THE IMPACT OF SCHOOL-BASED MENTORING ON STUDENT ACHIEVEMENT AND SCHOOL ENGAGEMENT IN ELEMENTARY AGED AT-RISK STUDENTS: IMPLICATIONS FOR LEADERSHIP

A Doctoral Thesis Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Education
in Professional Leadership

by

Steven Gutiérrez

May, 2012

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ABSTRACT

The purpose of this study is to examine the following questions: (1) What is the impact of school-based mentoring on students' academic achievement and school engagement? (2) Is there a difference in academic achievements and school engagement between at-risk students that participate in school-based mentoring for one year in comparison to at-risk students that participate in school-based mentoring for at least two years?

In order to answer the research questions above, eighty students (80) were selected to participate in this study. Forty (40) students were grouped together because of their participation in school- based mentoring. The other forty (40) students formed a match paired control group that mirrored the student demographic data of the group receiving mentorship.

Archival data using descriptive statistics was used to determine if there were significant differences between student groups with and without school- based mentoring in the areas of student achievement (TAKS Scaled scores in Reading and Math) and school engagement (daily attendance rate). Based on the descriptive statistics used in this study, the following conclusions were observed: (1) Mentored students had a higher student achievement in terms of mean scale score than their control group matches; (2) Mentored students demonstrated greater year-to-year growth in reading and math in comparison to the control group; (3) Although outperformed in mean scale score in reading, mentored students showed tremendous growth in reading—more than doubling

the growth score factor for control group students; (4) Mentored students made greater year-to-year improvements attendance rate than their control group matches; lastly, and perhaps most importantly, (5) At-risk mentored students had higher student achievement than non-risk identified control group students; thus, eliminating the achievement between at-risk students and their non-risk identified peers.

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CHAPTER ONE

INTRODUCTION

Introduction

Although federal mandates dictate that no student will be left behind academically, a significant portion of the American population remains unprepared and unable to compete in today's increasingly global economy. According to the statistics presented by the National Center for Educational Statistics (NCES) (2011), American schools are not adequately preparing all students to be successful on standardized assessments, high school completion, immediate enrollment in college, and college degree attainment. And, given the growing numbers of minority students in public schools something must be done to address issues of inequality (NCES, 2011).

In reviewing the 2009 National Assessment of Education Progress (NAEP) data for 12th grade, White students scored 27 points higher in reading than African-American students, and 22 points higher than Hispanic students. Unfortunately for minority students, this racial achievement gap follows the pattern of previous years, as neither score gap was significantly different from the respective score gaps in previous assessment years (NCES, 2011). Additionally, White students scored 30 points higher in mathematics than African-American students, and 23 points higher than Hispanic students. Thus, once again, neither score gap was measurably different from the corresponding score gaps in 2005 (NCES, 2011). While school and district leadership has been aware of the student achievement levels over that past 5 years, American schools have done little to close the racial achievement gap between African-American

and Hispanic students and their White counterparts. This racial achievement gap is evident in how it ultimately impacts some students to drop out of school.

The Dropout Epidemic

Dropping out of school before completing the normal course of secondary education greatly undermines opportunities and is associated with adverse personal as well as social consequences (Wilson, Tanner-Smith, & Lipsey, 2011). Compounding this issue is the fact that dropout rates in the United States vary by calculation method, state, ethnic background, and socioeconomic status (Cataldi, Laird, & KewelRamani, 2009). Across all states, the percentage of freshman students who did not graduate from high school within four years ranges from 13.1% to 44.2%, and averages 26.8%. In a general sense, dropout rates can be categorized into two types: status and event.

According to The National Dropout Prevention Center/Network (2009), the status dropout rate, which estimates the percentage of individuals in a certain age range who are not in high school and have not earned a diploma or credential, is slightly lower. In October 2007, the proportion of non-institutionalized 18-24 year olds not in school without a diploma or certificate was 8.7%. Furthermore, males are more likely to be dropouts than females (9.8% vs. 7.7%). Status dropout rates are much higher for racial/ethnic minorities (21.4% for Hispanics, and 8.4% for African-American) as compared to White students (5.3%).

NCES (2011) reports that dropout rates have declined over the last 20 years; however, in each year during that period, the dropout rate was lower for Whites and African-Americans than for Hispanics. In 2008 – the latest year for which data is available – the national graduation rate was 74.7%. In other words, slightly over 25% of

the students in the United States do not graduate from high school. Trend data also demonstrates that this percentage of dropouts is not equally distributed between racial groups. Specifically, in 2008, the dropout rate for Hispanic students was 18.3%; as compared to 9.9% for African-American students; and 4.8% for White students (NCES, 2011). Therefore, the dropout rate for Hispanic students is almost twice as high as the African-American rate, and nearly four times the dropout rate for White students. As evidenced by these numbers, teachers and school leaders are not adequately meeting the needs of all students, especially with regard to the growing Hispanic population.

When students do successfully complete high school, there are (again) apparent racial differences in the pursuit of higher education of graduates. Nationally, of those who do graduate from high school, only 61% of Hispanic and 62% African-American students enter college immediately thereafter, as compared to 75% of white and 90% of Asian students (NCES, 2011). Moreover, as evidenced between 1975 and 2010, when minority students do enter into college, there is a gap between degree attainment levels. For example, during this period, the gap in bachelor degree attainment between Whites and Hispanics widened from 15 to 25 percentage points, and the same gap between Whites and Blacks widened from 13 to 19 percentage points (NCES, 2011). Through each "milestone" in the pursuit of higher education (i.e., high school graduation, immediate enrollment in college, and college graduation) there are a dwindling number of minority students making it through the system. For the last 35 years, the data from NCES (2011) demonstrates that little has been done to improve the accessibility of education for *all* students. In fact, the racial divide in college attainment between White and minorities—specifically Hispanics and African-Americans—has increased by 16

percentage points collectively (NCES, 2011). How long can our country and support systems continue to sustain the failures of our schools? How long can the United States remain a world leader and Superpower given the growing number of its populace leaving the educational system unprepared for the demands of the current workforce and ill-suited to compete with their international counterparts?

Given the growing number of minority students in the United States, and the disparity in earning power for college graduates and high school dropouts, the inability of school institutions to meet the needs of its diverse population is alarming. It is predicted that from the 2008-09 through 2020-21 school years, public elementary and secondary school enrollment is projected to increase from 49.3 to 52.7 million students, but with enrollment variations across states (NCES, 2011). If trends in enrollment continue, of that increase, a growing number would be Hispanic. Such a trend would, therefore, be indicative of the period from 1989-2009, when the percentage of publicly enrolled Hispanic students jumped from 11% to 22%, while student enrollment among White students decreased from 68% to 55% (NCES, 2011). If enrollment over the next 15 years is expected to mirror the last 10 years, where Hispanic enrollment increased by 100% with a 20% decline in White enrollment, school and district leaders must do something to address the achievement levels and educational attainment of this particular population. Our necessity to address this situation is not only a professional and moral issue; it speaks to the financial and economic implications as well.

Educational attainment has a direct impact on future earning potential (NCES, 2011). In 2009, young adults from ages 25-34 with a bachelor's degree earned more than twice as much as young adults without a high school diploma or its equivalent, 50 percent

more than young adult high school completers, and 25 percent more than young adults with an associate's degree (NCES, 2011). High school dropouts in the United States earn an average of $9,245 a year less than those who complete high school, and have unemployment rates almost 13 percentage points higher than high school graduates (NDPCN, 2009). In 2010, young adults from ages 25–34 with at least a bachelor's degree had a full-time employment rate that was over 30 percentage points higher than that of their peers who had not completed high school (74% vs. 41%) (NCES, 2011). Furthermore, high school dropouts are more likely to become teen parents; they are more frequently live in poverty; and they are disproportionately represented in prison populations (NDPCN, 2009).

The school-to-prison pipeline. With increasing pressure on school leaders to increase test scores, students cannot afford any loss of instructional time due to, among other things, student disruptions and chronic misbehavior. Many school leaders employ a "zero tolerance" policy for chronic and severe violations of the code of conduct. However, these school policies have unintended consequences. The zero tolerance policies today are the most extreme form of punishment that was originally written for the war on drugs in the early 1980s by Ronald Reagan, and later applied to schools. As a result, the extraordinary rates of suspension and expulsion are linked nationally to increasing police presence, checkpoints, and surveillance inside schools (Fuentes, 2011). As police presence has been increased in schools across the country, the definition of "crime" – as opposed to a "teachable moment" – has been changed in dramatic ways that are detrimental for students. For instance, what was once recognized as an opportunity to

have a conversation about a minor transgression has instead become a law enforcement issue (Fuentes, 2011).

