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The Effects of the Help One Student to Succeed (HOSTS) Program on the Reading Achievement of At-Risk 4th and 5th Grade Elementary Students

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THE EFFECTS OF THE HELP ONE STUDENT TO SUCCEED (HOSTS) PROGRAM
ON THE READING ACHIEVEMENT OF AT-RISK 4th AND 5th GRADE
ELEMENTARY STUDENTS

By

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A Dissertation Proposal Submitted to the Faculty of
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Abstract

Title: The Effects of the Help One Student to Succeed (HOSTS) Program on the Reading Achievement of At-Risk 4th and 5th Grade Elementary Students

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This study investigated the effects of the Help One Student to Succeed (HOSTS) tutoring program on the reading achievement of at-risk 4th and 5th grade elementary students, as measured by the Texas Assessment of Academic Skill (TAAS). Seventy-eight 4th and 5th grade at-risk students from four Title I elementary schools in the Plano Independent School District participated in the study. Thirty-nine of these students were enrolled in the HOSTS program and were matched to a comparison group of students according to ethnicity, age, gender, grade, free or reduced lunch, bilingual and English as a Second language status.

The results of the present investigation were as follows: (a) of the thirty-nine at-risk 4th and 5th grade students enrolled in the HOSTS program, 28 students (72%) met or exceeded the minimum requirements on the TAAS exam, (b) data on the difference in reading achievement between the two groups of 4th grade students were not statistically significant, and (c) data on the difference in reading achievement between the two groups of 5th grade HOSTS students were statistically significant. Together, these findings underscore the many factors that must be considered when using tutoring programs to supplement general education environments for at-risk students. Finally, the mixed results support the need for further research.

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THE EFFECTS OF THE HELP ONE STUDENT TO SUCCEED (HOSTS) PROGRAM
ON THE READING ACHIEVEMENT OF AT-RISK ELEMENTARY STUDENTS

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CHAPTER I INTRODUCTION

During the past few decades, the United States has undergone tremendous social, political, and economic change that significantly altered the manner in which public education is viewed. Many Americans believe that schools are failing to educate a significant portion of the students they serve, with particular attention focusing on problems of students in urban settings (Tonelson, 1989). The perception is that many urban students are living in an environment surrounded by poverty, drugs, substance abuse, parental neglect, and urban decay which causes a significant proportion of school age children to be at-risk of failing to receive an adequate education.

Fashola and Slavin (1997) define “at-risk” as referring to students who, on the basis of several risk factors (e.g., poverty, drug/substance abuse, single parent household), are unlikely to graduate from high school. Students at-risk, often referred to as slow learners or underachievers, comprise a growing proportion of the school-age population. The accumulated research has shown that the majority of at-risk students require various instructional adaptations if they are to succeed in school (e.g., Mantzicopoulos, 1992; Marston, 1995; Nardini & Antes, 1991; Wasik & Slavin, 1990).

Probably most beneficial in addressing the educational needs of the at-risk student has been the federally funded Elementary and Secondary Education Act of 1965 (Public Law 89-10) Title I program (Slavin, 1991; Slavin & Madden, 1991). According to Wasik and Slavin (1993), tutoring is the only compensatory Title I education program that has proven to increase the academic performance of at-risk students. The tutoring models commonly discussed throughout the literature generally fall into one of five tutoring models: peer (Topping, 1998), cross-age (Rekrut, 1994; Zukowski, 1997), volunteer

(Vadasy, Jenkins, Antil, Wayne, & O'Conner, 1997; Wasik, 1997), computer-assisted instruction (Jitendra & Xin, 1997; Salerno, 1995), and intelligent tutoring systems (Mendes, Nunes, & Andreucci, 1996).

One Title I pullout reading program that uses volunteer tutors to help improve the academic performance of at-risk students is the HOSTS (Help One Student to Succeed) program. HOSTS is a program that involves adults and students from the community who tutor, one to one, an at-risk student who needs help and encouragement in learning to read (Bryant, Edwards, & LeFiles, 1995; Gaustad, 1992). The HOSTS program, founded by teacher Bill Gibbons in Vancouver, Washington in 1971, serves over 1,100 programs and 500,000 students in 41 states and the District of Columbia and El Salvador (Blunt & Gordon, 1998).

Although research supports the use of tutoring as an effective means to improve the academic achievement of at-risk students (Engman, 1992; Rekrut, 1994; Topping, 1998; Wasik & Slavin, 1993), few empirical studies have been conducted to document the effects of volunteer tutoring programs such as HOSTS (Wasik, 1997). Given the promise of volunteer tutoring programs, more research is needed to assess the relationship between the HOSTS program and the academic performance of at-risk students to determine if HOSTS is a viable solution for increasing the achievement of at-risk students. This study will examine the components of the HOSTS program and, in doing so, add to the current body of knowledge on volunteer tutoring programs.

Statement of the Problem

The United States economy has been transformed from an industrial economy to a technological one in which many of the skills previously demanded by the workplace

have now become obsolete. Today, there is tremendous pressure on schools to address the educational needs of all students. In particular, schools face serious challenges in serving at-risk students. No longer are there large numbers of jobs for workers who lack basic education skills. Recent studies of job opportunities have shown that many graduates as well as non-graduates cannot qualify for entry level jobs because of deficiencies in basic reading, writing, and math skills (Slavin & Madden, 1995). Schools that allow high numbers of students to exit school without acquiring basic literacy skills contribute significantly to a life of poverty and social dependence.

The failure of schools to meet the educational needs of a large group of students could prove to be disastrous to the social cohesiveness and global competitiveness of the United States. With the national trend of greater emphasis on standardized tests and higher student performance, students who are at-risk, due to social-economic conditions, race, ethnicity, language, poverty, drugs and other environmental factors, rarely are provided adequate educational services within the public schools (Letgers & McDill, 1995). Unable to qualify for special education services, at-risk students experience academic failure very early and often drop out of school at significantly higher rates than other students or are tracked into substandard courses and programs that hold low expectations for learning (Oakes, 1992; Wheelock, 1992). As the diversity of the general education classroom grows, many school systems are struggling to find ways to address the needs of at-risk students. The drive to improve the quality of American education, a major concern of the education reform movement, is of significant consequence to at-risk students. Most recent reports on reforming American education either ignore or pay little attention to the myriad problems associated with at-risk students (Rodriguez, 1997).

The literature suggests that to be effective education programs must be designed to address specific school needs (Wasik & Slavin, 1993); however, too few programs have been developed that address the needs of students at-risk of school failure. Students who are at-risk often begin their schooling reading several grade levels below their peers. Consequently, they require more time to develop reading and writing skills (Snow, Burns, & Griffin, 1998). According to Wasik and Slavin (1993), one-to-one tutoring is one of the most effective forms of instruction for helping at-risk students with reading problems. The research being proposed here will describe the effects of the Help One Student to Succeed (HOSTS) program on the reading achievement of at-risk 4th and 5th grade students. The HOSTS model is based upon a one to one tutoring program that uses teams of volunteers to help at-risk students improve academic achievement.

Purpose of the Study

The purpose of the study was to describe the effects of the Help One Student to Succeed (HOSTS) program on the reading achievement of at-risk 4th and 5th grade students. The study will describe the reading performance of students enrolled in the HOSTS program. The intent of this study is to bring together what is currently known about tutoring at-risk students and identify new strategies for improving student academic achievement.

Significance of the Study

Growing numbers of students are experiencing reading and other academic problems, as evidenced by the number of students who qualify for Title I services (Fashola & Slavin, 1998). Federal and state funding agencies require school districts to be accountable when applying for funds or grants (Oswald, 1995). Thus, many school

districts are paying increased attention to establishing more precise criteria for evaluating the effectiveness of Title I programs designed to improve the academic achievement of at-risk students. Guidelines and data are needed to evaluate Title I programs and to assist administrators in making decisions about which programs are most beneficial to at-risk students. Despite the fact that schools are experimenting with various approaches to tutoring at-risk students (Wasik, 1997), little empirical research has been conducted to evaluate the effects of specific strategies of volunteer tutoring programs such as the HOSTS. The HOSTS program incorporates three basic strategies for assisting at-risk students that are supported by research: (a) early intervention, (b) one to one tutoring, and (c) parent/community involvement. Although a great deal of qualitative data exist to support the use of volunteer tutoring programs such as HOSTS (e.g., Blunt & Gordon, 1998; Wasik, 1997), a more substantial quantitative database is needed to validate claims of improved academic achievement and student attitudes toward reading. The results of the present study should increase our understanding of the effects of the HOSTS program on the achievement of at-risk students.

Relationship to Urban Education

Rationale for the study lay in the need for research on the effects of instructional strategies designed to meet the burgeoning needs of at-risk students. While the increase in the number of at-risk urban students experiencing reading and other academic problems is recognized, urban educators and researchers face serious challenges to designing and delivering quality systems to meet the needs of at-risk students. Lippman, Burns, and McArthur (1996), in a study commissioned for the National Center for Urban Education Statistics, describe urban areas as having disproportionately large numbers of poor and

minority students (including Asians and Pacific Islanders), receive free or reduced lunch, and have difficulty speaking English. Aside from the increased likelihood of being poor and having difficulty speaking English, urban students were more likely to be exposed to safety and health risks and to come from single parent households. In short, most of the problems surrounding education are found in urban education.

A variety of research methodologies and practices are being used to study and to attempt to improve urban education. One of these approaches, the HOSTS program, currently is being implemented in 42 states and has served over one million urban and at-risk students during the past twenty-eight years. This study shall provide an empirical base for an analysis of the HOSTS tutoring program on the reading achievement of at-risk 4th and 5th grade students. The HOSTS program, because of its emphasis on the at-risk population, is the type of program that may prove very beneficial to poor urban students throughout the United States.

Research Questions

Education long has been the stepping stone by which children of all nationalities enter into the economic mainstream of American society. In recent years, however, many educators have begun to question the effectiveness of schools for children from non-mainstream cultures. In particular, there is concern voiced by educators about the education of children within diverse urban cultures. Increasingly, the diversity of cultures within the general education classroom and the manner in which traditional classroom instruction is delivered has significantly impacted the reading achievement of at-risk students.

As awareness of diversity within the general education classroom has risen, teachers and administrators struggle to find solutions to the complex problem of educating diverse student populations. One possible solution is the Help One Student to Succeed (HOSTS) program. Studies evaluating individual HOSTS programs have demonstrated that students achieve significant gains in reading (Bell, Meza, & Williams, 1995; Briggs & Clark, 1997; Fashola & Slavin, 1998; Holden, Simmons, & Holden 1998; Slavin, Olatokumbo, Fashola, & Duran, 1996; Wasik, 1997). Given the purpose of the study, two research questions and accompanying corollaries were delineated to guide this investigation:

Question 1: Do at-risk students in grade four demonstrate improvement in reading as measured by the Texas Assessment of Academic Skills (TAAS)?

Corollary 1a: Do at-risk students in grade four who participated in the HOSTS program demonstrate improvement in reading, as measured by the TAAS?

Corollary 1b: Do at-risk students in grade four who did not participate in the HOSTS program demonstrate improvement in reading, as measured by the TAAS?

Corollary 1c: Do differences in reading exist between grade four students who participated in the HOSTS program and grade four NON-HOSTS students, as measured by the TAAS?

Question 2: Do at-risk students in grade five demonstrate improvement in reading as measured by the TAAS?

Corollary 2a: Do at-risk students in grade five who participated in the HOSTS program demonstrate improvement in reading, as measured by TAAS?

Corollary 2b: Do at-risk students in grade five who did not participate in the HOSTS program demonstrate improvement in reading, as measured by the TAAS?

Corollary 2c: Do differences in reading exist between grade five students who participated in the HOSTS program and grade five NON-HOSTS students, as measured by the TAAS?

Definitions of Terms

For the purposes of the study, the following terms were operationally defined:

Tutoring. Tutoring is defined as a program whereby at-risk students work one to one with adult or student tutors on a variety of reading and writing activities designed to enhance reading comprehension and related reading skills and strategies (Gaustad, 1992).

At-risk student. An at-risk student is defined as a student who, on the basis of several risk factors, is unlikely to graduate from high school (Fashola & Slavin, 1997).

Tutor. A tutor is defined as an adult or student who provides reading tutorial services to an at-risk student through a variety of reading and writing activities introduced by an adult reading specialist (Gaustad, 1992).

Tutee. A tutee is defined as an at-risk student who receives reading tutorial services from an adult or student mentor/tutor (Gaustad, 1992).

Cross-age Tutoring. Cross-age tutoring is defined as a program whereby school age students work one to one with another student on a variety of academic

activities designed to improve reading comprehension and related skills and strategies (Gaustad, 1992).

Peer Tutoring. Peer tutoring is defined as a program whereby one student provides one to one tutoring to another student of relatively the same age on a variety of academic activities designed to improve reading comprehension and related skills and strategies (Fuchs, 1997).

HOSTS (Help One Student to Succeed). Help One Student to Succeed (HOSTS) is a Title I program designed to help at-risk students improve reading skills by providing individualized instruction through the use of volunteer tutors (Bryant et al., 1995).

