activities

Main Idea – help the child to pick out the main idea of a story or chapter.

Facts or Details – help the child to sort specific facts/details that led to an event.

Sequence – help the child to develop a sense of story order. What happened first, next and last?

Story retelling - at the conclusion of the story ask the child to retell the story in her/his own words. Check to insure that main points are included and the story is in the correct order.

Discussion – discuss with the child the meaning of the story and various parts of the story that the child may not understand.

Problem Solving – if there was a problem in the story, how was it solved? Would the child have solved it another way? Did the child like the solution?

Connections with the student's life – Are there any events in this story that are similar to things the child has experienced in her/his life?

Other Activities

Rhyming word families – use words such as “cat” “mat” “hat” and “fat” to build vocabulary.

Comprehension Strategy

Tutor questioning

Literal – when the tutor asks the tutee direct questions. Ex: What happened when the wolf huffed and puffed?

Inferential – when the tutor asks the tutee questions that the tutee must infer to get the answer.