The growth of the school-to-prison pipeline is part of a larger crisis. Since 1970, the U.S. prison population has exploded from about 325,000 people to more than 2 million today (Bureau of Justice, 2011). This is a phenomenon that cannot be explained by crime rates or drug use (Alexander, 2010). According to Human Rights Watch (*Punishment and Prejudice: Racial Disparities in the War on Drugs*, 2000), although whites are more likely to violate drug laws than people of color, black men in some states have been admitted to prison on drug charges at rates 20 to 50 times greater than those of white men. Latinos, Native Americans, and other people of color are also imprisoned at rates far higher than their representation in the population (Alexander, 2010). Moreover, once they are released, former prisoners are caught in a web of laws and regulations that make it difficult or impossible to secure jobs, education, housing, and public assistance. Tragically, this process has created a sub-set of permanent second-class citizenship, which can best be described as the new form of segregation (Alexander, 2010). This phenomenon is clearly evident by the fact that the United States imprisons a larger percentage of its black population than South Africa did at the height of apartheid. In Washington DC, for example, it is estimated that 75 percent of young black men can expect to serve time in prison (Alexander, 2010). The impact of mass incarceration is devastating for children and youth. More than 7 million children have a family member incarcerated, on probation, or on parole. Many of these children live with enormous stress, emotional pain and uncertainty (Alexander, 2010). The increase in incarcerated population juxtaposed against the overall increase in total population speaks to the critical

nature of this issue. From 1970 to present day, our total population has gone from just over 203 million to just under 309 million. Yet, while our population has increased only 67% over the last 30 years, our incarcerated population has increased by over 660%. Astonishingly, our incarceration rate has increased at ten times the rate of increase in our population (Alexander, 2010).

As will be discussed in depth in the next chapter, when students disengage from school early on in primary school or later in secondary school and become a drop out, there are fewer legitimate options available afforded to them in our society. In order to fundamentally address this critical issue, district and school leaders and teachers must reexamine their leadership and instructional practices in addressing the needs of the diverse learners entering their school districts, buildings, and classrooms. The school-to-prison phenomenon can be broken down further to examine the classroom-to-prison pipeline. A student's educational trajectory to a disengaged, at-risk, criminalized life often begins with a curriculum that disrespects children's lives and that does not center on things that matter (Fuentes, 2011). Recently, *Federal Policy, ESEA Reauthorization, and the School-to-Prison Pipeline*, a collaborative study by research, education, civil rights, and juvenile justice organizations, linked the policies of No Child Left Behind and the accountability movement to the pipeline. According to George Wood, executive director of the Forum for Education and Democracy, "By focusing accountability almost exclusively on test scores and attaching high stakes to them, NCLB has given schools a perverse incentive to allow or even encourage students to leave" (Advancement Project et al., 2011). While this practice may not be the norm in many school districts across the U.S., the National Center for Fair and Open Testing cites findings that schools in Florida

gave low-scoring students longer suspensions than high-scoring students for similar infractions; moreover, in Ohio, students with disabilities were twice as likely to be suspended out of school than their peers (Advancement Project et al., 2011). Since the passage of NCLB in 2002, 73 of the largest 100 districts in the United States have seen their graduation rates decline. Of those 100 districts, which serve 40 percent of all students of color in the United States, 67 districts failed to graduate two-thirds of their students (Advancement Project et al., 2011).

The more that districts, schools, and individual teachers are assessed, rewarded, and fired on the basis of student test scores, the more incentive there is to push out students who might negatively affect those scores. And the more that schools become test-prep academies, as opposed to communities committed to everyone's success, the more hostile and regimented the atmosphere becomes – that is, more prison-like (Advancement Project et al., 2011). Again, to say that this is common practice in every school district across the nation would be both irresponsible and misleading; yet, where this practice is prevalent, the rigid focus on test prep and scripted curriculum means that teachers need students to be compliant, quiet, in their seats, and willing to learn by rote for long periods of time. Security guards, cops in the hall, and score-conscious administrations suspend and expel "problem learners" (Advancement Project et al., 2011). This school-as-prison culture is considerably more common in schools populated by children of color in poor communities as opposed to majority-white, middle-class schools, creating what Jonathan Kozol calls "educational apartheid". In his work titled *The Shame of the Nation: The Restoration of Apartheid Schooling in America* (2005), Kozol documents his visits over the last five years to nearly 60 public schools in 11

states. He finds that inner-city children are more racially isolated than they have been at any time since the landmark ruling of *Brown v. Board of Education* in 1954 (Kozol, 2008). Sadly, as related to Kozol's observation, schools without compassion or understanding occupy communities instead of serve them. As our society accelerates punishment as a central paradigm, the regimentation and criminalization of our children, particularly children of color, can only be seen as training for the future. Hence, we cannot logically build safe, creative, nurturing schools and criminalize our children at the same time. Teachers, students, parents, and administrators must begin to examine their practices and policies to ensure all students are given an opportunity for an excellent education, and we must find alternative approaches to safe school communities that rely on community building instead of criminalization.

National stability. The statistics paint a very bleak picture for an individual who does not graduate from high school or college. The consequences of school dropout are even worse for minority youth; subsequently, further compounding the economic and structural disadvantage they often experience. Considering the projected future growth of minority populations, as well as the inability of school institutions and leaders to successfully educate all students (as evidenced by the lack of completion in high school and college attainment), our local, state, and federal systems will be significantly taxed as they bear the load of a growing citizenry that is unable to compete in our national and global workforce.

With the expansion of regional and national economies into a global marketplace, education has an even greater importance as a primary factor in allowing young adults to enter the workforce and advance economically. Additionally, education will serve as a

primary factor in allowing youth to share the social, health, and other benefits associated with schooling and productive careers. The stability of our nation and our ability to create a workforce that matches the needs of our society in this rapidly changing global and technological economy is in jeopardy (NDPCN, 2009). Becoming a school dropout, therefore, has enormous economic and social implications – both in terms of the individual dropout (i.e., limited life and employment opportunities) and the society as a whole. For instance, each annual cohort of dropouts costs the United States over $200 billion during their lifetime due to lost earnings and unrealized tax revenue; and even a 1% increase in high school graduation rates could save over $1 billion in incarceration costs (NDPCN, 2009). The Organization for Economic Co-operation and Development (OECD) has similarly documented the tremendous social and economic gains associated with secondary school completion in OECD member countries (NDPCN, 2009).

If we do not begin to reverse the effects of the data presented above, the racial and economic achievement gap in our country will continue to grow and our standing in the international community will be compromised. As it currently stands, the United States is already being outperformed academically on the international stage (NCES, 2011).

International competiveness. U.S. schools are not preparing American students to be competitive with their international counterparts (Mullins, 2007). Namely, American students are falling behind their foreign counterparts in reading, math, and science. As a member of the OECD, the United States is performing at the average or below average in math, reading, and science. In 2009, the average U.S. combined reading and science score for 15-year-old students was not measurably different from the average of the rest of the group, and the math literacy rate for 15-year-olds was below the

average of the participating OECD countries (NCES, 2011). Mullins (2007) digs deeper and points out that between 2001 and 2006, when U.S. 4th-graders' scores did not measurably change, the reading scores of their peers improved in eight countries. The gains made by five of these countries (Hong Kong, Hungary, Italy, the Russian Federation, and Singapore) brought the total number of countries that outperformed the United States in 2006 to 10. In addition, between 2001 and 2006, the percentage of U.S. 4th-graders who reached the Advanced benchmark did not measurably change. In contrast, the percentage of students who reached the Advanced benchmark increased in the Russian Federation from 5 to 19 percent; in Hong Kong from 5 to 15 percent; in Singapore from 12 to 19 percent; and in Hungary from 10 to 14 percent. While other countries are making significant academic gains, the United States' student outcomes remain stagnant and we are falling behind. Alarmingly, this trend is also evident in among our best-performing students (Mullins, 2007). If our most successful American students are being outperformed by their international counterparts, what does that say about the collective health of our nation and the academic preparedness of our citizenry?

Socio-economic factors. While much of the data suggest that there is an underlying racial factor in the success of American students in school, a closer looks reveals that it is not race that determines your academic success, but rather socio-economic factors make learning more difficult and less accessible.