CHAPTER II

REVIEW OF THE LITERATURE

An Educational Research Information Center (ERIC) search, conducted in August 1999 revealed 8,195 “hits” on a search of the topic “tutoring.” When a search was conducted on the topic of “volunteer or community tutors,” there were 396 “hits”. Another ERIC search for information on the “HOSTS (Help One Student to Succeed)” program produced 13 documents, all of which appeared relevant to this study. Though tutoring programs that utilize volunteer tutors are a common practice and implemented in a variety of formats, this ERIC search confirmed that the body of literature that quantitatively validates the use of the HOSTS program is limited.

Making adequate provisions for meeting the individual needs and interests of all students in the general education classroom has long been a concern of educators. While the primary mission of schools is to provide all children with an appropriate educational experience, attention increasingly is being given to identifying and assessing the needs of students identified as “at-risk” of school failure. Fashola and Slavin (1997) define at-risk as referring to “students who, on the basis of social, economic, or emotional risk factors, are unlikely to graduate from high school” (p. 252). Concern over at-risk students has led to the use of various educational methods and practices designed to increase the likelihood of school success for these students.

Nationwide, there are growing numbers of programs being implemented that focus on the responsibility of educators to address the educational needs of at-risk children and adolescents (Fashola & Slavin, 1997; McChenesy, 1996). When the educational needs of at-risk students are met, they may perform at a level consistent with their academic

potential and maintain interest in the educational process early on during the adolescent years (Wasik & Slavin, 1993). Various school reforms initiatives are being introduced to improve the academic achievement of students. Reform efforts, such as charter schools (Schneider 1998), block scheduling (Curry, Griffin, Washington, & Zyskowski, 1998), public school choice (Lindjord, 1996), extended-year schooling (Count, 1992), and year-round schooling (Anada, 1997) are being considered by various school districts.

Research indicates that the most effective programs for at-risk students emphasize prevention rather than remediation (Mantzicopoulos, 1992; Slavin & Yampolsky, 1992; Wasik & Slavin, 1993), direct instruction (Marston, 1995; McChesney, 1996; McLaughlin, & Vacha, 1992; Vergason & Anderegg, 1991), increased time on task and opportunities for students to respond (Locke & Fuchs, 1995), and individualized instruction in the basic skills of reading, writing, and mathematics (Nardini & Antes, 1991). Finally, prevailing literature on meeting the educational needs and interests of at-risk students suggests that tutoring is a viable supplement to traditional classroom instruction (Fashola & Slavin, 1998; Wasik & Slavin, 1993).

A review of the literature reveals that implementation of tutoring programs can be beneficial, both academically and socially, for students' at-risk of school failure (Ainsworth, 1995; Fashola & Slavin, 1998; Foster-Harrison, 1997; Gaustad, 1992; McLaughlin & Vacha, 1992; Wasik & Slavin, 1993). However, very little quantitative and qualitative research exists to validate the effectiveness of tutoring programs that utilize adult volunteers to tutor at-risk students. As reflected in the literature, there is often a lack of knowledge on how to: (a) assess the effectiveness of volunteer tutoring on student achievement (Wasik, 1997), (b) structure tutoring programs (Wasik, 1998), (c)

determine whether the educational technology is adequate to evaluate student performance or whether there is appropriately trained tutors (Roller, 1998) and (d) determine which tutoring models are most effective (Wasik, 1997; Wasik & Slavin, 1990).

Historical Perspective

Tutoring long has been used as a teaching and learning strategy. The roots of tutoring can be traced to ancient times. During earlier periods of history, tutoring was the primary means of bestowing knowledge to future generations by ancient Greeks and the Romans (Wagner, 1982). According to Wagner (1982), the use of students as tutors dates as far back as the first century A.D.

Gartner, Kohler, and Riessman (1972), in a literature review of peer and cross-age tutoring, noted several discussions of the topic in preceding centuries. Of particular interest is the reference to John Comenius (1592-1670) whose first work was published in the mid-nineteenth century. According to Comenius, education began at birth and was divided into four levels: (a) birth to 6 years of age; (b) grammar school, from 6 to 12 years of age; (c) secondary school, from 12 to 18 years of age; and (d) university, from 18 to 24 years of age. At each of the four levels, the same subjects were taught, but with varying degrees of difficulty which the teacher adapted to each individual's developmental level. Comenius advocated universal education because of his belief that education should be used as a vehicle for social change and unity (Gartner et al., 1972). Further, he suggested that mothers should be provided guidance for tutoring their children and be taught how to use manipulative objects and instructional principles to instruct their children properly (Gartner & Riessman, 1994). A staunch supporter of

tutoring, Comenius felt that tutoring was of benefit to both the tutor and the tutee. He recommended that students who wanted to make genuine academic progress should arrange to give lessons to other students on a regular basis. The belief was that students learned more when teaching other students (Gartner & Riessman, 1994).

In England, toward the end of the eighteenth century, a teacher, Joseph Lancaster, was instrumental in designing a tutorial system designed to provide education to large populations of poor students (Ediger, 1987; 1991; Hogan, 1989; Newman, 1998; Rayman, 1981). Lancaster believed that through the use of student teachers, schools could keep educational costs down, while at the same time, providing adequate education to large numbers of poor, undereducated children (Ediger, 1991). Lancaster hypothesized that children who taught other children were in a better position to learn themselves and had repeated opportunities to review and internalize materials in conjunction with memorizing basic skills (Ediger, 1987). According to Lancaster, children also could be better teachers than adults, for they were more likely to work democratically with their partner, understand their feelings, and recognize the capacities of their peers (Newman, 1998; Rayman, 1981). The Lancaster system, as it was called, was organized in such a way that one master teacher could train a group of students as assistant teachers. The trained students would then teach the same lesson to approximately twenty other students, under the supervision of the master teacher. The system covered four curricular areas: reading, writing, spelling, and arithmetic. Memorization of learning was the primary teaching method employed by the Lancaster system.

The Lancaster system was so successful in England that Joseph Lancaster decided to introduce the Lancastrian System of Instruction into the United States in 1805 (Newman,

1998). Lancaster's philosophy spread rapidly in the United States and was used widely in American Indian and Missionary schools to train older students to tutor younger students in basic literacy and other manual skills. In contrast to its widespread acceptance in England, the Lancaster system eventually was abandoned in the United States when a group of concerned parents protested the ineffectiveness of the system (Ediger, 1987; Rayman, 1981).

In the mid-1800s, a teacher from Boston, William Fowle wrote the "Manual of Mutual Instruction" which described in detail, tutorial procedures for instructing students. Included in the manual were point by point tutorial procedures that incorporated the use of instructional materials adapted to the learner's ability and a monetary reward system for student tutors. Notwithstanding their popularity, these early versions of tutoring lacked sufficient research to validate program effectiveness and subsequently tutoring was abandoned in public schools in favor of specialized training for teachers (Webb, 1987).

Between 1930 and 1950, there was little mention of tutoring in the educational literature until the 1960s when the Lippetts created several tutoring projects designed to meet the academic needs of students (Lippett, 1969, 1975; Lippett & Lippett, 1970). The Lippetts believed that tutoring programs should be based upon several assumptions: (a) younger children tend to model the behavior of older children – a process that can be replicated in the classroom; (b) student tutors, trained by adults, are provided the opportunity to develop peer relationships; (c) tutors learn content more thoroughly than they might in the context of the regular classroom environments; and, (d) tutors gain more confidence in their academic abilities, improve affective, and interpersonal skills. In

their research, Lippett and Lippett (1970) reported growth of both tutor and tutee in terms of academic interest, motivation, and attitude toward school. Gartner et al. (1972) conducted similar research on tutoring programs and extrapolated from their studies five types of children who seemed to benefit from tutorial programs. These authors theorized that children who benefited the most from tutoring were those who (a) experienced previous failures in peer relationships, (b) had younger children in the family, (c) were the oldest child, (d) had not had experiences in working with others on an equal footing, and (e) had never worked with an older, same-sex child. Common characteristics among these five types of children were the absence of extended, successful contact with peers.

Early studies of tutoring primarily focused on affective rather than academic domains. There was little emphasis on documenting the effectiveness of specific tutorial techniques. Cloward (1967) was among the first to examine the effects of tutoring on academic achievement when he conducted research on a demonstration tutorial project in New York City, known as the Mobilization for Youth program. In this project, eleven tutorial centers were established in neighborhood elementary schools. Hired from local academic and vocational high schools, 240 students were trained to tutor 544 fourth- and fifth-grade pupils. Each center was run by a master teacher who, in addition to administrative activities, was responsible for training the tutors. Tutors and tutees eligible for participation in the program were assigned randomly to experimental and control groups. Students assigned to the experimental group were tutored either once or twice a week for 2 hours. Cloward (1967) reported that both tutor and tutee made significant progress in reading achievement when compared to the control groups.

In another tutoring program, known as the Youth Tutoring Youth, Philadelphia and Newark high school students who were at least two years behind grade level in reading were paid to act as tutors for underachieving children in urban schools. Subjective evaluation of the program suggested that even when underachieving youth are given work responsibility as tutors, both they and the tutees make progress in the following areas: (a) a sense of work responsibility, (b) an appreciation of learning, (c) improved literary skills, and (d) motivation to work and stay in school.

The 1960s and the 1970s ushered in a period in which the social conscience of America reflected increased concern with poverty, racial discrimination, and inequality in education (Farkas, 1996; Letgers & McDill, 1995). As the demographics of urban areas began to change, educators began to notice large number of students who were socially, economically, and emotionally disadvantaged (Farkas, 1996). With the rapidly decaying urban areas and the white middle class exodus to the suburbs, student achievement levels in many urban classrooms began to deteriorate. Teachers in urban schools faced learning situations that significantly differed from those previously encountered in schools. With the majority of students not graduating from high school and going to college and with a growing percentage of urban students dropping out or graduating from school as functional illiterates, new educational aims and priorities surfaced to address the needs of all students.

In the early 1980s, as a result of trends such as local and national testing of all students, minimum competency testing, basic skills programs, and the theme of national excellence in schools, the at-risk student population again took center stage within the education community. The mounting at-risk student population highlighted the

importance of the immediate need for new instructional methods, instructional techniques, class materials, and support services. The result was a host of compensatory programs funded by the federal government to supplement and improve the education of at-risk students. Most significant in providing funds to address the educational needs of at-risk students is the national Title I Program. Title I, began in 1965 as Title I of the Elementary and Secondary Education Act of 1965 (Public Law 89-10), continues today as the primary source of funding for a wide range of academic and social programs serving the needs of at-risk students nationwide (Letgers & McDill, 1995). Certain provisions of Title I provide federal support to schools that seek to establish tutoring programs for at-risk students. According to Wasik and Slavin (1993), tutoring is the only compensatory Title I education program that has been shown to increase the academic performance of at-risk students. Whether used as a pullout program or integrated into daily classroom instruction, accumulated research tends to support the use of tutoring as an effective approach to increase the academic performance of at-risk students.

Theoretical Considerations

The current practice of introducing tutoring as a supplement to traditional education is grounded in psychological (Sherman, 1991) and sociological theory (Rings & Sheets 1991; Scheid, 1993; Sherman, 1991). Psycho-sociological research provides educators with a sense of what may typically occur when different types of classroom strategies are employed (Medway, 1991). The investigation of social and psychological theories may aid in determining the appropriate variables to observe in both formative and summative evaluation of volunteer tutoring programs such as HOSTS. Applying well-grounded

theories to the process of tutoring may indicate whether a project is likely to be successful, or under what conditions it might be successful.

Theoretical assumptions describe how input variables to the HOSTS tutoring program may lead to specific, desirable outcomes. This allows educators and researchers to examine cause-and-effect relationships through continued experimentation while simultaneously establishing empirical evidence for evaluating the effectiveness of the HOSTS program. Theories discussed in the social-psychological literature which exert particular influence on the concept of tutoring are social influence (Medway, 1991, Smith, 1993), de-individualization (Eiserman, 1991), attribution theory (Dohrn & Bryan, 1994; Yasutake, 1996), cognitive dissonance (Ohlsson, 1992; Trimbur, 1987), and conflict resolution (LeLand-Jones, 1998).

Social Influence

Social influence primarily is concerned with the conscious and deliberate influence on the behavior of others (Medway, 1991; Raven, 1992; Raven & Erchul, 1997). On a daily basis, teachers attempt to influence the cognitive ability, attitude, and behavior of students. Research suggests that adults, as well as peers, exert influence on students (Raven, 1992). According to Raven (1992), six types of influential power exist: coercive, reward, informational, expert, referent, and legitimate.

Coercive influence involves the ability of the influencer to mediate punishment. For instance, the student who copies the right answer to a problem in order to avoid being scolded or losing certain privileges is responding to coercive influences. Reward influence involves the ability of the influencer to mediate rewards as the basis for the

effect. For example, the child that does his work in order to receive rewards such as praise, affection, or high grades would exemplify this means of influence.