As previously outlined in the presentation of dropout rates and immediate enrollment in college after high school graduation, there are clear gaps with regard to racial achievement gaps; however, those gaps are present and even more pronounced in socio-economic comparisons.

Event dropout rates illustrate single-year dropout rates for high school students and show that students from low-income households dropout of high school more frequently than those from more advantaged backgrounds (8.8% for low-income; compared to 3.5% for middle income; and 0.9% for high income students) (NDPCN, 2009). Additionally, the breakdown by socio-economic group—high, medium, and low income—and immediate enrollment in college after high school show that when students do graduate from high school, lower income students are less likely to immediately enroll in a college or university at 57% as compared to 64% and 82% for middle and high income groups.

Regardless of race, young people in low-income families are less likely than those in middle or upper-income families to finish school (Caputo, 2005). This particular pattern may be occurring because those families living in poverty are less able to supply the nutrition and materials needed for children's healthy development, and they may have less access to safe neighborhoods, good schools, appropriate recreational facilities, and adequate health services (Caputo, 2005). Moreover, children growing up in poverty often do not have comparable access to learning resources that more affluent families can readily provide, such as tutoring, summer travel/learning experiences and enrichment programs. Yet, it is not simply a lack of buying power that makes children in low-income families more likely to drop out. Rather, the decision to leave school often stems from the social and psychological forces that accompany poverty (Caputo, 2005). For example, researchers studying the link between economic security and children's emotional status have found that economic loss is associated with changes in parenting practices that have adverse consequences for children's emotional well-being (Caputo,

2005). Newer research has pointed to the effects of stress on the brains of children living in poverty. One study followed a group of 195 poor and middle-class white students from age 9 until age 17 and concluded that living in poverty not only causes stress, but that it actually diminishes brain cells and impairs memory – namely, the very functions associated with reading, writing and problem-solving abilities (Evans & Schamberg, 2009). More research is needed to shed light on the specific aspects of children's environments that put them at risk and reduce their chances for educational success.

At-risk. In the past few years, research on the well-being of the population has expanded to include the concept of "at-risk" conditions. Generally, these conditions are thought to be characteristics of the individual, or situations of the context they are a part of, that are believed to create higher likelihoods of undesirable life outcomes (e.g. completing high school, avoiding premarital births) or to impact overall quality of life (Kominski, Jamieson, & Martinez, 2001). Kominski et at. (2001) further breakdown at-risk qualities to delineate between personal and familial at-risk factors. The personal conditions are (a) the presence of a disability, (b) ever having been retained in school, and (c) speaking English less than "very well". By contrast, the familial conditions are (a) either or both parents absent from the household, (b) at least one foreign-born parent of recent immigration, (c) low family income, and (d) no employed parent. The data analysis shows that, while a majority (54%) of school-age children have no significant risk factors, a significant minority does. A far larger proportion of children have experienced a familial risk factor (36%) than a personal one (18%). The single most common personal risk factor is being retained in school, while the most common familial factor is not living with both parents (Kominski, et al., 2001). Additionally, a sizable

proportion of children (18%) have more than one risk factor in their life. Substantial variation in the number and kind of risk factors occurs across various demographic groups, with multiple risk factors more frequent for males and blacks. There is little variation across age groups, implying that younger persons have already encountered similar levels of risk factors as the cohort nearly a decade older (Kominski et al., 2001). It is evident that there is a large section of our school-aged children population that have at least one at-risk factor, and those at-risk factors are believed to have less desirable life outcomes and have an impact on the quality of their life for at-risk students (Kominski et al., 2001).

Problem Statement

Again, the national education context is clear: Far too many students are not having their needs met by American schools. As shown above, given the data related to the challenges faced by those dropping out of school, their likelihood for financial instability, and the increasing number of at-risk students, educational leaders in the United States are at a crossroads. However, merely acknowledging the problem alone will no longer suffice. Our educational leaders must now act to correct the trend that clearly shows American students are not being adequately prepared for success within the national economy, or within competitive global markets as a whole. From a leadership perspective, with failure not an option for many teachers and administrators working with at-risk students, educators must be innovative and possess situational awareness (McREL, 2011) in order to look beyond the classroom and school walls to address the needs of American youth. Today's at-risk students are faced with many obstacles that make focusing academic tasks much more difficult; nevertheless, it is still the educator's

professional, moral, and social responsibility to ensure they are preparing students to become the future of the United States.

Purpose of the Study

The primary aim of this study is to examine the impact of school-based mentoring with relation to student achievement and school engagement in elementary-aged at-risk students. Secondly, this study aims to assist school leaders in the identification of a method of intervention that would benefit the growing at-risk population in the United States. Finally, this study will also serve as a programmatic evaluation for a school-based mentoring program that specifically targets at-risk elementary-aged students in an urban school setting in Houston, Texas.

Significance of the Study

Despite the apparent success and potential promise of mentoring interventions, mentoring programs are not always carefully evaluated, nor are the mechanisms by which they work are always well understood (Cavell & Smith, 2005; Rhodes et al., 2000). The evaluation of mentorship programs has occurred since the 1970s; yet, this process is still considered to be in its early developmental stages (Dubois, Holloway, Valentine, & Cooper, 2002). Due to limited empirical studies (Jackson, 2002) and sometimes discrepant findings (Keating et al., 2002), additional evaluation is needed to fully understand the impact of school-based mentoring, particularly with regard to their effectiveness in meeting the needs of at-risk students. As will be discussed throughout the next chapter in my review of the existing literature on school-based mentoring, this study aims to add to the body of knowledge and understanding of school-based mentoring and its impact on students, and to address many of the recommendations made

by previous research studies. Additionally, as discussed at the beginning of this chapter, there are a variety of alarming statistics that demonstrate the educational system's inability to educate all students, especially with regard to the growing number of minority and at-risk students. School leaders are charged with the daunting task of ensuring high academic standards and achievement even in the most challenging of schools and districts. Leaders are in great need of an effective intervention that will address the needs of the growing population – many of whom are entering our school system with one or more at-risk qualities (NCES, 2011). The strategic implementation of school-based mentoring, as a means of mitigating those at-risk factors, needs to be explored further.

Research Questions

The purpose of this study is to explore the following research questions:

1. What is the impact of school-based mentoring on students' academic achievement and school engagement?
2. Is there a difference in academic achievement and school engagement between at-risk students that participate in school-based mentoring for 1 year in comparison to at-risk students that participate in school-based mentoring for at least 2 years?

CHAPTER TWO

REVIEW OF LITERATURE

At-Risk

The concept of "at-risk" can be difficult to define and identify. Once again, at-risk conditions are generally thought to be characteristics of the individual, or situations of the context they are a part of, that are believed to create higher likelihoods of undesirable life outcomes (e.g. completing high school, avoiding premarital births) or to impact overall quality of life (Kominski, Jamieson, & Martinez, 2001). For the purpose of this study, when a student is referred to as "at-risk", the implication is that the particular student has individual or familial conditions present that put him or her in danger of dropping out of school.

Risk Factor Literature Search

There has been a plethora of research on dropout risk factors. In partnership with Communities in Schools (CIS, the nation's 5th largest youth-serving organization and a leading organization in the prevention of dropouts), The National Dropout Prevention Center/Network (NDPC/N) conducted a study to identify the risk factors that increase the likelihood that students will drop out. The identification of significant risk factors was accomplished in several steps (see Chart A-1 in Appendix A). The first step included a thorough review of the literature to determine the risk factors and conditions that increase the likelihood of students dropping out of school. Twenty-five years of ERIC literature, from 1980 up to December 31, 2005, were reviewed to obtain an historic view of the issue. Other electronic databases, such as *PsychInfo* and *Medline,* were also explored for pertinent materials. An Internet search was also conducted for ephemeral and

unpublished items. Search terms included risk factors, risk indicators, at-risk youth, dropout indicators, and dropout identification (Hammond, Smink, & Drew, 2007).

The first search resulted in around 3,400 potential citations for review, which was eventually narrowed, based on relevance, research base, and source, to approximately 75 articles that were judged worthy of further analysis. To best assess available research up to December 2005 on risk factors, NDPC/N staff decided to review only the major articles in this group that specifically focused on high school graduation or school dropout as the primary goal of analysis. Forty-four of the citations met this criterion (Hammond, Smink, & Drew, 2007).

Overall findings and trends. The following overall trends emerged from the literature:

- Dropping out of school is related to a variety of factors that can be classified in four areas or domains: individual, family, school, and community factors.
- There is no single risk factor that can be used to accurately predict who is at risk of dropping out.
- The accuracy of dropout predictions increases when combinations of multiple risk factors are considered.
- Dropouts are not a homogeneous group. Many subgroups of students can be identified based on when risk factors emerge, the combinations of risk factors experienced, and how the factors influence them.
- Students who drop out often cite factors across multiple domains and there are complex interactions among risk factors.
- Dropping out of school is often the result of a long process of disengagement that

may begin before a child enters school.

- Dropping out is often described as a process, not an event, with factors building and compounding over time (Hammond, Smink, & Drew, 2007).

Identifying specific risk factors. The 44 studies used to examine major trends in dropout research were further analyzed to identify significant risk factors. Hammond, Smink, and Drew (2007) limited this particular analysis only to those studies that:

- Directly analyzed the data source;
- Examined school dropout and/or high school graduation as the dependent variable for analysis;
- Collected longitudinal data over a period of at least two years;
- Examined a variety of types of predictors in several domains (individual, family, school, and/or community), including student demographic data;
- Used multivariate statistical techniques or models to simultaneously control for independent relationships between student demographic and other individual factors, factors in at least one other domain, and the dependent variable; and
- Included a sample of 30 or more students classified as dropouts.

Based on the above criteria, 21 studies that included analyses from 12 different data sources were identified for review. Studies were published between 1974 and 2002, with data collection carried out in varying time periods, from the mid-1960s until the mid-1990s. The studies not only span different time periods but also diverse communities (rural, suburban, and urban) as well as demographically diverse groups of students (SES, race/ethnicity, and gender). Within these studies, there were many differences in factors

examined, measures, populations sampled, sample sizes, timeframes for data collection, and statistical methods for data analysis (Hammond, Smink, & Drew, 2007). To introduce some measure of control for this variation, factors were pared down to only those found to be significantly ($p < .10$) related to school dropout in multivariate analysis and significant in at least two data sources. Approximately 60 percent of the factors were individual factors and the remaining 40 percent were family factors (Hammond, Smink, & Drew, 2007).

Significant Risk Factors for School Dropout

Based on the meta-analysis of the research on at-risk factors, the resulting 25 significant risk factors across eight factor categories were identified into *Individual* and *Familial* Domains:

Individual Domain

- Individual Background Characteristics
  - Has a learning disability or emotional disturbance
- Early Adult Responsibilities
  - High number of work hours
  - Parenthood
- Social Attitudes, Values, & Behavior
  - High-risk peer group
  - High-risk social behavior
  - Highly socially active outside of school
- School Performance
  - Low achievement
  - Retention/over-age for grade
- School Engagement
  - Poor attendance
  - Low educational expectations
  - Lack of effort
  - Low commitment to school
  - No extracurricular participation

- School Behavior
    - Misbehavior
    - Early aggression

Familial Domain

- Family Background Characteristics
    - Low socioeconomic status
    - High family mobility
    - Low education level of parents
    - Large number of siblings
    - Not living with both natural parents
    - Family disruption

- Family Engagement/Commitment to Education
    - Low educational expectations
    - Sibling has dropped out
    - Low contact with school
    - Lack of conversations about school

Identifying risk factors by school level. Another goal of the study was to examine the identified risk factors by school level. To fully understand the risk factors by school level, educators then are able to tailor their intervention plans for these students based on their individual school level. This customization of interventions will have the greatest impact on students; it will allow school leaders to make systematic and informed decisions to better target efforts; and it will encourage local leaders to make direct connections between the services for at-risk and dropout prevention. To accomplish this goal, matrices were developed by school level for individual- and family-based risk factors relying on data available from the selected studies. Specifically, two groups of matrices were developed. The first set of matrices contained information by level from one data source and to be included the factor had to be: (1) Measured at a specified grade or school level for the analysis, and (2) found at that level to be significantly ($p < .10$)

related to school dropout through multivariate analysis (Hammond, Smink, & Drew, 2007).

As shown in the Table A-2 (see Appendix A), all risk factors were identified in at least one school level by a single data source. All but one of the risk factors were identified at either the middle or high school levels. Eighteen of the 25 risk factors were identified in at least two data sources at either the middle or high school level. Fewer factors were identified at the elementary level (Hammond, Smink, & Drew, 2007).

Four factors were found in at least two data sources to significantly impact dropout at all three school levels. In particular, of these four overall factors, the following three factors were found to be "individual" in nature: (a) low achievement, (b) retention/over-age for grade, and (c) poor attendance (Hammond, Smink, & Drew, 2007). The fourth factor found to be significant across all school levels was the family factor of low socioeconomic status (SES). In numerous other studies, family SES level has been tied to other educational outcomes at all stages of a student's school career, and its appearance at all levels in predicting dropout is consistent with this pattern (Hammond, Smink, & Drew, 2007). For purposes related to this study, achievement and attendance are two of the factors being measured in order to examine the impact of school-based mentoring. These factors were selected because of the significant impact they have on dropping out; that is, by having a potential impact on these factors, school-based mentoring could provide school leadership with another effective intervention for engaging at-risk students and preventing students from dropping out.

School Engagement

A large number of the school-related risk factors involve a student's engagement with school; subsequently, these attitudes and behaviors constitute warning signs that he or she is detaching from school. More specifically, student engagement is one of the most important behavioral precursors to dropping out. As a result, many empirical studies have examined this factor; however, these studies vary greatly in terms of how they measure this construct (Rumberger & Lim, 2008). Engagement has several dimensions that include students' active involvement in academic work (e.g. coming to class, doing homework, exerting mental effort) and in the social aspects of school (e.g. participating in sports or other extracurricular activities) (Rumberger & Lim, 2008). Consequently, many studies created multiple indicators of student engagement often based on information from student and teacher questionnaires. For example, Finn and Rock (1997) developed nine measures of engagement that represented students' active involvement in class work – such as how often they were absent or tardy, whether they completed their homework, and whether they arrived to class prepared to learn – and in activities outside the classroom – such as whether they participated in sports or in academically oriented extracurricular activities (e.g., band or debate club) (Rumberger & Lim, 2008).

Rumberger and Lim (2008) identified 694 analyses that investigated the relationship between composite measures of student engagement and whether students dropped out or graduated from high school. Of the 35 analyses that examined student engagement in high school, 24 found that higher levels of engagement reduced the likelihood of dropping out or increased the likelihood of graduating from high school,

while 11 analyses found no significant relationship. Of the 31 analyses that examined student engagement in middle school, 10 analyses found engagement reduced dropout and increased graduation from high school, while 11 of the studies found no significant relationship or a positive relationship. At the elementary level, only one of three analyses found that engagement reduced the odds of dropping out of high school (Alexander et al., 2001). As you can see, there are mixed results in showing or measuring the impact of school engagement on graduation from high school.

Models of student engagement. One of the most important and immediate factors associated with dropping out in the preceding models is student engagement. Because student engagement has been identified as an important precursor to both dropping out and student academic achievement, there is a growing theoretical and empirical literature on the subject. Newman, Wehlage, and Lamborn (1992) developed a model of engagement in academic work, which they define as the student's psychological investment in and effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote (Rumberger & Lim, 2008). Because engagement is an inner quality of concentration and effort, it is not readily observed, so it must be inferred from indirect indicators, such as the amount of participation in academic work (i.e., attendance, amount of time spent on academic work, etc.), interest and enthusiasm. The researchers contend that engagement in academic work is largely influenced by three major factors: (1) students' underlying need for competence, (2) the extent to which students experience membership in the school, and (3) the authenticity of the work they are asked to complete (Rumberger & Lim, 2008). Two of the three major factors identified as increasing students' engagement to academic

work in this model are aspects of the school in which leaders and teachers a significant locus of control and influence upon – namely, the students' feeling of belonging as a member of the school community, and the quality of the work/material presented to students on a daily basis by teachers. However, it should be noted that the latter construct corresponds more closely to the affective realm of the learner (i.e., a student's own feelings or attitudes toward school and learning) and is, therefore, much harder to measure.

Some conceptions of engagement have included student attitudes, while other conceptions view student attitudes as precursors to engagement. This distinction reflects the fact that students may arrive at school with a set of attitudes, while engagement only occurs as a result of students' experiences after they arrive (Rumberger & Lim, 2008). For example, the 2004 National Research Council report, titled *Engaging Schools: Fostering High School Students' Motivation to Learn*, developed a model of academic engagement which is manifested in behaviors and emotions toward academic work which, in turn, are influenced by three psychological variables – students' beliefs about their competence and control (*I can*); their values and goals (*I want to*); and their sense of social connectedness or belonging (*I belong*) (National Research Council, Committee on Increasing High School Students' Engagement and Motivation to Learn, 2004).