Informational influence occurs when the information communicated by the influencer is the basis for the effect or change. For example, a teacher may have successfully explained to the student why a particular procedure is desirable for solving mathematical or other problems and, by means of this information, may have influenced the student's behavior.

Expert influence occurs when the superior knowledge of the influencer is the basis of change or effect. For example, a student might accept that a particular procedure is useful in solving a problem without understanding why. He might believe that the teacher "knows best" and consequently alters his response. Finally, referent influence occurs when one identifies with another person or group, which serves as a frame of reference for the change. Thus, seeing other students doing (or not doing) homework (and identifying with them) may result in a similar behavior. When a student emulates the behavior of another student or adult, the influencer exerts referent influence on the student.

Finally, legitimate influence occurs when the student accepts the right of the teacher to exert influence. The teacher might, for example, be perceived as having the right to assign homework and to expect students to do it, thereby eliciting the anticipated behavior.

These bases of influence are interdependent. An individual attempting to influence another, may be using several bases simultaneously (Raven, 1974). Furthermore, a tutor attempting to influence a student may employ differing influencers at different stages in a

relationship. Complexities in a tutor relationship explains the importance of understanding the bases of influences. The susceptibility of a student to any kind of influence is dependent upon the relationship that exists between both tutor and tutee (Raven, 1992). For example, some tutees might be more responsive to informational influence, others to referent. Raven (1974) undertook an analysis of the bases of social influence employed by teachers and students. Using a questionnaire format, Raven asked African-American, Hispanic, and Caucasian junior high school students to state the reasons why they would comply with a request such as "pick up your things that you had left around" when made by their teacher as compared with a fellow student. Participant responses indicated that teachers were much higher in legitimate and coercive influence, and somewhat higher in expert influence than peers. In contrast, peers were rated much higher in referent influence. Fellow students also were judged higher in reward and informational influence. Similar findings have been reported with Brazilian students outside of the United States (Raven, 1974).

Studies on tutoring suggest that schools attempting to employ tutoring as an instructional practice may benefit from understanding the bases of influence. Given that influence may be exerted in various ways, social-psychological theory suggests that more desirable results are obtained dependent on the situation and the type of influence evoked in response (Raven, 1992; Raven & Erchul, 1997). Redefining power and empowerment in terms of synergistic interactions forces educators to consider some new dimensions when developing tutoring programs.

De-Individualization of Students

Within schools, students are placed in an environment that is, to a great extent, de-individualized. De-individuation occurs when the person, in this case the student, is not seen or given attention as an individual and instead is primarily "submerged" within groups or subgroups (Diener, 1980; Dodd, 1970; Raven & Erchul, 1997). A growing body of research demonstrates that conditions of de-individualization and associated anonymity can result in increased anti-social behavior (Cannavale, 1970; Diener, 1977; Raven & Erchul, 1997; Zimbardo, 1970).

Cognitive Dissonance

Cognitive dissonance is a social-psychological theory which asserts that "cognition's must be consistent, and that inconsistency, or dissonance, generates uncomfortable tension resulting in changes designed to reduce dissonance" (Prislin & Pool, p. 941). In other words, dissonance occurs when a behavior and its consequences contradict an individual's self-concept. The change in roles that results from being a tutor might be expected to have the greatest impact on those adults and students for whom there is the largest discrepancy between the perceived meaning of the tutoring role and the belief they possess the qualifications necessary for the tutoring position (Trimbur, 1987). Included in this category would be adult volunteers who view themselves as poor academic performers or lacking a specific knowledge base, low achieving, and problem students. Research has shown that a clear understanding of the impact of cognitive dissonance on both tutor and tutee may help practitioners determine whether to emphasize the tutor component or tutee component when developing a tutoring program (Carkenord & Bullington, 1993; Trimbur 1987).

Misiti and Shirley (1994) conducted a study in which they evaluated five preconditions for dissonance arousal in a counter-attitudinal essay writing task. The five preconditions were: perceived choice, irrevocable commitment, minimum incentive, perceived responsibility for consequences, and foreseeability of negative consequences of behavior. The sample population was 141 middle school students enrolled in grades 6, 7, and 8. Subjects were asked to write essays on the theme "Why I like learning science," with the expectation that the essays would be publicly displayed and read by their peers. Misiti and Shirley predicted that dissonance arousal following the essay writing task would be reduced by a positive attitude change in the direction of the counter-attitudinal advocacy. The effect of grade level, gender, and three treatment levels on attitude change were assessed. A significant three-way interaction of grade level, gender, and treatment level on science attitude scores was found. The need for dissonance reduction would be greatest for those tutors for whom being assigned the role represented the greatest surprise. This would imply that it may be particularly effective and meaningful to involve in the tutoring process those students or adults who at first glance seem the least likely candidates for the role.

Attribution Theory

Attribution theory is concerned primarily with the analysis of the way people explain their own behavior and that of others (Dohrn & Bryan, 1994; Fulk, 1996; Gama & Jesus, 1997; Hudley et al., 1998; Samples, 1997; Yasutake, 1996). For example, if one observes students working at a particular task, attribution theory would focus on how the students, the teacher, classmates, parents, and others would explain the fact that the students are working (Samples, 1997). Is it because they enjoy the task or because a teacher has

threatened them with punishment? Similarly, if it is observed that a student succeeds at the task, is it because he or she is competent or because the task is very easy? Or, perhaps the exertion of a great deal of effort was primarily responsible for the successful performance.

Miller, Brickman, and Bolen (1975) conducted a study designed to evaluate the concept of attribution on modifying student behavior. They compared various techniques designed to modify the behavior of 4th- and 5th-grade inner city children with respect to their littering. Students were divided into three groups, with one group acting as the control. One technique involved persuasion -- telling the children what they should do. Another technique involved an attribution approach, namely telling the children that they possessed characteristics consistent with the desired behavior. The results revealed that the attribution treatment was more than twice as effective as the persuasion or control conditions in reducing the children's littering behavior.

In a second experiment conducted by Miller et al. (1975), attribution was compared with persuasion or reinforcement communications for its effects on math achievement and self-esteem. Children, again 4th- and 5th-grade inner city students, were assigned to three groups. One group of students (attribution condition) were told "they were hard workers or good performers"; another group of students (persuasion condition) were told that "they should be hardworkers;" the third group of students (reinforcement condition) were told that "others (e.g., the teacher) were pleased with their work". Finally, the fourth group of students acted as the control and no communication was delivered in the control condition. As before, the results favored the attribution treatment, which showed about 20% greater gains in math and in self-esteem. This effect was observed immediately after

the treatments (which lasted eight weeks) and two weeks following the termination of the treatments.

Dweck (1975) analyzed the attributions made for success/failure experiences and their relevance for achievement striving and affective responding in reaction to successes or failures, and the perseverance in the face of failure. Working with school age children whose performance would severely deteriorate following failure, she compared the efficacy of two differing treatments: (a) a Success-Only condition in which children were carefully taught and met only with success and (b) a Re-Attribution condition in which subjects were taught to explain their failures as due to lack of sufficient effort and to use failure as a reminder to work harder and persevere. On the dependent measure, she found that following treatment, those children who had been trained in making the lack-of-effort attributions did not show any deterioration effects following failure experiences and in fact, showed slight improvement following failure. Subjects in the other conditions continued to show marked adverse effects following failure.

Yasutake (1996) conducted a study to evaluate the concept of attribution on modifying student behavior. Twelve elementary students with learning disabilities and 42 students at risk for special education referral served as tutors for younger children. The student tutors were divided into two groups. One group of student tutors was trained to make statements attributing success to ability and effort. The other group of student tutors were taught strategies for suggesting error conditions. The results of the study revealed that the attribution treatment was effective and the tutors became more positive in their self-perceptions than the tutors did in a strategy-only condition.

When tutors teach on a one to one basis, they presumably will observe the role of effort in achievement, especially if their training alerts or predisposes them to attribute success and failure to effort levels. Thus, it is possible to surmise that the process of tutoring could enhance the achievement motivation of tutors and, with appropriate training, tutors could affect re-attribution training with tutees. The one to one nature of the interaction can prove very valuable in training desirable attributions for both tutee and tutor which may generalize to other success/failure situations. The implication is that methods that express confidence in the child's competence are effective. Assigning the role of tutor to a student or parent may signal an expression of confidence in their ability or competence. The attributions made for the tutor/tutee roles may constitute a central element in the success or failure of a tutoring program. In evaluating or researching the effectiveness of tutoring programs, attention should be paid to the attributions that students make regarding their own and others' participation. Such attribution might well be one predictor of program success.

Benefits of Tutoring

Research suggests that tutoring can be extremely beneficial to at-risk students (Blunt & Gordon, 1998; Cline & McLaughlin, 1993; Collier, 1995; Fantuzzo, 1995; Freedman & Jaffe, 1993; Heller & Fantazzo, 1993; Jason, 1994; Juel, 1991; King-Sears & Bradley, 1995; Letgers & McDill, 1995; Madrid, Terry, Greenwood, Whatley, & Webber, 1998; Martino, 1994; McCarthy, 1995; Slavin, 1993; Vadasy et al., 1997; Wasik, 1998). Tutoring is defined here as the process by which one person, with a minimum of specialized training and under the overall guidance of a teacher or instructional aide, helps one or more students or tutees' learn a specific skill (Gaustad, 1992). Generally,

tutees are students who require assistance with some academic facet of the classroom learning situation. The tutoring process is not a formalized teaching strategy, but rather a temporary means to help prevent educational problems or remediate existing ones (Wasik, 1997). Such tutoring provides individualized assistance that supplements both regular and special classroom instruction (Heller & Fantazzo, 1993).

Bargh and Schul (1980) were among the first to examine the instructional relationship between tutor and tutee. These authors found that the tutor benefits from the teaching process in two ways. First, teaching can cause a content specific gain by increasing the organization and elaboration of the specific material that was taught. In addition, tutoring can facilitate the learning of related material, which is known as a generalized gain. In examining this issue, Bargh and Schul compared students who studied material to learn it themselves with students who studied the material with the expectation they were to teach it to someone else, even though they did not actually teach at a later time. Bargh and Schul found that the students who were expecting to teach others had significantly higher content-specific scores. Thus, Bargh and Schul tentatively concluded that cognitive benefits of teaching do result from the preparation stage of the teaching process.

Teachers also have been beneficiaries of the tutoring process. Benefits for the teacher have included: increased opportunity to individualize instruction, increased comparing and consulting with other teachers, and the development of more positive attitudes among students and between students and teachers (Ainsworth, 1995). Depending on how a program is structured, students also may demonstrate improved attitude toward school and academic and social behavior. Qualitative and quantitative evidence suggests that

tutoring can add measurably to student motivation (Yasutake, 1996), self-concept (Fantuzzo, 1995), academic achievement (Fantuzzo, 1995; Guinta, 1997; Vadasy et al., 1997), social (Guinta, 1997), and emotional well being (Hoover, 1992) of at-risk students.

Academic Achievement

The educational literature on tutoring programs indicates that tutoring has definite and positive effects on the academic performance of students (Allsop, 1997; Bender, 1994; Fantuzzo, 1995; Freedman & Jaffle, 1993; Ginsberg & Fantuzzo, 1997; Heller & Fantuzzo, 1993; Jason, 1994; Martino, 1994; Wasik, 1998; Weiss, 1988; Wilson & Robinson, 1997). Critical analyses and meta-analyses also suggest that tutoring, as an individualized learning experience, benefits the tutor as well as the tutee (Cohen, Kulik, & Kulik, 1982; Hopkins & Robinson, 1993). Students who have been tutored often outperform their peers on examinations and express more positive attitudes toward the subjects in which they are tutored. Cohen et al. (1982) conducted a meta-analysis of sixty-five studies examining tutoring programs. The meta-analysis concluded that tutoring programs have definite and positive effects on the academic performance of those who receive tutoring. Slavin (1987) reached a similar conclusion in a review of seven controlled studies of tutoring provided to at-risk students in the elementary grades (generally by paraprofessional aides, teachers, or other trained adults). In each of these studies, the tutored children exhibited performance gains that exceeded the gains of similar students who were not tutored.

Weiss (1988) evaluated the effectiveness of using volunteer reading tutors to work with students with reading difficulties. Changes in academic engaged time, active

responding time, achievement, and student attitude were assessed, along with information from tutor evaluations. Nine intervention and 8 control students (grades 3-5) with mild disabilities participated over an 11-week period, with experimental subjects receiving at least 36 20-minute sessions with reading tutors during that time. Observations on the students with reading difficulties indicated significantly greater active academic responding (particularly reading aloud) and academic engaged time when students were with tutors, as well as significantly less inappropriate nontask behavior. During the intervention period, higher inappropriate nontask behavior was observed when the student was not with the tutor during reading time. Follow-up observations of intervention students without tutors revealed that changes in responses were not maintained. Nor were changes over time found in achievement or in student attitude measures. Finally, tutor evaluations suggested the possibility of gains in some aspects of reading not measured by standardized tests (e.g., expression), as well as improvements in social-emotional areas.

Bender (1994) evaluated the Pottstown Homework Center Partnership project in Pottstown, Pennsylvania, a volunteer tutoring program for sixth, seventh, and eighth grade students. Tutors who participated in the program were recruited from the local community. Evaluation of the program was conducted by comparing the grade point averages of at-risk students to other grade level students not in the program. Results indicated an increase in academic achievement for students who had been tutored in the program.

Denton (1997) evaluated the effectiveness of the Reading Recovery Program, a literacy intervention for at-risk first-grade students, as it was being implemented in 1995-

96 in a small rural school district in Texas. Components of the program included: (a) daily individual literacy tutoring sessions taught by a specially trained teacher; (b) emphasize on active engagement of the child; (c) instruction in use of literacy strategies; and (d) instructional scaffolding temporarily supporting teaching for independence.

Quantitative data were collected over a 9-month period, comparing the performance and rate of improvement of two treatment groups (one treatment group had four students and the other six students) with those of a comparison group of nine students. Student performance was measured by means of an informal survey of oral reading fluency, accuracy, and comprehension, and the reading components of the Iowa Test of Basic Skills. Analysis of the program indicated that the treatment group of students did not achieve expected normative benchmarks in oral reading fluency or on the norm-referenced measure and they did not attain the average level of performance of their peers on literacy measures. However, data from the program indicated that students in the treatment groups did show an accelerated rate of growth in their literacy learning and ability to read accurately with average comprehension.

Attitude

Although gains in achievement of tutors and tutees have been the focal point of many studies, research has demonstrated that the tutoring process also may yield substantial improvement in the attitude of tutors and tutees (Cohen et al., 1982; Collier, 1995; Drake, 1993; Howell, 1999; Juel, 1991; King-Sears & Bradley, 1995; Leach, 1993; Martino, 1994; Mohan, 1972; Stradford, 1993).

In one early investigation, Mohan (1972) evaluated a peer-tutoring program designed for unmotivated students in grades two through eight that focused on math skills.

Children selected to participate in the program were considered unmotivated and exhibited a lack of goal directness, energy, or emotional response to objects and varied learning situations. Those assigned to serve as tutors for these unmotivated students were trained in a variety of classroom demonstration techniques. Although data analysis indicated minimal measurable gains in self-concept, there was a marked increase in student motivation and math skills. Students also exhibited a more positive attitude toward the subject of math.

More recently, Cohen et al. (1982) reviewed and summarized 65 studies related to tutoring. Eight of the studies addressed the attitude of tutees toward the subject matter they had been taught. In all eight studies, student attitudes toward the subject matter were more positive in classrooms with a tutorial program. Five of the studies investigated the effects of tutor attitudes toward the subject matter they were teaching. In four of these studies, attitudes were more positive for the tutors.

In another study on tutoring, Collier (1995) examined a cross-age tutoring program implemented to improve reading comprehension skills in a group of regular students in a rural elementary school. A targeted group of four fifth-grade students and four second-grade students were matched for cross-age tutoring sessions. The fifth-grade students who were to serve as tutors were taught how to develop reading comprehension skills through the use of the strategies of Question/Answer/Relationship Technique and context clues. After being instructed in these strategies, tutors were then allowed to practice the skills, so that they internalized and transferred the skills to the fifth-grade reading comprehension level. The fifth-grade students' levels of self confidence and attitudes toward reading improved as a result of functioning as experts during the cross-age

tutoring sessions. The second-grade tutees benefited by being able to read the entire story aloud with immediate corrective feedback and reinforcement and from being asked every inferential "guided reading question" suggested in the teacher's edition of the basal reader. If the student was unable to answer the guided reading question, a more experienced tutor was able to guide the student in the correct procedure for understanding what was read. Student levels of success were measured by pretests and posttests of various kinds. Most participants, both fifth and second graders, showed considerable gains in their reading ability and attitudes.

Social

In addition to academic and attitude gains, tutoring has been shown to benefit social-emotional behaviors, such as improved relationships (Freedman & Jaffe, 1993; Howell, 1999; Martino, 1994), increased sensitivity (Gorrell & Keel, 1986), and less absenteeism (Brottman, 1975). Low-achieving children also have been observed to become "model students" while serving as tutors (Shaw, 1973). The act of tutoring allows students to exercise some measure of authority, as well as demonstrate organizational and interpersonal skills (Gorrell & Keel, 1986).

Self-Concept

Studies have demonstrated that tutoring also can be used as a means of helping tutors, as well as tutees, accept responsibility and to gain an increased sense of self-worth and social understanding (Fantuzzo, 1995; Freedman & Jaffe, 1993; Yasutake, 1996; Wasik, 1997). Tutoring allows the tutor to improve overall subject knowledge, communication skills, as well as social skills (Ginsburg-Block & Fantuzzo, 1997; Juel, 1991; Pierce, 1982).

In another study on tutoring, Cazden and Steinberg (1979) reported the unusual ability of the tutor to deal with problems associated with the instructional task. Cazden and Steinberg speculated that the tutoring role may cause increased effort and concentration as the role of teacher is assumed, thus leading to increases in self confidence and motivation. In a similar study, Lazerson (1980) examined gains in self-concept and improvement in behavior for sixty students. Both aggressive and withdrawn children were selected for the study and paired with other students with similar problems. At the end of the five week experiment, almost all active participants showed higher gains than the control group in self-concept and made greater behavioral improvements. In addition, students expressed an increased interest in school and in the learning process.

Bierman and Furman (1981) conducted a study that involved 112 fourth grade students in a foreign language program. Their results indicated that children enacting tutor roles tended to form more positive attitudes than children in tutee roles and that role had a major impact on attitudes. It was determined that children associated the role of the tutor with positive characteristics such as competence and prestige. In the course of enacting those roles, they applied these characteristics to themselves and thus, positively influenced their self-perceptions. While the actual ability of the tutee was better on achievement tests, they did not feel as smart, quick, or skillful as the tutors did.

Cohen and Kulik (1981) summarized nine studies that examined the effects of tutoring programs on tutee self-concept. In seven of the studies, self-concepts were more positive for students in classrooms with tutoring programs. Sixteen studies summarized by Cohen, Kulik and Kulik (1982) related to the self-concept of the tutors. In 12 of the studies, the

self-concept was higher for tutors; whereas, in four of them, the self-concept was higher for the control group.

In 1982, Pierce noted that as a result of the individual attention the tutee receives and the positive influence of a role model, students who are tutored demonstrated gains in self-esteem. Price and Dequine (1982) reviewed a program in which low achieving students served as tutors in a reading class for non-English speaking students. As a result of this experience, the tutors displayed significant gains in self-concept, basic reading skills, and vocabulary. Cohen et al. (1982) observed in their literature review on tutoring that seven out of nine studies reported more favorable self-concepts for students who participated in tutoring programs. Likewise, other investigators have found that low-achieving tutors demonstrated greater confidence in academic performance (Berliner & Casanova, 1988; Price & Dequine, 1982) and more positive responses to self-concept measures (Robertson, 1971).

Tutoring Models

Slavin (1991) reviewed a range of early intervention programs designed to prevent school failure. He discovered that, of all the intervention programs being used in schools, tutoring programs of all types were more effective than any single intervention strategy. A wide variety of tutorial models using tutors ranging from experienced, specially trained teachers, paraprofessional aides, low and high achieving students, and volunteers from local communities have demonstrated considerable effectiveness in improving student achievement. School-based tutoring models discussed throughout the literature generally fall into one of five tutoring models: (a) peer, (b) cross-age, (c) volunteer, (d) computer-assisted instruction (CAI), and (e) intelligent tutoring systems.

Peer tutoring utilizes tutors who are the same age or grade level as their tutees. Assigning students of the same age or grade to work with at-risk students may enhance or strengthen the social and emotional needs of at-risk students. Bowers (1991) investigated the use of peer tutors on elementary students and reported gains in both academic performance and student attitude toward school. A second tutoring model is cross-age. In a cross-age tutoring program, the tutor is older than the tutee. Advantages associated with cross-age and peer tutoring programs are that student tutors may be better than adults in certain situations in relating to their tutees on a cognitive, emotional, and social level. Also, cross-age tutoring offers the tutor the higher status of being older but still being close in age. For example, Collier (1995) describes a cross-age tutoring program that utilized fifth grade students to tutor at-risk second grade students in reading. According to Collier, the fifth grade students who served as tutors showed increased levels of self-confidence and attitudes towards reading as a result of functioning as tutors during the cross-age tutoring sessions. The second grade at-risk students who were tutored showed increases in reading performance. However, there are numerous pitfalls to peer and cross-age tutoring. For example, without training, tutors may resort to damaging practices such as threats of punishments, scornful put-downs, and the possibility of making tutees feel rejected by inducing guilt. Student tutors also require constant monitoring and periodic feedback on performance issues.

Computer-assisted instruction (CAI) represents another form of tutoring. In this case, the "tutor" is a computer rather than a person. CAI utilized advances in technology to automate the tutoring processes of assessing and determining students' needs, delivering instruction appropriate to individual needs, identifying student strengths and weaknesses, reinforce student success, and keep records of student progress. Several studies have demonstrated the

effectiveness of CAI (Ragosta, 1983). In a four-year longitudinal study conducted in the Los Angeles Public Schools by the Educational Testing Service (Ragosta, 1983), students were randomly assigned to receive ten minutes per day of CAI in mathematics, reading, and language, as part of a thirty-minute Title I pullout period. Results on the California Test of Basic Skills (CTBS) indicated substantial effects of CAI on math computations which increased from an effect size of .36 in the first year to .72 by the third year of intervention. Effects on concepts and applications scales were smaller and non-significant. In reading, positive effects were found for vocabulary and comprehension scales after one year. Major drawbacks to the use of CAI include the high cost associated with the hardware and software requirements of computers and the inability of computerized tutoring model to explain concepts to students or establish social and emotional relationships with students as in other types of tutoring models.

A fourth tutoring model, Intelligent Tutoring Systems (ITS), uses technology and artificial intelligence techniques to formulate a computerized model of a student's knowledge and a model of expert knowledge (what a student is expected to know after training). The computer and associated technology then intervenes with tutorial advice and guidance when differences exist between the student knowledge and expert knowledge (Gugerty, 1997). The earliest ITS projects recognized the complexity associated with developing computerized instruction and computer architectures that explicitly represents student knowledge and expert knowledge in a modular format. According to Murray (1993), ITS systems have not achieved much use or integration into the curriculum of schools because of critical flaws in the ability of ITS technology to accurately represent useful student and expert cognitive domain models.

Volunteer tutoring programs represent another tutoring model that utilize adults to provide additional academic support for students. Although it is a widely held belief that participation of volunteers in schools is positive and beneficial, surprisingly little is known about the actual effects of volunteers on student achievement (Wasik, 1997). Most of the research on the effectiveness of tutoring on student achievement has been conducted using peer and cross-age tutors (Gaustard, 1992; Wasik, 1997, 1998; Wasik & Slavin, 1990).

Components of Tutoring Programs

Implementation of volunteer tutoring programs into a school district requires a significant commitment by school administrators in both time and patience. As Wasik and Slavin (1990) indicate, it is also important to consider the instructional process when exploring ways to implement a tutoring program. Anania (1983) summarizes the elements of successful instruction. First, what is to be learned and how the task should be approached needs to be communicated to the learner. The learner also must be engaged or actively participate in the task. Positive reinforcement in the form of praise or tangible rewards should be used to encourage the learner to repeat the behavior and feedback should be provided that informs the learner about the progress being made. Finally, steps should be taken to individualize or adjust the curriculum to meet the specific needs of the at-risk student.

A review of the literature reveals several factors that impact the effectiveness of delivering instruction in tutoring programs. Those factors include: (a) program goals (Diss, 1998; Gaustad, 1992; Hartman, 1990; Niedermeyer, 1977), (b) resources (Gaustad, 1992; Ross, Smith, Madden, & Slavin, 1997), (c) program structure (Hartman, 1990; Wasik, 1997; Weinsheimer, 1998), (d) selection of tutors (Weinsheimer, 1998), (e) training (Morris, 1993; Ross & Smith, 1994; Weinsheimer, 1998), (f) supervision of tutors (Hartman, 1990; Morris,

1993; Morris, Shaw, & Penny, 1990), (g) program evaluation (Hartman, 1990; Ross et al., 1997; Ross & Smith, 1994), (h) costs (Bender, 1994) and materials (Bender, 1994; Nardini & Antes, 1991; Wasik, 1997; Weinsheimer, 1998). Schools attempting to design, implement, and manage successful volunteer tutoring programs will require a thorough understanding of these factors (Diss, 1998; Fashola & Slavin, 1998; Wasik, 1997).

One of the most important aspects of effective tutoring programs is the establishment of goals that clearly define the outcomes of the program (Bashaw, 1993; Bender, 1994; Diss, 1998). Program goals are used to identify the target population, areas of improvement (e.g., academic, affective), type of resources needed, and ways to evaluate the effectiveness of the program (Gaustad, 1992). According to Diss (1998), clear, specific, assessable, and measurable outcomes should be used as the focal point for establishing tutoring programs and when evaluating overall program effectiveness.