In their extensive review of research literature, Fredericks, Blumenfeld, and Paris (2004) identify three dimensions of engagement: behavioral, emotional, and cognitive. Behavioral engagement represents behaviors that demonstrate students' attachment and involvement in both the academic and social aspects of school, such as doing homework and participating in extracurricular activities like athletics or student government.

Emotional engagement refers to students' affective reactions to their experiences in school and in their classes, such as whether they are happy or bored. Cognitive engagement represents mental behaviors that contribute to learning, such as trying hard and expending effort on academic tasks. Their review goes on to examine both the outcomes and the antecedents to engagement. The antecedents include various school-level factors, such as school size, communal structures, and disciplinary practices; and classroom-level factors, such as teacher support, peers, classroom structure, and task characteristics (Fredericks, Blumenfeld, & Paris, 2004). It is evident in the research that there are school- and class-level factors that influence a students' engagement within school. Many times students are given the blame for their slow withdrawal from school, but it is clear that educators and school leaders are responsible for these factors.

Finn (1997) provides a "participation-identification" model; in this model, the initial antecedent to withdrawal is the lack of participation in school activities, which, in turn, leads to poor school performance and, subsequently, to less identification with school. Participation in school activities includes responding to teacher directions and class requirements, participation in homework and other learning activities, participation in non-academic school activities, and participation in the governance of the school. This model argues there is both a behavioral and emotional component to the withdrawal process (Rumberger & Lim, 2008).

In the model proposed by Finn and reinforced in the research by others, school engagement involves a long-term process that begins in early elementary school. Researchers are attempting to identify important factors that influence student withdrawal from school, including attitudinal and behavioral factors, but the models do not

differentiate between factors that might affect student withdrawal from a particular institution (mobility) and those that might affect student withdrawal from schooling altogether (dropping out) (Rumberger & Lim, 2008). Moreover, some models and research studies do not specifically address features of schools that may directly influence students' participation and identification with school.

Some studies have attempted to go further in investigating the relationship between specific indicators of engagement and dropout or graduation. The most common specific indicator within such studies was absenteeism. As discussed previously, the majority of the 35 analyses that examined the impact of this indicator found that students with higher absenteeism were more likely to drop out and less likely to graduate (Rumberger & Lim, 2008). At the high school level, 13 of the 19 analyses found a statistically positive relationship between absenteeism and dropout; four of the analyses found no significant relationship; and two of the analyses found a statistically negative relationship. At the middle school level, all 13 analyses found a positive relationship and the other eight analyses found no significant relationship. At the elementary school level, one of the three analyses found a significant relationship and two found no significant relationship (Alexander, Entwisle, & Horsey, 1997).

Given the fact that attendance is one of the factors to significantly impact dropping out, it should not be surprising that attendance is a key indicator for students' school engagement. Absenteeism was found in various studies to impact dropout at all school levels (Alexander et al., 1997). In a Baltimore study, absences in the 1st grade were found to be significantly related to leaving school before graduation. Regardless of other personal characteristics, with each additional day absent in a school year, a

student's chance of dropping out increased by 5 percent. Missing one week during a school year, then, would increase the chances that a student would drop out by 25 percent. Two weeks would increase their chances by 50 percent (Alexander et al., 1997). In another study, 27 percent of students with high absenteeism in their 9th grade year had dropped out two or three years later (Gleason & Dynarski, 2002). It should be alarming to educators that as early as 1st grade, the absences a student accumulates decreases that student's likelihood of graduating 11 years later.

Attendance

Researchers have focused more attention on the issue of students who drop out of school than on issues related to rates of daily attendance. However, the research on student absenteeism suggests that the latter may be as important as any educational issue facing schools today (Epstein & Sheldon, 2002). Again, while the dropout problem has received much more attention than truancy, research on dropouts suggest that school leaders must address problems related to student absenteeism early on in elementary and middle school (Epstein & Sheldon, 2002). Educational leaders must be aware that one of the primary behaviors used as a gauge of school engagement is attendance, particularly when measured through absenteeism. Although dropping out as categorized by a single event in the life of the student, the reality is that this action is reflected in a long process of withdrawal and disengagement from school. To fully understand and adequately address the dropout issue, school leaders must closely analyze the actions of the student before they actually leave school. Cross-sectional and longitudinal studies show that students who eventually drop out of school are more absent from school than other students are early as 1st grade (Alexander et. al, 1997; Epstein & Sheldon, 2002). These

students follow a pattern of increasing absenteeism as they continue through their schooling. Unfortunately, having consistently low levels of attendance in early grade levels is correlated to higher future academic risk, including grade retention and prediction of dropping out of school, but it also compounds negative consequences for the student (Neild & Balfanz, 2006). When students are absent from school, they receive fewer hours of classroom instruction; they have fewer opportunities to learn material that enables them to be successful later in school; and, as a result, research shows that students with better attendance score higher on achievement tests than their more frequently absent peers (Lamdin, 1996).

Additionally, there are also sociological and economic concerns associated with having low attendance rates. Sociologically, decreased attendance from school is related to increased alienation from classmates, teachers, and schools (Gottfried, 2009). This sense of possible alienation from the school community must be addressed by school leaders; if nothing is done to foster a relationship with the estranged student, they will likely continue on the path of disengagement until their inevitable withdrawal from the school entirely (i.e., becoming a dropout). Missing school is also correlated with current and future risky behaviors, such as tobacco, alcohol, and drug use (Halfors et al, 2002; Wang, Blomberg, & Li, 2005). With regard to individual economic effects, students who tend to have high absenteeism (and thus have a correlated higher risk for retention and dropping out) are more likely to face economic hardship and unemployment (Alexander, Entwisle, & Horsey, 1997; Broadhurst, Patron, & May-Chahal, 2005; Kane, 2006). Further research shows that issues related to both increases and decreases in attendance are heightened for urban students. For example, increased attendance in math classes

have been attributed with reducing the math achievement gap for urban students (Balfanz & Byrnes, 2006). Because of the concentration of high poverty and minority students in urban districts, the importance of attending school in the early years is crucial in eliminating the math achievement gap that appears as early as 4th grade (Balfanz & Byrnes, 2006). Inversely, decreased attendance is correlated with compounding academic issues for urban, minority youth in comparison to their non-urban, non-minority counterparts (Swanson, 2004).

In an analysis of attendance and student achievement in an urban district, a study using data from the Philadelphia School District spanning almost 10 years reveals a relationship between attendance and achievement, for both grade point average (GPA) and standardized testing performance. The coefficients on the number of days present indicate a positive, significant relationship between individual attendance and student level achievement. In short, students who attend school have higher GPAs (Gottfried, 2009). Further evaluation of standardized testing outcomes of elementary school students also suggests that attendance has predictive capabilities not only on GPA, but also on reading and math subject test performance (Gottfried, 2009). Research indicates that the consistently positive and significant estimates with all three outcomes—GPA, and performance on math and reading standardized assessments—suggest that the relationship between attendance and achievement can be generalized to multiple factors of academic success. In lieu of the statistical significance of the coefficient on the days present and the multiple measures of achievement, the results of the study imply that attendance is a robust predictor of student achievement (Gottfried, 2009). This study clearly shows the importance of daily attendance and its impact on academic achievement

– namely, there is a generalizable effect on GPA and standardized test scores in reading and math. As a result, attendance is a variable used in the present study to analyze the possible impact of school-based mentoring on at-risk students. If the effects of school-based mentoring can have a positive impact on attendance for elementary aged at-risk students, the research presented on attendance and absenteeism suggests that there will be a positive effect on students' current and future academic achievement (Gottfried, 2009).

The implications for leadership are positive as studies suggest that schools can affect student attendance by implementing specific procedures and activities. To leverage the school resources as a means to address the attendance issue, schools must look inward to remove barriers and features of the educational environment that turn students away from the school. Large schools, for example, are more likely to have truancy problems compared to smaller schools (Finn & Voelkl, 1993). Understanding this dynamic, leaders of large districts and schools must take innovative approaches to make larger schools smaller by creating grade clusters or academies to increase the interaction between adults and students; thus, decreasing the students' anonymity in the school (Epstein & Sheldon, 2002).

Additionally, students are more likely to skip school if they believe that the classroom environment is chaotic or boring, that teachers do not listen to them, or that there are no academic consequences for skipping class (Epstein & Sheldon, 2002). These are all factors that teachers and school leaders have control and influence over; and, if only for the sake of student success, leaders must act upon and remedy the factors that lead students to be truant. The importance of relationships cannot be emphasized enough; additionally, to fully engage the student in the educational community, teachers

and administrators need to intensify and improve the quality of interpersonal relationships (Epstein & Sheldon, 2002). Furthermore, in a study of 39 elementary schools, schools that made the greatest impact on student attendance had student, family, school, and community partnership programs to help foster critical interpersonal relationships (Epstein & Sheldon, 2002; Epstein, Clark, Salinas, & Sanders, 1997). Creating such a focus on relationship and the stakeholder partnerships is a key feature of the school-based mentoring program used in the school in this study. While most research studies do not advocate for a specific type of program to use to engage students and families, research suggests that schools interested in improving or maintaining good attendance will benefit from taking a comprehensive approach that includes students, educators, parents, and community partners (Epstein & Sheldon, 2002).

Acknowledging that schools, administrators, and teachers have increasing pressure to improve academic performance for all students – especially those at-risk – mentoring programs have grown in popularity due to their ability to foster strong relationships between students, educators, parents, and community partners.

School-Based Mentoring

Over the last ten years, mentoring has experienced unprecedented growth. This has been particularly noticeable in school-based mentoring, which is a relatively new form of mentoring that brings mentors into schools to meet with students (Karcher & Herrera, 2007). A national poll conducted by MENTOR (2006) estimated that close to 870,000 adults are mentoring children in school. School-based mentoring is now the most common form of formal mentoring in the U.S., surpassing traditional community-based mentoring. The growth of school-based mentorship, however, has outpaced the research

community's ability to determine whether and how the program works (Portwood & Ayers, 2005). Although mentoring relationships have been defined in various ways, they are generally described as relationships that (a) occur over time between a mentor (a person who is older and who had greater experience than the mentee) and mentee, (b) consist of an emotional bond founded on mutual trust and respect, and (c) function as a resource for support and guidance that in intended to facilitate the mentees healthy development (DuBois & Karcher, 2005).

Types of mentoring. There are two basic types of mentoring: school-based and community based. The central distinguishing feature between these two is where the mentoring takes place. For instance, school-based mentoring typically takes place between youth and mentor only in the school setting; whereas community-based mentoring extends beyond the school setting (Wheeler, Keller, & DuBois, 2010). One of the benefits of school-based mentoring is that for a variety of reasons it typically attracts more volunteers than does community-based mentoring, and the volunteers are more diverse in age and ethnic background (i.e., qualities that are more likely to be positively received by at-risk mentors). And, because teachers and administrators are usually the ones identifying and referring students to the mentoring programs, these students are from underserved groups of youth who often have academic, social, or behavioral problems (Herrera, 2004).

Although the underlying goal of school-based mentoring and community-based mentoring is the same – that is, providing at-risk youth with supportive relationships—the school context provides matches with opportunities not available in community-based mentoring and, at the same time, places constraints on relationship development that are

not present in community-based mentoring. These differences yield different match experiences and, ultimately, contribute to the somewhat distinct, context-specific impacts. One potential strength of school-based mentoring is the fact that staff can supervise matches at the school, and thus involve groups of mentors not typically utilized in community-based mentoring, such as high school and college age mentors who may prefer or require the additional structure of the school context and on-site supervision (Karcher, 2005b). Additionally, because teachers nominate students for the program, school-based mentoring can reach children whose parents might not have the resources necessary to seek out mentoring services for their children (Herrera, 1999).

The school context may also provide mentors with opportunities to influence school-related outcomes. For example, the mentor's presence may provide youth an incentive to come to school more often and a disincentive to misbehave in this context. Some school-based mentors may even become a voice or advocate for the child at school (Herrera, 1999). Finally, in contrast to community-based mentoring, school-based mentoring match meetings often occur in the presence of peers. Little is known about the effects of this meeting format on students receiving the mentoring. These peer interactions (or peers' reactions to a classmate's being assigned a mentor) could inhibit the match from engaging in interactions that could add depth to their relationship (Karcher & Hererra, 2007). Alternatively, peer interactions could provide the mentor with valuable insights into the child's social skills and relationships as well as opportunities to scaffold the child's peer-related development. Additionally, when a child's peers observe her being valued and appreciated by a mentor, it may influence how those peers view the child. There is some research evidence to support this notion,

especially at the elementary school level (Hughes & Cavell, 2004). In fact, as will be discussed below, improvements in peer relationships, support, and connectedness appear to be some of the key outcomes of school-based mentoring. In addition to the potential benefits of this context, the school setting also places several constraints on school-based mentoring meetings not experienced in community-based mentoring. Class schedules tightly limit the time matches can spend together, and the summer schedule, as well as other holidays, impose pauses in relationship development that do not occur in the lives of community-based mentoring matches (Karcher & Hererra, 2007). The school context also does not allow mentors to engage in the types of activities that could contribute to community-based mentoring's success – for example, connecting the child to the surrounding community or providing an escape from a difficult home environment. The school also provides far fewer opportunities for playful activities than does mentoring in the community. There is longstanding evidence (Goodman, 1972) that more active mentoring relationships yield bigger impacts than those based primarily on discussion. In schools, and increasingly between elementary and high school, opportunities to engage in physical activities become fewer and harder to find (Karcher, 2007a).

In a research study by Thomas J. Smith (2004), paid mentor-counselors were advocated for in dealing with the most high-risk youth. Smith (2004) states that extremely high-risk students are facing likely failure in the labor market, early pregnancy, substance abuse, homelessness and serious involvement in criminal justice system. For more than two decades, research and evaluation have identified some basic principles for successful intervention programs for high-risk youth. It is agreed that the presence of caring and committed individuals in the lives of young people make a strong difference

(Smith, 2004). However, knowing this information, there is a lack of programs for these youth; moreover, given the tight economy, funding has been scarce for these types of programs for the extremely high-risk youth. Be that as it may, a claim was made for the need of paid mentor-counselors to provide the mentorship and guidance that these youth often are lacking. Volunteers are a great asset to supplement the social services that are available to these high-risk students and families, but the drawback on using volunteers for the most high-risk students is that they often leave suddenly and abruptly, and often times are unwilling to work with youth that have been criminally inclined (Smith, 2004). Paid mentor-counselors may be the middle group for these highly at-risk youth.

The paid mentor-counselor is an advocate for the youth; they serve by assisting youth in navigating the system; and they help youth avoid trouble by providing an authentic adult relationship that has proven to be very beneficial for at-risk youth. Training and support are essential to the success of this type of program because of the nature of the situations that the at-risk youth may find themselves. Mentor-counselors must be trained in recognizing and coping with typical problems that adolescents face generally so that they are better able to serve the youth when problems arise. Without the training, adult learning, and support, the mentors are more likely to burn out and leave the mentoring program (Smith, 2004).

In reviewing the more common school-based mentoring and community-based mentoring, recent studies have begun to outline some of the model's strengths and challenges. Results from these studies support three main conclusions: (1) School-based mentoring is a very different intervention from the traditional community-based mentoring model; (2) the approach does benefit participating youth, primarily in peer

relationships and other school-related areas; and (3) several practices may be crucial for maximizing youth benefits.

Cost comparison. Despite these differences, costs for school-based mentoring and community-based mentoring programs are very similar—approximately $1,000 per match, per year (Herrera et al., 2007). Yet, there is considerable variation across programs. Some of this variation is due to differences in child-to-staff ratios (i.e., the more children served per staff member, the less expensive the program) (Herrera et al., 2007). Some variation may also reflect the fact that programs working with youth with greater needs typically require more staff and resources. The Friends of the Children program in Portland, Oregon is, for example, relatively expensive since it pays mentors to work with children for four hours a week. Each paid mentor works with a small number of children; thus, the program's child-to-paid mentor ratio is relatively low, making it much more costly than the average school-based mentoring program (Karcher & Herrera, 2007). The program also serves a population of youth at much greater risk and over a significantly longer period of the child's life than most school-based mentoring programs. This example highlights the fact that costs must be weighed with the type of services being provided and the population being served when determining a program's potential value. For school leaders looking to identify an intervention for at-risk students, school-based mentoring costs and benefits have yet to be examined in this way. The future cost to not engage these students will greatly outweigh the current cost; yet, in current budget-tightening times, even with the best intentions to implement school-based mentoring, there may not be the necessary funds to do so. Additionally, because mentors are drawn to make a difference in underserved communities, there are some school-based mentoring

programs that are offered at no cost to participating schools (except for providing the necessary space/location for matches to meet). The program featured in this study—Kid's Hope USA (KHUSA)—is one of those programs operating at no cost to the school or students.