Various aspects of a tutoring program also are dependent upon the types of resources needed to oversee or implement the program (Gaustad, 1992). Resources typically involve: (a) people who will oversee and manage the program, as well as, determine how tutors will be identified and what training is necessary to ensure the success of the program; (b) facilities where tutoring will take place (at the local school or elsewhere within the community; and (c) type of materials will be needed to operate and validate the success of the program.

According to the literature, how a program is structured also effects the outcome of volunteer tutoring programs (Eggers, 1995; Enright & Axelrod, 1995; McChesney, 1996). Structure, as the term applies to this study, relates to how materials are presented to at-risk students to ensure that learning occurs (Bashaw, 1993). Analyses of tutoring research

suggests that programs that have well structured materials are more apt to be successful in promoting cognitive growth and influencing student learning (Bashaw, 1993; Diss, 1998; Weinsheimer, 1998). Structured programs also make it possible for the division of material into sections or modules to provide more realistically attainable short-term goals and meet the individual needs of at-risk students (Wasik, 1997).

Keel and Harrison (1971) evaluated an elementary school tutoring program that relied on materials and volunteer parents and high school students to tutor elementary students at-risk of reading failure. Six groups of students, three kindergarten and three first-grade groups consisting of one control group, one with parent tutors, and one with student tutors participated in the study. Ten children were assigned to each group. The tutors were given a manual of instructions and received a limited amount of training in one session lasting one hour. The tutoring lasted for 6 weeks, during which time the child was taught naming, sounding, and blending of specified letters. Pretesting and post-testing was done to obtain gain scores and the percentage of children who achieved the criterion in each skill practiced. In mean gain scores the difference between the control and the treatment groups was significant, but there was no significant difference between the two treatment groups. A significant difference was found between the tutored and non-tutored groups for the sounding of letters and blending letters into nonsense words, but not for naming letters.

A fourth factor affecting volunteer tutoring program relates to attracting and maintaining the necessary pool of tutors (Diss, 1998; Morris, 1993). Several researchers have analyzed the elements that make up successful peer tutoring programs and have concluded that careful recruitment and selection of tutors are among the most important factors affecting program success (Clay, 1993; Diss, 1998; Invernizzi, 1997; Morris, 1993). These researchers asses

that tutors need to be responsible, patient, and interested in tutoring, as well as, demonstrate the ability to interact with students in a positive manner (Wasik, 1997). Research has shown that prospective tutors are likely to succeed in their relationships with tutees if they place a high value on the service they will be providing. Potential sources of volunteer tutors include: teachers aids, retired teachers and professionals, parents, college students, high school students, other leaders within the local community.

According to the literature, another common feature of successful tutoring programs is the training of tutors (Bender, 1994; Diss, 1998; Weinsheimer, 1998). Tutors must be provided with at least minimal training to insure that they carryout the process of tutoring with reasonable effectiveness. Tutors need to know how to make their tutees feel comfortable and how to offer suggestions and criticism in ways that avoid alienating their tutees (Diss, 1998). Tutors are also more likely to experience success if they are proficient in the teaching and learning process as well as the skills that they need to teach (Weinsheimer, 1998). Training should provide tutors with skills in listening, patience, observation, and use of corrective feedback and social reinforcement, effective communication, building trust, and handling conflicts. The vast majority of tutoring studies feature training sessions for tutors and involve such skills as establishing rapport with the tutee, and providing corrective feedback and praise.

Harrison (1969) conducted a three-phase study on possible differences in the teaching effectiveness of trained and untrained upper-grade elementary school student tutors. In phase one, objectives for instruction in linear mathematical equations were specified for first-grade students and special instructional materials prepared. Tutorial skills were identified with these specific objectives and materials (using an evaluation-revision strategy) and were

formulated into tutoring techniques in phase two. Phase three of the study was concerned with a number of tests of the validity of the identified tutoring techniques. In one test, 16 first graders who had scored low on a pretest were assigned randomly to one of two treatment groups, the tutors of one group having been trained and the tutors of the other having received no training. Both groups used the same instructional materials and were allotted the same amount of time. Results from a posttest indicated that the effectiveness of trained student tutors was greater than that of untrained tutors. In a related study, Niedermeyer (1977) found that trained tutors were more likely than untrained tutors to engage the pupil in friendly conversation, confirm and praise, give the correct answer when the pupil was incorrect, and elicit the correct response before proceeding with the lesson. Conrad (1975) also discovered that tutees with trained tutors outperformed tutees with untrained tutors.

How tutors are supervised impacts the outcome of volunteer tutoring programs (Wasik, 1998). Most authorities agree that tutors must be supervised and supported in order to ensure that the basic conditions of the tutoring process are met over time (Morris, 1993; Ross & Smith, 1994; Weinsheimer, 1998). Programs that are successful typically have a program coordinator who is responsible for ensuring that tutors are properly trained and supervised (Morris et al., 1990). For example, in the Howard Street Tutoring Program (Morris et al., 1990) and Book Buddies (Invernizzi, 1997), both of which incorporate the use of volunteer tutors, a program coordinator or reading specialist supervises the volunteers on a daily basis, assesses student progress, develops lesson plans for the volunteers to implement, and gathers the materials that the tutors need in order to carry out the lesson plan. In addition, the program coordinator monitors the volunteers and provides them with constant feedback and support as they work with the students (Morris et al., 1990). The program coordinator also

can use the knowledge gained about the program to develop a detailed diagnosis and tutoring plan, which allows the tutor to understand the specific problems a child is having and, more importantly, what strategies and techniques the tutor needs to implement to effectively assist the tutee (Wasik, 1998). Without a program coordinator to supervise the tutoring program, tutors are unlikely to have the guidance or skills they need to tutor effectively (Morris et al., 1990).

The manner in which a program is evaluated is crucial to the success or failure of the tutoring program (Ross et al., 1997). Program evaluation enables program administrators to determine if the goals have been attained or whether adjustments need to be made in specific areas of the program (Gaustad, 1992). Evaluation of tutoring programs also helps the tutors to become aware of changing needs and allows changes to be made that tailor the tutoring process to meet the individual needs of students (Clay, 1993; Wasik, 1998). Unfortunately, many volunteer tutoring programs neglect to use quantitative data to evaluate program effectiveness (Slavin & Madden, 1995; Wasik, 1998). Ross et al. (1997) rationalizes the lack of evaluation in tutoring projects in terms of vague goals and objectives and lack of organizational structure.

Finally, the costs associated with managing a tutoring program may affect significantly the quality of instruction of at-risk students receive. The cost of an in-school tutoring program depends upon several factors, including: number of students, who will provide the tutoring (volunteers or paid paraprofessionals), amount and type of tutor training, services to be provided, and number of personnel necessary to administer the program. More research needs to be conducted to determine if volunteer tutoring programs are less costly and produce similar results as programs with paid tutors or paraprofessionals.

Help One Student to Succeed (HOSTS) Program

A number of researchers have reported gains in reading and non-academic performance that are attributed to structured tutoring programs (Bryant et al., 1995; Cardenas & Chahin, 1999). Research examining individual HOSTS programs has demonstrated that students achieve significant gains in reading and mathematics (Bell et al., 1995; Bryant et al., 1995; Holden et al., 1998; Holmes, 1985; Kushmuk, 1985; Slavin et al., 1996; Wasik, 1997). For example, Holmes (1985) evaluated the HOSTS program being used at Cleveland High School in Ohio. Twenty-one retired teachers, fifteen peer tutors, five Cleveland High School staff members, and five college interns acted as tutors for 40 at-risk students in grades nine through twelve. Student performance was evaluated at the end of the school year. Results showed that students in the HOSTS program scored exceptionally high when compared to gains obtained by a comparison group. In a related study, Kushmuk (1985) evaluated the implementation of HOSTS in the Portland Public Schools. Eight-hundred thirty-three at risk students in kindergarten through grade eight were tutored. Results from their study indicated that students enrolled in the program for two years demonstrated growth rates in reading equivalent to the district average.

Bryant et al. (1995) examined the effects of the HOSTS program on at-risk students in Edgecombe County Schools in North Carolina. Two hundred forty students in grades one through eight spread across six school campuses were tutored by 750 tutors recruited from the school district, business and local community. Three schools involved in the study used the California Achievement Test (CAT) for data comparisons by examining Normal Curve Equivalent (NCE) scores. Title I North Carolina schools require a gain of only one NCE to show progress. According to the researchers, the average gain at three of the schools that participated in the study and had been in operation for at least seven

months had average NCE improvements of 5.53, 10.06, and 12.14, respectively. One school which served students in grades 4 through 8 used the North Carolina End of Grade Test for comparison and found an average 1.78 NCE gain for students. The remaining two schools started the HOSTS program late in the school year and had only 4.5 months of full operation. These schools had average NCE gains of 3.41 and 11.52 when comparing pre- and post-program scores.

Holden et al. (1998) evaluated the reading and non-academic student performance in HOSTS program schools in the Delaware, Michigan, and Texas school districts. The study involved 136 schools spread across three school districts and included 7000 students in grades one through ten. Qualitative and quantitative data were collected on reading performance, percentage of students who qualified to exit the program, and student attitude toward reading, and self-esteem. Students who participated in the program were reading one or more grade levels below their peers, as measured by teacher diagnostic assessments, informal reading inventory assessments, and scores on state/national student achievement tests. Pretest and posttest scores on the informal reading inventory were used to measure each student's reading level and the differences in pretest and posttest scores provided measures of change in student reading performance (student gain scores). Self-esteem and reading interest surveys were used to measure student self-esteem and interest in reading. After reviewing the data the researchers found that the overall average reading gain for the group of students was 2.0 grade levels. More than 51% of the students in programs which had explicit exit criteria met the minimum exit criteria of reading on or above grade level. All three states showed a substantial increase in student performance in reading and improved self-esteem at all

grade levels, in all districts, in all three states. Most recently, Cardenas and Chahin (1999) evaluated the HOSTS programs in six independent school districts. Qualitative and quantitative data indicated improvement in academic achievement, attitude towards reading, school attendance, and disciplinary actions among the various sites.

History of HOSTS

Reading is a skill that must be learned early in the education process; a skill linked to success in all other academic areas including: math, science, and social studies (Morris, 1993). Research indicates that one to one tutoring is one of the most effective forms of instruction for helping students who have demonstrated problems with reading (Orbry, Simmons, & Holden, 1997; Slavin, 1991, Wasik & Slavin 1990). HOSTS uses one to one tutoring or small group instruction and incorporates personalized structured tutoring programs in language arts, writing, math, and Spanish. There are four parts to each program: (a) curriculum aligned to state and local standards, (b) personalized lesson plans, (c) tutor guidelines, and (d) measurement tools to address the instructional and developmental level of each student.

The HOSTS program, founded by teacher Bill Gibbons in Vancouver, Washington in 1971, serves over 1,100 programs and 500,000 students in 41 states and the District of Columbia and El Salvador (Blunt & Gordon, 1998). Using information obtained during diagnostic testing of students, the HOSTS program coordinator creates individualized student lesson plans that are aligned with the local school district's standards, resources, and philosophies. These individualized lesson plans serve as student and program benchmarks, establish objectives, and identify individual student strengths and weaknesses (Bryant et al., 1995). Students in the HOSTS program are allowed to

progress at their own pace under the tutelage of the mentor and supervision of the teacher.

Student Selection

A primary purpose of HOSTS is to provide individualized instruction for at-risk students. HOSTS is designed to help low performing and at-risk students learn to read by providing individualized instruction on a one to one basis through the use of volunteer tutors. Title I eligibility requirements are used to select program participants. Students are identified and referred to the HOSTS coordinator if they score in the bottom quartile on the local or state diagnostic exam. Students also may be referred by the classroom teacher or parent. Once accepted into the program, students are assessed using an Individual Reading Inventory as a placement test, which helps to establish the level at which reading can occur without frustration. Then the student is tested with an appropriate level developmental skills test to identify specific reading skill deficiencies. After testing, the results serve as the basis for the preparation of instructional prescriptions and daily lesson plans that are used by trained volunteer tutors to provide individualized instruction.

Tutoring Time

Tutoring sessions are scheduled for thirty minutes per day, four days per week. A typical tutoring session occurs Monday through Thursday of each week and is structured in the following manner:

15 min. - Collaborative reading - students and tutors alternately read in self-selected trade books. Students read for fluency; tutor supplies difficult words. Students practice word recognition and meaning skills. Vocabulary words are identified in collaborative reading with the tutor. Tutors also

discuss word meanings and have students use words in context when appropriate.

15 min. - Specific Skills Work - Students work on particular skills (i.e. sequencing, main idea, words in context) identified as deficient by the use of testing instruments. To reinforce skills students writing in journals; playing word games; or practice skills using the computer time.

Friday of each week is used for independent work on the same materials used during tutoring sessions or devoted to group instruction.

Tutor Selection

The HOSTS program uses volunteers from the local and business community, high school and college students, as well as peers to serve as tutors. Volunteers are asked to complete a questionnaire and, based upon their answers, are given the opportunity to either tutor or serve in some other capacity. Once selected to serve as a tutor, each participant receives 1 hour of specialized training. An orientation for tutors is conducted at the beginning of the school year to explain the needs of students to be tutored, the materials and procedures of the HOSTS program, and the objectives of effective tutoring. Tutors learn that students in need of remedial instruction often have experienced failure and that tutoring must produce successful experiences and improve self-esteem in order to encourage further efforts to learn and do well in school. Emphasize is on the uniqueness of each student and the instructional plan is tailored to meet the specific needs of the student. Training tutors during the orientation is regarded as the beginning of the task to make one to one instruction effective (Blunt & Gordon, 1998). Additional

training occurs throughout the year via the supervision and assistance by the HOSTS teacher.

The HOSTS tutorial model uses software to create a dynamic instructional database that assists the HOSTS coordinator in aligning the tutee's curriculum to local and state objectives, match resources to objectives, generate individualized plans and track tutor and student data. The HOSTS databases also include listings of the supplemental resources available to educators and current books, kits, games, CD-ROMS, video and audio tapes for use by the students.

When a student's individualized lesson plan is created, areas for improvement are identified. A school's computer, loaded with the HOSTS database, generates a detailed prescription that correlates the tutoring with the specific needs of the student. Also, a personalized instructional plan is developed for each student participating in HOSTS. A folder is created for each student that outlines the prescription that guides the tutor and student. It might, for example, focus a Language Arts student on figures of speech and direct the tutor to a vocabulary game. Or, it might lead the tutor and the Math student to an interactive CD-ROM. For the teacher, this simplifies resource management and identifies a wide variety of available resources for consideration. For the tutor, this plainly defines tasks to be accomplished and pinpoints exact assignments the tutor and student will tackle together. Students are allowed to progress at their own pace.

Performance Evaluation

Students are tested individually by the HOSTS teacher at the beginning of the year using an individual reading inventory (IRI). Results from the IRI are used to determine whether students qualify for HOSTS. Results from the tests are keyed into a computer

designed to develop long-range lesson plans based on test scores. HOSTS coordinators at each site develop individual daily lesson plans based on the long-range prescriptions from the computer. The daily lesson plans then are used by trained tutors who instruct students in two or more objectives per session and continue until mastery is achieved which is determined by informal testing. Students are tested at mid-year and at the end of the school year using the IRI to measure progress and to determine if students retained those skills that were mastered. Exit criteria from the HOSTS program is determined by the school district. Student performance is also measured using local, state, and national diagnostic exams.

HOSTS Staff

The use of collaborative teams is growing increasingly popular as one way to accommodate a range of individual student needs (Gable, Hendrickson, & Rogan, 1993). In that regard, the HOSTS team consists of school administrators, HOSTS supervisors, HOSTS coordinators, regular educators, reading specialists, tutors, and students.

Training

At the beginning of each school year, training on the HOSTS program is conducted for teachers, aides, and tutors. Training covered the following topics: HOSTS components; student selection; the IRI; the HOSTS Survey of Developmental Tasks; the HOSTS Reading Skills Inventory; the HOSTS Computerized Reading Prescription Program; materials and room organization; resource management; tutor recruitment; training; and retention; program evaluation and monitoring; and exit criteria.

CHAPTER III

METHODOLOGY

The purpose of this research was to describe the effects of the Help One Student to Succeed (HOSTS) program on the reading achievement of at-risk 4th and 5th grade students. Prior research has demonstrated gains in reading that were attributed to structured tutoring programs (Bryant et al., 1995). Studies evaluating individual HOSTS programs have also reported that students achieve significant gains in reading (Bell et al., 1995; Holden et al., 1998; Leitner & Ingebo, 1984; Slavin et al., 1996; Wasik, 1997). Although a great deal of qualitative data exists to support the use of peer and cross-age tutoring programs, a more substantial quantitative database is needed to validate HOSTS claims of improved academic achievement and student attitude toward reading. This chapter describes the methodology that will be used to answer the research questions identified for the study and is divided into the following subsections: (a) description of the Host Program, (b) research design, (c) participants, (d) instrumentation, (e) data collection and analysis procedures, and (f) summary.

HOSTS Program Description in the Plano School District

Reading is a skill that must be learned very early in the education process, a skill that is linked to success in other academic areas including: math, science, and social studies (Morris, 1993). Research has shown that one to one tutoring is one of the most effective forms of instruction for helping students who have demonstrated problems with reading (Wasik & Slavin 1990). HOSTS is a Title I program adopted by schools in the Plano Independent School District (PISD) to help at-risk students improve academic performance in reading through the use of volunteer tutors.

HOSTS is used in the PISD to align existing local, state, and supplementary curriculum materials to the instructional and developmental level of a specific at-risk student or group of students. HOSTS uses teacher diagnostic assessment, informal reading inventory (IRI) assessment and scores on local or state student achievement tests to determine eligibility for the HOSTS Program. Classroom teachers and parents also may recommend students for the program. Students are typically selected for participation in HOSTS if they score in the bottom 25% of students taking the TAAS or other state diagnostic test.

The HOSTS program in each school is staffed by a teacher who serves as the HOSTS coordinator. The coordinator is responsible for testing students, entering data into a computer database, producing long-range individualized prescriptions or learning objectives, writing daily lesson plans, and supervising aides and tutors. Coordinators are assisted by one or more part-time teacher aids to help manage the program.

The HOSTS coordinator reviews student performance on state and district accountability tests or other measures used by the school. Each student identified as a potential HOSTS participant is assessed using an IRI to identify learning strengths and weaknesses. On the basis of assessment information and utilizing an electronic database, the HOSTS coordinator develops an individualized plan that is aligned with the district curriculum and instructional standards. These plans identify benchmarks, establish objectives, accentuate strengths, target weaknesses, provide continuous feedback, and prescribe lesson plans that enable the tutor to assist the students in achieving their individual goals. Exit criteria from the HOSTS program relates exclusively to the student's gains in reading.

The HOSTS program attempts to match tutors and tutees that share the same learning style. Tutors who volunteer for the program are given a formal questionnaire to complete and matched with a tutee based upon the results of the questionnaire. Tutors are provided one hour of initial training and supervised by a HOSTS coordinator during the tutoring sessions. The HOSTS program assigns each student a total of four tutors. Each tutor is assigned a specific day of the week and spends thirty minutes tutoring a student in reading or other activities using daily lesson plans prepared by the HOSTS coordinator. With the assistance of the trained volunteer tutor, students practice using a variety of materials and strategies during each tutoring session. At the end of each training session, tutors also provide daily evaluative comments on the students' mastery of the tasks and on the appropriateness of the instruction.

Design

This study utilized a descriptive design to investigate the implementation of the HOSTS program in the Plano Independent School District on the reading achievement of at-risk students. Specifically, this study sought to examine the two research questions and accompanying corollaries delineated below:

Question 1: Do at-risk students in grade four demonstrate improvement in reading as measured by the Texas Assessment of Academic Skills (TAAS)?

Corollary 1a: Do at-risk students in grade four who participated in the HOSTS program demonstrate improvement in reading, as measured by the TAAS?

Corollary 1b: Do at-risk students in grade four who did not participate in the HOSTS program demonstrate improvement in reading, as measured by the TAAS?

Corollary 1c: Do differences in reading exist between grade four students who participated in the HOSTS program and grade four NON-HOSTS students, as measured by the TAAS?

Question 2: Do at-risk students in grade five demonstrate improvement in reading as measured by the TAAS?

Corollary 2a: Do at-risk students in grade five who participated in the HOSTS program demonstrate improvement in reading, as measured by the TAAS?

Corollary 2b: Do at-risk students in grade five who did not participate in the HOSTS program demonstrate improvement in reading, as measured by the TAAS?

Corollary 2c: Do differences in reading exist between grade five students who participated in the HOSTS program and grade five NON-HOSTS students, as measured by the TAAS?

Population and Sample

Table 1 presents demographic data on the four schools that participated in the study. Minorities: Hispanic “887” (35%), African American “281” (11%), Asian/Pacific Islander “100” (4%), and American Indian “14” (1%) represented fifty-one percent of the population. Thirty-six percent (897) of the students were on free or reduced lunch. Twenty-three percent (568) of the students were bilingual or ESOL. Fourteen percent (349) of the students qualified for Title I services and “717”; 29% of the students had been identified as at-risk. Fourteen-percent (379) of the students were receiving special education services and “198”; 8% of the students were enrolled in the HOSTS program.

Table 1: Plano Independent School District
Demographic Data

	Mendenhall Elementary	Foreman Elementary	Meadows Elementary	Barren Elementary	Totals	%
All Students	705	583	607	604	2499	
Male	351	284	340	327	1302	52%
Female	354	299	267	277	1197	48%
Race/Ethnicity						
Am.Indian	2	4	5	3	14	1%
Asian/Pacific	48	19	10	23	100	4%
African Amer	62	61	74	84	281	11%
Hispanic	222	145	270	250	887	35%
White	371	354	248	244	1217	49%
Demographic Data						
Free Lunch	210	111	190	214	725	29%
Reduced Lunch	29	65	31	47	172	7%
PASP	0	1	2	0	3	0%
PACE/GT	31	13	10	7	61	2%
Reading Recovery	42	33	24	37	136	5%
Bilingual	122	67	101	162	452	18%
ESOL	49	21	33	13	116	5%
LEP	181	92	139	175	587	23%
Title I	102	57	70	120	349	14%
At-Risk	118	160	146	293	717	29%
HOSTS	51	42	62	43	198	8%
SP ED - LD	62	29	45	18	154	6%
SP ED - Speech	36	21	46	32	135	5%
SP ED - ED	3	16	5	2	26	1%
SP ED - MR	1	7	1	2	11	0%
SP ED - OHI	16	17	8	9	50	2%
SP ED - VI	0	0	0	1	1	0%
SP ED - HI	0	2	0	0	2	0%

The PISD provided this researcher with a list of 4th and 5th grade students identified as at-risk. From this list, seventy-eight students from four Title I elementary schools in the Plano Independent School District were randomly selected by this researcher to participate in the study. Of these 78 children, 36% (28) participated in the free and reduced breakfast and lunch programs. The 18 African-Americans, 14 Hispanic, and 46 white students were from grades 4 and 5.

Thirty-nine of these students were enrolled in the HOSTS program. Students selected to participate in the HOSTS program had scored in the bottom quartile on local and state diagnostic exams and were deemed the most at-risk. These HOSTS students were matched to a comparison group of students on ethnicity, age, gender, grade, free or reduced lunch, bilingual and English as a second language status.

The four schools that participated in the study have been involved with HOSTS from one to five years. All of the schools have implemented HOSTS as part of a school wide Title I program. The tutor population at the four sites represented a diversity of tutor sources: corporate and business volunteers, community volunteers, parents, retired persons, teachers, high school and college students. Because of the ex-post facto nature of this study, no attempt was made to evaluate program implementation between schools.

Instruments

The TAAS was used to collect the data needed to test the research questions in the study. The primary purpose of the TAAS was to provide a measure of student reading achievement. TAAS reliabilities are based on internal consistency measures, in particular on Kuder-Richardson Formula 20 (KR-20). Most KR-20 reliabilities are in the high .80 to

low .90 range. For reading, the reported reliability is .89 for grades 3 and 4 and .87 for grade 5.

Validity is another important consideration when assessing student performance. Validity is a process of collecting evidence to support inferences from the use of the resulting scores from an assessment. In the case of TAAS, the score used is applied to knowledge and understanding of the Texas essential elements mandated by the state. Validity estimates have not been determined.

Procedures

District permission to conduct the study was acquired from the Plano Independent School District. TAAS reading achievement data for all students were provided by the Plano Independent School District and was analyzed using a *t*-test for non-independent samples in which the variables were whether or not the student is in the HOSTS program and, reading achievement, as measured using the TAAS (third, fourth, and fifth grade test scores). The 95% confidence level ($p < .05$) was the criterion for determining statistical significance.

Limitations of the Study

A program evaluation was conducted to investigate the effects of the HOSTS program on the reading achievement of at-risk students in the Plano School District, an appropriate way to answer the research questions and document events as they naturally occur. In this type of program evaluation, threats to internal and external validity cannot be controlled in quite the same manner as experimental and quasi-experimental studies (Ary, Jacobs, & Razavieh, 1996). Because the researcher was unable to manipulate variables and randomly assign subjects, causation cannot be inferred from the results of the study. As a

result, the study's limitations relate to its southern location, Texas, where a large number of Hispanic families with English as a second language reside. Therefore, when school administrators implement the HOSTS program in their districts for the purpose of instructional decision-making, local norms reflecting the population being served are necessary. The data generated by this study may allow for comparison of a child's academic progress to other children's progress in the district as well as to the child's own history of performance. Any comparisons are highly restrictive to the local school population. Comparisons are not applicable to other schools, whether in the district or nationally, even though the demographics of the populations may be similar. Finally, the TAAS exam represents another limitation in this study. At the time of this study, validity estimates for the TAAS exam had not been determined.