Cost assessments of school-based mentoring have not yet fully considered how many hours of mentoring a child receives for every dollar spent. School-based mentoring and community-based mentoring programs both cost about $1,000 per child, per year; however, relative to youth involved in community-based mentoring, youth in school-based mentoring programs receive much "less" mentoring (i.e., fewer hours of mentoring) per dollar, per year of mentoring (Karcher & Herrera, 2007). Thus, despite their similar annual cost, school-based mentoring is a much more expensive program per hour. It is difficult to ascribe a value to the content of a given hour in these programs. For example, it is possible that an hour in school-based mentoring is much more focused and productive than a given hour in community-based mentoring. Specifically, given that the mentor and youth understand that their time together is quite limited, they use it more wisely. In other words, a given hour in these two very different programs may have very different values, making a direct comparison of "total time together" potentially misleading (Karcher & Herrera, 2007).

For the paid mentor-counselor model, a specific dollar amount cannot easily be generated as school-based mentoring or community-based mentoring because of the limited use and understanding of true costs associated with navigating the various social and legal systems in the paid mentor-counselor model (Smith, 2004). However, in his study, Smith is calling for increased funding for paid mentor-counselor programs and

outlines three arguments for doing so. First, the results for this type of program have produced intriguing results and a positive track record. More definitive research is needed, but this approach has shown promise with the most at-risk youth (Smith, 2004). Unfortunately, funders are not likely to donate money to a project solely on promise. Secondly, the rationale to support paid mentor-counselors is that since so many other attempts and programs to intervene with this population have failed, and the paid mentor-counselor program has shown positive results with moderate cost. Therefore, why *not* give it a chance? Lastly, if we do not do something with this extremely at-risk population, they will likely end up incarcerated, and the cost to incarcerate is currently at a crisis level (Smith, 2004). Is it better to fund a program up front that will deter a youth from ending up in jail or pay the long-term effect of our neglect?

Considering the outcomes yielded for a given price is likely a better strategy. Recent data on outcomes combined with cost data (Herrera et al., 2007) will enable researchers and educators to begin to assess whether, dollar for dollar, school-based mentoring yields comparable benefits to community-based mentoring and other programs for youth – a crucial next step in understanding the program's true cost.

The importance of adult relationships. Researchers have found preliminary indications which demonstrate that youth may benefit both academically and socially from school-based mentoring programs. Several explanations have been offered to describe how mentoring relationships may protect against youth risk behavior. The social development model, which integrates control, social learning and attachment theories, suggests that prosocial bonds are of central importance in preventing adolescent risk behavior and delinquency (Black et al, 2010). When youth are committed to

prosocial relationships and organizations like schools, they are less likely to have associations with delinquent peers and activities – thus, protecting youth from socially-learned risk behavior. Additionally, the qualities derived from mentoring relationships, such as empathy and trust, lead to a mentee's attachment to a mentor and subsequent modeling of prosocial behaviors performed by the mentor, which are guided by conventional social norms (Black et al, 2010). Research indicating that weak school bonds are reliable predictors of adolescent risk behavior and delinquency provides support for this model (DuBois & Silverhorn, 2005).

School leaders must be acutely aware of which students are beginning to disengage and withdrawal from the school community; more importantly, though, they must recognize that such behaviors are a clear indication that students may be heading toward risky and delinquent behavior that will affect current and future academic success. The more recent Model of Youth Mentoring (MYM) proposes that specific domains of youth development are positively influenced by mentoring relationships, which, in turn, prevent risk behavior (Rhodes, 2005). These domains include socioemotional development (i.e., helping youth understand, express and regulate emotions; cognitive development) increasing abstract thinking and information processing; and identity development (i.e., modeling prosocial behavior and assisting with values clarification) (Rhodes, 2005). Therefore, based on these theories, it is fair to contend that school-based mentoring may enhance a youth's prosocial attachment to school and reduce their engagement in risky behaviors (Black et al, 2010). Given the fact that a student's sense of belonging to the school community was a major factor in school engagement and

likelihood of graduation, school-based mentoring may give school leaders the vehicle to engage their most at-risk students.

Some young people stay in school and meet graduation requirements despite tough circumstances. Researchers seek to understand what makes the difference for these students. Their findings point to the wisdom of dropout prevention strategies that make students feel known as individuals, engaging them in school and helping them build confidence, stay healthy, and cope with difficult times in school and in their lives. Drawing on studies linking student outcomes with the relational trust within school communities (Bryk & Schneider, 2002), researchers stress the importance of supportive adult-student relationships. The presence of at least one supportive, caring adult can make a huge difference for a high school student. Researchers also say that dropout prevention strategies should reflect students' own perceptions about the holding power of schools. Prevention strategies must therefore focus not only on programmatic approaches, but also on adults' relationships, beliefs, expectations, and willingness to listen (Hupfeld, 2007).

Other literature related to adult (non-familial) mentoring may offer some insight into the potential for adults to shape low-income minority students' academic trajectories. For healthy development, children need positive relationships with adults (Search Institute, 2005). Due to changes in family systems and shifting social norms, many children may be receiving less parental support than in the past (Jekielek, Moore, & Hair, 2002; Rhodes, Reddy, Roffman, & Grossman, 2005) and may be discouraged from forming natural mentoring relationships with other adults (Rhodes, 2005). Mentoring programs are designed to facilitate appropriate, meaningful relationships between

children and adults leading to positive outcomes such as increased social skills and self-esteem (Dappen & Isernhagen, 2005; Dubois, Neville, Parra, & Pugh- Lilly, 2002).

Several studies have demonstrated that students can benefit academically and psychologically from a close relationship with a mentor (Portwood, Ayers, Kinnison, Waris, & Wise, 2005). If the mentor-mentee relationship lasted for a year or longer, the benefits were positive both academically and socially. However, if the relationship lasted fewer than six months, there was a negative effect on social adjustment in the mentees (Herrera, 2004). The quality of the relationship formed between mentors and mentees may also account for differential impacts of mentoring interventions on mentees. The power of the adult relationship is exhibited when adolescents who identified a non-familial adult as a mentor in their life were more likely to complete high school and engage in health promoting behaviors (Cavell & Hughes, 2000). Given the data presented in Chapter One regarding the dropout rates for students in the United States, school-based mentoring has shown promise in changing the academic and social trajectories of at-risk students.

Additionally, the success of the intervention greatly depended on the relationship between the mentor and mentee. The approach the mentor takes in building the relationship and the kinds of supervision and support that the mentors receive have a direct impact on the positive benefits for the students. A mentor who takes an approach that incorporates the child's interests and strengths is more likely to have success with that student in the academic and affective domains (Herrera, 2004).

The impact of school-based mentoring. Until recently, most school-based mentoring studies had been conducted using non-experimental or quasi-experimental

methods (Portwood & Ayers, 2005; Rhodes, 2005). In a review of research into mentoring programs as a form of academic and social intervention, there are varying degrees of success with the programs and apparent contradictions in research findings.

The U.S. Department of Education's Student Mentoring Program, authorized under the No Child Left Behind Act of 2001, section 4130, is a competitive federal grant program managed by the Office of Safe and Drug Free Schools. Addressing a lack of supportive adults in the lives of at-risk students, the Student Mentoring Program provides funds to schools, as well as community- and faith based organizations, to create school-based mentoring programs targeting students in grades 4–8 (Bernstein et al., 2009). While the legislation did not mandate specific mentoring activities, it states that supported activities are those designed to improve interpersonal relationships with peers, teachers, other adults, and family members; increase personal responsibility and community involvement; discourage drug and alcohol use, use of weapons, and other delinquency involvement; reduce dropout rates; and improve academic achievement. A priority of the program, as stipulated by the Office of Safe and Drug Free Schools in their grant solicitation for the program, is its focus on the academic and social needs of at-risk students (Bernstein et al., 2009). The Office of Management and Budget requested that the Institute of Education Sciences (IES) oversee an independent impact evaluation of the federal Student Mentoring Program. Employing a student level random assignment design, the study focused on the impacts after one school year of school-based mentoring programs funded through the U.S. Department of Education's Student Mentoring Program on students randomly assigned to either receive or not receive program services (Bernstein et al., 2009). The study provides experimentally-based evidence about the

effect of school-based mentoring programs when implemented by a variety of sponsoring organizations. Using school records and self-reported data from student surveys, the study estimated impacts on outcomes for intervention and control group students after one school year. Seventeen outcomes in the three domains of interpersonal relationships and personal responsibility, academic achievement and engagement, and high risk or delinquent behavior were measured (Bernstein et al., 2009).