Summary

As noted in the need for the study and throughout the review of the literature, there is limited research on the use of volunteer tutoring programs such as HOSTS. Studies that do focus on volunteer tutoring tend to be theoretical in nature, or focus on anecdotal data. There is a large body of qualitative and quantitative data in support of peer and cross-age tutoring programs, (e.g., verbal and written comments made by coordinators and participants of tutoring programs), but limited quantitative research showing the impact of HOSTS on student achievement. Therefore, the intent of this study was to add to the body of knowledge on the HOSTS program and to provide decision-makers with evaluation information that may be useful for overall HOSTS program improvement.

CHAPTER IV

RESULTS

The purpose of this study was to determine the effects of the Help One Student to Succeed (HOSTS) tutoring program on the reading achievement of at-risk fourth and fifth grade students in the Plano Independent School District (PISD). At the completion of the 98-99 school year, TAAS data for all at-risk students in the PISD was provided to the researcher. Subjects were randomly selected and matched on age, ethnicity, gender, grade, free or reduced lunch, bilingual and English as a second language status. Chapter 3 discussed the methods and procedures used in this research. This chapter has been divided into several sections, each of which corresponds with the corollaries of the study. The corollaries address the reading achievement, as measured by the Texas Assessment of Academic Skills (TAAS), of fourth and fifth grade at-risk students enrolled in the HOSTS program. Descriptive data and statistical analysis (through the use of *t*-tests) were utilized to answer the research questions.

Results for Research Question One

The following is the first of two research questions addressed by this study: Do at-risk students in grade four demonstrate improvement in reading as measured by the Texas Assessment of Academic Skills (TAAS)? In addressing this question, the study examined three corollaries as follows:

Corollary 1a: Do at-risk students in grade four who participated in the HOSTS program demonstrate improvement in reading, as measured by TAAS?

Corollary 1a examined whether at-risk fourth grade students who participated in the HOSTS program demonstrated improvement in reading, as measured by the TAAS

during the 98-99 school year. Table 2 presents the 4th grade TAAS scores for the students enrolled in the HOSTS program. At-risk students who scored a minimum of 70 on the TAAS were considered to have demonstrated improvement in reading. A total of 18 at-risk fourth grade students enrolled in the HOSTS program participated in the study. The scores on the 4th grade TAAS exam showed differences ranging from a high of 93 to a low of 47, with an average of 77.5 and a median score of 81. Of the 18 students enrolled in the HOSTS program, 14 (77.78%) obtained a score of 70 or higher, compared to 17 (94.44%) of the at-risk NON-HOSTS comparison group of students. The average score for these 14 HOSTS students was 82.45 with a median score of 83. Scores for these 14 HOSTS students on the 4th grade TAAS exam showed differences ranging from a high of 93 to a low of 70. Although a smaller percentage of HOSTS students passed the TAAS, this researcher considers this a noteworthy accomplishment considering the extreme level of “at-riskness” of students enrolled in the HOSTS program. Four (22.22%) of the 18 students enrolled in HOSTS scored below 70. The average score for these four HOSTS students was 60.75 with a median score of 64. Scores for these 4 students on the 4th grade TAAS exam showed differences ranging from a high of 68 to a low of 47.

Table 2: 4th Grade TAAS Data '98-99' (18 Hosts Students)

Host Student ID	Age	Gender	Ethnicity	Free Lunch	Reduced Lunch	Bilingual	ESOL	3rd Grade Reading Score Hosts	4th Grade Reading Score HOSTS
1	10	F	African American	N	Y	N	N	83	75
2	10	M	African American	Y	N	N	N	52	60
3	10	M	African American	N	N	N	N	72	77
4	10	M	African American	N	N	N	N	74	93
5	10	M	Hispanic	Y	N	N	N	62	47
6	10	M	Hispanic	N	N	N	N	83	88
7	11	M	Hispanic	N	N	N	N	74	86
8	11	M	Hispanic	Y	N	N	N	69	68
9	10	F	White	N	N	N	N	87	83
10	10	F	White	N	N	N	N	64	81
11	10	F	White	N	N	N	N	72	83
12	10	M	White	N	N	N	N	62	68
13	10	M	White	N	N	N	N	72	88
14	10	M	White	N	N	N	N	67	83
15	10	M	White	Y	N	N	N	69	81
16	11	F	White	N	N	N	N	74	83
17	11	M	White	N	Y	N	N	64	81
18	11	M	White	N	Y	N	N	60	70

* Note: 86% of all 4th grade at risk students within PISD passed the TAAS exam during the 98-99 school year.

Corollary 1b: Do at-risk students in grade four who did not participate in the HOSTS program demonstrate improvement in reading, as measured by the TAAS?

Corollary 1b examined whether at-risk fourth grade students who did not participate in the HOSTS program demonstrated improvement in reading, as measured by the TAAS during the 98-99 school year. Table 3 presents the 4th grade TAAS scores for the 4th grade comparison group of students who were not enrolled in the HOSTS program. A total of 18 at-risk fourth grade NON-HOSTS students served as the comparison group and were matched to the 4th grade HOSTS students on ethnicity, age, gender, grade, free or reduced lunch, bilingual and English as a Second language status. Students who scored a minimum of 70 on the TAAS exam were considered to have demonstrated improvement in reading. TAAS scores for the NON-HOSTS students show differences ranging from a high of 98 to a low of 60. The average of all scores was 88 with a median score of 93.

Of the 18 NON-HOSTS students, 17 (94.44%) met or exceed the minimum requirement on the TAAS exam compared to 14 (77.78%) of the HOSTS students. The average score for these 17 NON-HOSTS students was 89.65 with a median score of 93. Scores for these 17 NON-HOSTS students showed differences ranging from a high of 98 to a low of 75. One (0.06%) NON-HOSTS student scored below the minimum requirement for passing the TAAS exam. This student scored a 60 on the TAAS exam.

Table 3: 4th Grade '98-99' TAAS Data (18 NON-HOSTS Students)

NON-HOSTS Student ID	Age	Gender	Ethnicity	Free Lunch	Reduced Lunch	Bilingual	ESOL	3rd Grade	4th Grade
								Reading Score NON-HOSTS	Reading Score NON-HOSTS
1	10	F	African American	N	Y	N	N	85	81
2	10	M	African American	Y	N	N	N	83	96
3	10	M	African American	N	N	N	N	76	81
4	10	M	African American	N	N	N	N	90	90
5	10	M	Hispanic	Y	N	N	N	90	93
6	10	M	Hispanic	N	N	N	N	83	96
7	11	M	Hispanic	N	N	N	N	85	60
8	11	M	Hispanic	Y	N	N	N	94	93
9	10	F	White	N	N	N	N	92	86
10	10	F	White	N	N	N	N	83	83
11	10	F	White	N	N	N	N	94	98
12	10	M	White	N	N	N	N	90	93
13	10	M	White	N	N	N	N	90	95
14	10	M	White	N	N	N	N	92	96
15	10	M	White	Y	N	N	N	85	96
16	11	F	White	N	N	N	N	94	96
17	11	M	White	N	Y	N	N	61	76
18	11	M	White	N	Y	N	N	60	75

* Note: 86% of all 4th grade at risk students within PISD passed the TAAS exam during the 98-99 school year.

Corollary 1c: Do differences in reading exist between grade four students who participated in the HOSTS program and grade four NON-HOSTS students, as measured by the TAAS?

Corollary 1c examines whether differences in reading exist between 4th grade HOSTS students and 4th grade NON-HOSTS students. Scores from the 3rd and 4th grade TAAS exams were analyzed for both groups of 4th grade students (HOSTS/NON-HOSTS) using a *t* test. Third grade TAAS scores were used as the pretest measure of reading performance and fourth grade TAAS served as the post test measure of reading performance. Table 3 presents the 3rd and 4th grades TAAS scores for the HOSTS students. As previously noted, a total of 18 at-risk fourth grade NON-HOSTS students served as the comparison group and were matched to the 4th grade HOSTS students on ethnicity, age, gender, grade, free or reduced lunch, bilingual and English as a Second language status. Table 4 presents the 3rd and 4th grade TAAS scores for the NON-HOSTS students.

To test this corollary, the mean difference between 3rd and 4th grade TAAS scores for both groups of students were analyzed using a *t*-test to examine group mean differences. Table 4 presents the results of the *t*-test of differences between related means of the two groups of students. The mean difference score for the HOSTS students was 7.50. The mean difference score for the NON-HOSTS students was 3.17. The *t*-test comparing the mean difference TAAS scores between the two groups of 4th grade at-risk students was not statistically significant at the .05 level of significance ($t = p < .075$) indicating that no significant differences in reading existed between the two groups of students.

Table 4: Summary of *t*-test Results for 4th Grade HOSTS vs. NON-HOSTS Students

t-Test: Paired Two Sample for Means

	Hosts Students	NON- HOSTS Students
Mean	7.500	3.167
Variance	87.324	88.853
Observations	18.000	18.000
Pearson Correlation	0.160	
Hypothesized Mean Difference	0.000	
Df	17.000	
t Stat	1.511	
P(T<=t) one-tail	0.075*	

* not statistically significant difference at the .05 level

Results for Research Question Two

The second research question addressed by this study was: Do at-risk students in grade five demonstrate improvement in reading as measured by the TAAS? In addressing this question, the study examined three corollaries as follows:

Corollary 2a: Do at-risk students in grade five who participated in the HOSTS program demonstrate improvement in reading, as measured by the TAAS?

Corollary 2a examined whether at-risk fifth grade students who participated in the HOSTS program demonstrated improvement in reading, as measured by TAAS. A total of 21 at-risk fifth grade students enrolled in the HOSTS program participated in the study. Students who scored a minimum of 70 on the TAAS were considered to have demonstrated improvement in reading. TAAS data for the 98-99 school year are presented in Table 5. The scores on the 5th grade TAAS exam showed differences ranging from a high of 89 to a low of 38. The average of all scores was 72.05, with a median score of 76. Of the 21 at-risk students enrolled in the HOSTS program, 14 (66.67%) met or exceeded the minimum requirements on the TAAS exam compared to 19 (90.48%) of the NON-HOSTS students. The average score for these 14 HOSTS students was 80 with a median score of 81. Scores for these 14 students showed differences ranging from a high of 89 to a low of 71. Although a smaller percentage of HOSTS students passed the TAAS, this researcher considers this a noteworthy accomplishment considering the level of risk for students enrolled in the HOSTS program. Seven (33.33%) of the 21 students enrolled in HOSTS scored below 70. The average score for these 7 HOSTS students was 56.14 with a median score of 59. Scores for these 7 students on the 5th grade TAAS exam showed differences ranging from a high of 66 to a low of 38.

Table 5: 5th Grade TAAS Data (21 Hosts Students)

Host Student ID	Age	Gender	Ethnicity	Free Lunch	Reduced Lunch	Bilingual	ESOL	4th Grade Reading Score Hosts	5th Grade Reading Score HOSTS
1	11	F	African American	N	N	N	N	72	74
2	11	F	African American	N	N	N	N	66	66
3	11	F	African American	N	N	N	N	62	81
4	11	M	African American	N	N	N	N	66	74
5	12	F	African American	Y	N	N	N	47	50
6	11	M	Hispanic	N	Y	N	N	45	38
7	11	M	Hispanic	Y	N	N	N	81	84
8	12	F	Hispanic	Y	N	N	N	76	76
9	11	F	White	N	N	N	N	68	79
10	11	F	White	N	N	N	N	80	89
11	11	F	White	N	N	N	N	72	59
12	11	F	White	N	N	N	N	68	64
13	11	F	White	N	N	N	N	74	66
14	11	F	White	N	N	N	N	80	71
15	11	F	White	N	N	N	N	81	81
16	11	M	White	N	N	N	N	16	81
17	12	F	White	N	N	N	N	68	84
18	12	M	White	N	N	N	N	76	84
19	12	M	White	N	Y	N	N	37	81
20	12	M	White	Y	N	N	N	85	81
21	12	M	White	Y	N	N	N	45	50

* Note: 82% of all 5th grade at risk students within PISD passed the TAAS exam during the 98-99 school year.

Corollary 2b: Do at-risk students in grade five who did not participate in the HOSTS program demonstrate improvement in reading, as measured by TAAS?

Corollary 2b examined whether at-risk fifth grade students who did not participate in the HOSTS program demonstrated improvement in reading, as measured by TAAS. At-risk NON-HOSTS students who scored a minimum of 70 on the TAAS were considered to have demonstrated improvement in reading. Data for the 1998-1999 school year are presented in Table 6. A total of 21 at-risk fifth grade NON-HOSTS students served as the comparison group and were matched to the 5th grade HOSTS students on ethnicity, age, gender, grade, free or reduced lunch, bilingual and English as a Second language status. The scores on the 5th grade TAAS exam showed differences ranging from a high of 97 to a low of 69. The average of all scores was 83.86 with a median score of 87.

Of the 21 at-risk students NON-HOSTS program, 19 (90.48%) met or exceeded the minimum requirements on the TAAS exam compared to 14 (66.67%) of the HOSTS group. The average score for these 19 students was 85.42 with a median score of 87. Scores for these 19 students showed differences ranging from a high of 97 to a low of 71. Two (9.52%) of the 21 students enrolled in HOSTS scored below 70. Both of these students scored a 69 on the TAAS exam.

Table 6: 5th Grade TAAS Data (21 NON-HOSTS)

NonHost Student ID	Age	Gender	Ethnicity	Free Lunch	Reduced Lunch	Bilingual	ESOL	4th Grade Reading Score NON-HOSTS	5th Grade Reading Score NON-HOSTS
1	11	F	African American	N	N	N	N	87	89
2	11	F	African American	N	N	N	N	96	84
3	11	F	African American	N	N	N	N	64	69
4	11	M	African American	N	N	N	N	94	92
5	12	F	African American	Y	N	N	N	85	87
6	11	M	Hispanic	N	Y	N	N	94	87
7	11	M	Hispanic	Y	N	N	N	66	76
8	12	F	Hispanic	Y	N	N	N	87	87
9	11	F	White	N	N	N	N	81	92
10	11	F	White	N	N	N	N	89	79
11	11	F	White	N	N	N	N	94	71
12	11	F	White	N	N	N	N	91	92
13	11	F	White	N	N	N	N	91	81
14	11	F	White	N	N	N	N	96	97
15	11	F	White	N	N	N	N	87	92
16	11	M	White	N	N	N	N	89	84
17	12	F	White	N	N	N	N	94	95
18	12	M	White	N	N	N	N	89	91
19	12	M	White	N	Y	N	N	64	69
20	12	M	White	Y	N	N	N	72	71
21	12	M	White	Y	N	N	N	64	76

* Note: 82% of all 5th grade at risk students within PISD passed the TAAS exam during the 98-99 school year.

Corollary 2c: Do differences in reading exist between grade five students who participated in the HOSTS program and grade five NON-HOSTS students, as measured by the TAAS?

Corollary 2c examines whether differences in reading exist between 5th grade HOSTS students and 5th grade NON-HOSTS students. Scores from the 4th and 5th grade TAAS exams were analyzed for both groups of 5th grade students using a *t* test. Fourth grade TAAS scores were used as the pretest measure of reading performance and fifth grade TAAS served as the post test measure of reading performance. Table 5 presents the 4th and 5th grades TAAS scores for the HOSTS students. As previously noted, a total of 21 at-risk fourth grade NON-HOSTS students served as the comparison group and were matched to the 5th grade HOSTS students on ethnicity, age, gender, grade, free or reduced lunch, bilingual and English as a Second language status. Table 6 presents the 4th and 5th grade TAAS scores for the NON-HOSTS students.

To test this corollary, the 4th and 5th grade TAAS scores for both groups of students were analyzed using a *t*-test to examine group mean differences. Table 7 presents the results of the *t*-test of differences between related means of the two groups of students. The mean difference score for the HOSTS students was 7.05. The mean difference score for the NON-HOSTS students was -0.62. The *t*-test comparing the mean difference of 4th and 5th grade TAAS scores between the two groups of at-risk 5th grade students was statistically significant at the .05 level of significance ($t = p < .034$).

Table 7: Summary of *t*-test Results for 5th Grade HOSTS vs. NON-HOSTS Students

t-Test: Paired Two Sample for Means

	HOSTS Students	NON-HOSTS Students
Mean	7.048	-0.619
Variance	325.348	69.948
Observations	21.000	21.000
Pearson Correlation	0.215	
Hypothesized Mean Difference	0.000	
Df	20.000	
t Stat	1.932	
P(T<=t) one-tail	0.034*	

* Significant at the .05 level

Summary

In this chapter, data analyses were presented for findings relative to the corollaries for this study. Corollary 1a and 1b examined whether at-risk 4th grade HOSTS and NON-HOSTS students demonstrated improvement in reading as measured by the Texas Assessment of Academic Skills. Seventy-eight percent of the HOSTS students passed the TAAS exam compared to ninety-four percent of the NON-HOSTS students. Corollary 1c found that statistically significant differences in reading achievement did not exist between these two groups of 4th grade students.

Corollary 2a and 2b examined whether at-risk 5th grade HOSTS and NON-HOSTS students demonstrated improvement in reading as measured by the TAAS. Sixty-seven percent of the HOSTS students passed the TAAS exam compared to ninety percent of the NON-HOSTS students. Corollary 2c found that a statistically significant value ($t = p < .034$ at the .05 level) in reading achievement did exist between the two groups of at-risk 5th grade with the HOSTS students obtaining a higher mean score.

CHAPTER FIVE

Summary, Conclusions, and Recommendations

Summary

One to one tutoring programs are being implemented across the nation in an effort to provide additional academic and personal support for at-risk students with reading problems. A number of researchers (Gallegos, 1995; Morris et al., 1990; Ross et al., 1997; Shaw, 1973; Stradford, 1993; Wilbur, 1995) have reported gains in student reading performance that they have attributed to structured tutoring programs. The purpose of this study was to describe the effects of the Help One Student to Succeed (HOSTS) program on the reading achievement of at-risk 4th and 5th grade students.

Many quantitative studies have been reviewed that measured achievement of at-risk students, however, many of these studies lacked control or comparison groups (e.g., Borla-Willms, 1991; Levine, 1986), lacked rigorous data analysis procedures (e.g., Atkinson, 1995; Miller, 1989), or analyzed data on groups of participants of less than ten (e.g., Fogarty & Wang, 1989). This study was undertaken, in part, to add to the limited body of research reported with these limiting factors.

The rationale for this study lay in the need for research on the effectiveness of volunteer tutoring programs for at-risk students'. The significance of this study is shown by the limited available research and varying opinions of educators and parents on the needs of at-risks students (Snow et al., 1998). The statement of the problem, review of the literature, research design, and results were presented in previous chapters. Based upon information presented in preceding chapters, practical implications for educators and suggestions for further research are presented in this chapter.

Conclusions

Results of this study lead to several possible conclusions. The first conclusion seeks to provide an answer to question one: Do at-risk students in grade four demonstrate improvement in reading as measured by the Texas Assessment of Academic Skills (TAAS)? Seventy-eight percent of at-risk 4th grade HOSTS students passed the TAAS exam compared to ninety-four percent of at-risk 4th grade NON-HOSTS students. The *t*-test comparing the mean difference 3rd and 4th grade TAAS scores between the two groups of 4th grade at-risk students was not statistically significant at the .05 level ($t = p < .075$). These results indicate that at-risk NON-HOSTS students performed remarkably well on the TAAS exam. For the 4th grade HOSTS students that participated in this study, the results do not support findings by other researchers of the effectiveness on HOSTS tutoring programs for at-risk students (Bryant et al., 1995; Cardenas & Chahin, 1999; Fashola et al., 1996; Gaustad, 1992; Wasik & Slavin, 1993).

There are several alternative explanations for the large number (94%) of 4th grade NON-HOSTS students passing the TAAS exam compared to 78% of 4th grade HOSTS students. One plausible explanation could be that the students enrolled in the HOSTS program had been identified as “most at-risk” based upon local and state diagnostic exams. All had scored in the bottom quartile of local and state diagnostic exams or were referred by parents or teachers for poor academic performance within the general education classroom.

Another explanation may be that the psychology associated with state accountability tests such as the TAAS could have influenced instructional practices of classroom teachers. The high number of 4th grade NON-HOSTS students (94%) who met or

exceeded the minimum requirements on the TAAS exam, may reflect the changing nature of instructional reading strategies (e.g., guided practice, cloze procedures, graphic organizers, concepts maps.) that occur within the general education classroom. Although such strategies help to improve the academic performance of all students, those identified as “most at-risk,” such as the HOSTS students, may continue to require additional curriculum modifications and adaptations if they are to be successful in the general education classroom.

The second conclusion reached in this study seeks to provide an answer to question two: Do at-risk students in grade five demonstrate improvement in reading as measured by the Texas Assessment of Academic Skills (TAAS)? Sixty-seven percent of at-risk 5th grade HOSTS students passed the TAAS exam compared to ninety percent of at-risk 5th grade NON-HOSTS students. These results indicate that at-risk 5th grade NON-HOSTS students performed remarkably well on the TAAS exam. For the 5th grade HOSTS students that participated in this study, the results do not support findings by other researchers of the effectiveness on tutoring programs for at-risk students (Bryant et al., 1995; Cardenas & Chahin, 1999; Fashola et al., 1996; Gaustad, 1992; Wasik & Slavin, 1993).

Although only 67% of 5th grade HOSTS students passed the TAAS exam, it is again worth noting that these students were considered “most at-risk”. Despite the fact that they receive most of their instruction in the general education classroom where new instructional practices are occurring, these findings may suggest the need for additional strategies for those students deemed “most-at-risk”.

The *t*-test comparing the mean difference of 4th and 5th grade TAAS scores between the two groups of at-risk 5th grade students was statistically significant at the .05 level ($t = p < .034$) with the HOSTS students obtaining higher mean and variability scores. However, caution should be exercised when interpreting these results. While the higher mean and variability scores may indicate that the effects on reading are most significant for the HOSTS students, the Hosts Program placement standard may have acted as a confounding variable. Students who scored low on the TAAS exam (bottom quartile) were considered for placement into the HOSTS program. Future studies should be conducted that are more experimental in design and compare Hosts students to other Hosts students to rule out rival hypotheses and determine in a more definitive manner the effects of the HOSTS program on the reading achievement of at-risk students.

Limitations of the Study

A program evaluation was conducted to investigate the effects of the HOSTS program on the reading achievement of at-risk students in the Plano School District, an appropriate way to answer the research questions and document events as they naturally occur. In this type of program evaluation, threats to internal and external validity cannot be controlled in quite the same manner as experimental and quasi-experimental studies (Ary, Jacobs, & Razavieh, 1996). Because the researcher was unable to manipulate variables and randomly assign subjects, causation cannot be inferred from the results of the study. As a result, the study's limitation relates to its southern location, Texas, where a large number of Hispanic families with English as a second language reside. Therefore, when school administrators implement the HOSTS program in their districts for the purpose of instructional decision-making, local norms reflecting the population being

served are necessary. The data generated by this study may allow for comparison of a child's academic progress to other children's progress in the district as well as to the child's own history of performance. Any comparisons are highly restrictive to the local school population. Comparisons are not applicable to other schools, whether in the district or nationally, even though the demographics of the populations may be similar.

Recommendations

Research on the effects of the HOSTS program on the reading achievement of at-risk students is limited. The findings of this study underscore the need for additional research prior to widespread inclusion of all at-risk students into the HOSTS program. Future investigations on the effects of the HOSTS program will provide guidance to educators, parents, and the general public as they plan innovative programs to address the needs of at-risk students.

Results from *t*-tests found no statistically significant difference between the two groups of 4th grade at-risk students. However, a significant difference was found between the two groups of 5th grade students. The descriptive nature of this study was a limiting factor in determining causation. Ideally, designing an experimental or quasi-experimental study with schools from the same school district serving as experimental and control groups would provide more evidence to support or refute the effectiveness of the HOSTS program on the reading achievement of at-risk students.

Investigating differences in HOSTS program implementation also may provide insight into success rates among different HOSTS schools. It also would be of interest to determine the extent to which reading strategies school-wide or within the general education classroom impact the reading achievement of at-risk HOSTS students.

Investigating how various reading and instructional strategies impact the reading achievement of at-risk students enrolled in the HOSTS program would be beneficial to schools seeking to better understand how to educate at-risk students. Further investigations could examine the effects of HOSTS on student's absenteeism attitude, motivation, and behavioral problems as well.

Research could be conducted to investigate whether the education level or socioeconomic background of the tutor produces different academic or attitudinal results on at-risk students. Tutors who have high levels of education and possess comprehension skills and work strategies may produce statistically significant results on at-risk elementary school age children. Another area that warrants further investigation is whether matching tutors to their tutees based upon tutor characteristics would produce different results. In this study, no attempt was made to evaluate the effects of tutor characteristics such as gender or ethnicity on the reading achievement of at-risk students.

Future research projects also might include investigations into the length of time a student is enrolled in the HOSTS program and whether this produces different academic or attitudinal outcomes. It could have been that the length of time the 5th grade students spent in the HOSTS was responsible for the statistically significant difference in reading achievement discovered by corollary 2c. Although this study examined the effects of HOSTS on student achievement for one school year, a study of the long-term effects (two–four years) of HOSTS on student achievement would be beneficial. Numerous questions arise as to whether or not scores on TAAS continue to increase after being removed from the program. A longitudinal study that examines difference scores over time would provide useful information on the impact of HOSTS on long term student

achievement. Again, a longitudinal study is recommended to determine if HOSTS students continue to show improvement in reading achievement over time after they discontinue participation in the HOSTS program.

This study was undertaken, in part, to add to the limited body of knowledge on volunteer tutoring programs. Although the results of this study do not conclusively support the use of HOSTS as a supplement to traditional classroom instruction for at-risk students, it is recommended that the PISD consider the continued implementation of the HOSTS program utilizing the recommendations suggested within this study. By contributing to the information available on the HOSTS program, this research takes a small step toward the evaluation of HOSTS in schools with high concentrations of at-risk students.

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