After data analyses, it is shown that no statistically significant impacts were found for the key student level outcomes after adjusting for multiple comparisons. There were some statistically significant differences in impacts within and across subgroups, and some significant associations were found between site level characteristics and student outcomes (Bernstein et al., 2009). Overall, at the end of the school year, students in the intervention group did not report statistically significant differences in interpersonal relationships, personal responsibility, and community involvement compared with students in the control group. They also did not exhibit statistically significant differences in academic achievement or school engagement or statistically significant lower levels of high risk or delinquent behavior compared with control group students (Bernstein et al., 2009).

Subgroup analyses were conducted to examine impacts both across and within groups by gender, age, family structure, academic risk, and baseline delinquency. For age, truancy rates were statistically & significantly lower in the treatment group for younger students (below age 12), but not for older students. However, the difference in impacts between younger and older students was not significant (Bernstein et al., 2009). No further statistically significant differences in impacts between age groups were found

for any outcome measure across the three impact domains. Likewise, no statistically significant impacts or differences in impacts were found for family structure, prior academic performance, and prior delinquency. There were, however, statistically significant differences in impacts and outcomes by gender in two outcome domains: (1) Interpersonal relationships, personal responsibility, and community involvement (positive social behavior): Intervention group boys reported statistically significantly lower scores on the positive social behavior measure compared with their control counterparts. The difference in impacts between boys and girls was also statistically significant, with boys experiencing significantly lower scores than girls did (Bernstein et al., 2009); and (2) Academic outcomes: The impact of school-based mentoring programs on student self-reports of school efficacy and bonding was positive and statistically significant for girls, but not for boys, and the difference in impact by gender was statistically significant with girls scoring higher than boys. The mentoring programs had a statistically significant, positive impact on the future orientation measure for boys, but not for girls. The difference in impacts on this measure by gender, however, was not statistically significant. For all other academic outcomes, neither impacts on boys or girls, nor differences in impacts by gender, were statistically significant (Bernstein et al., 2009).

As a result of this evaluation report on the Federal Student Mentoring Programs, in 2009, President Obama eliminated federal support for mentoring programs. Obviously, this research study proved to be a major setback for the mentoring field. However, other agencies conducted studies and showed contradictory results to the federal study—there are programs that are having positive effects on the youth that participate in mentoring programs. Using meta-analytic techniques, three studies were

examined to determine the outcomes of mentoring programs. This study was able to yield more reliable and precise estimates of program impact than what is possible for any individual study (Wheeler et al., 2010).

The study showed that there was evidence that school-based mentoring can be modestly effective for improving selected outcomes, such as support from non-familial adults, peer support, perceptions of scholastic efficacy, school related misconduct, absenteeism, and truancy (Wheeler et al., 2010). Academic achievement outcomes attributed to the program effects are not as apparent in the research study. Some suggestions for moving forward with mentoring as an intervention were outlined: longitudinal studies are needed to provide a better understanding of the impacts over time; innovative approaches to mentoring need to be investigated; and cost-benefit analysis should be integrated into future program evaluations (Wheeler et al., 2010).

Two large-scale random assignment impact studies have provided the field with rigorous evidence to demonstrate that this program does, in fact, work. The subsequent programmatic benefits are mostly in relation to school performance, attitudes, and behavior, as well as peer relationships. The Big Brothers Big Sisters (BBBS) School-Based Mentoring Impact Study (Herrera et al., 2007) involved ten BBBS agencies nationwide and 1,139 youth in 4th through 9th grades, attending 71 different schools. Approximately 80 percent of the youth received free or reduced-price lunch and/or lived in a single-parent home; and 77 percent were having difficulties in at least one of four areas of risk assessed – namely, academic performance, school behavior, relationships, and youth-reported misconduct (Herrera et al., 2007). After the first school year of program involvement, during which youth received an average of about five months of

weekly mentoring, teachers reported that participating youth improved more than their non-mentored peers in following several aspects of their school performance and behavior: Overall performance, quality and number of assignments turned in, skipping school, serious school infractions (Herrera et al., 2007). Participating youth also felt more confident in their scholastic abilities. The size of these benefits was modest, although almost identical to that reported for the BBBS community-based mentoring program (Tierney, Grossman, & Resch, 1995). However, BBBS school-based mentoring benefited youth in only school-related outcomes; whereas BBBS community-based mentoring affected a much broader set of outcomes, including initiation of drug and alcohol use, and parent relationships (Herrera et al., 2007).

Unlike the BBBS community-based mentoring study, the BBBS school-based mentoring evaluation included a six month follow-up assessment to test the durability of these changes. Similar to those few studies that have included an additional follow-up beyond the typical program dosage (Aseltine, Dupre & Lamlein, 2000), most of these school-based mentoring outcomes were not sustained into the first half of the second school year of the study, when about half of the youth were no longer receiving mentoring (Herrera et al., 2007). This last finding is particularly troubling for school-based mentoring advocates because if the positive influences cannot be sustained for an extended time period, it does not speak well for the natural lapses in match contact due to summer schedules and holidays.

The Communities In Schools (CIS) Study of Mentoring In the Learning Environment (SMILE) Impact Study (Karcher, 2007b) examined the effect of providing youth with school-based mentoring, in addition to other school-based support services.

The study included a sample of 516 predominately Latino(a) students in grades 5 through 12 attending 19 different schools. Participants in the multi-component intervention run by CIS of San Antonio were randomly assigned to one of two conditions: (1) supportive services alone; or (2) supportive services plus school-based-mentoring. Therefore, unlike the BBBS school-based mentoring study described above, the CIS SMILE study examined the "additive" effect of providing a school-based mentor to youth who were already receiving other services, such as tutoring, group counseling, and enrichment activities (Karcher, 2007b). The duration of the SBM relationships in the CIS SMILE study were brief – typically eight meetings across three months partly because the agency experienced barriers to retaining mentors. Relative to those youth who were not mentored, youth who were randomly assigned to receive a mentor improved in their self-reported connectedness to peers, self-esteem (global and present-oriented), and social support from friends (Karcher, 2007b). Other studies also have noted improvements in peer relationships (Curtis & Hansen-Schwoebel, 1999; Herrera, 2004; King, Vidourek, Davis & McClellan, 2002) as well as in attitudes toward or about oneself (Curtis & Hansen-Schwoebel, 1999; Karcher, 2005c; Portwood et al., 2005; King et al., 2002). The SMILE study did not find impacts in several other areas, including grades and attendance.

Other findings suggest that when students at risk for academic failure spend sufficient time with a mentor, they feel more connected to several aspects of the school environment, most notably teachers. The frequent contact with mentors may have been necessary to increase students' general feelings of school belonging (Portwood et al., 2005). And, although mentored students' grades and absences did not change

significantly, the findings are encouraging given that other researchers have observed longitudinal relationships between higher levels of school belonging and better grades, lower crime, less substance use, and fewer risky sexual behaviors (Portwood et al., 2005).

Through the course of my literature review on mentoring, it is clear that our most at-risk students need interventions that can adequately address academic and social needs. There is a strong case for the need of more intervention programs like school-based mentoring and paid mentor-counselors; but, unfortunately, there is conflicting research on the exact impact that it produces. My current research study seeks to add to the body of knowledge on the impact of school-based mentoring. One major difference between the two recent impact studies (Herrera et al, 2007; Karcher, 2007) and my study is the length of time students receive school-based mentoring. While the details of the study will be included in the next chapter, a closer look will be given to the identified school-based mentoring program utilized in my current research study: Kid's Hope USA.

A Closer Look at School-Based Mentoring: Kid's Hope USA

Kid's Hope USA (KHUSA) is a school-based mentoring program that offers churches and schools a model to meet the emotional, social, and academic needs of children. More specifically, KHUSA creates one-on-one mentoring relationships between a caring adult church member and at-risk elementary students (KHUSA, 2011). Like all school-based mentoring programs, KHUSA utilizes the existing structures and systems in school settings to facilitate successful, sustainable, and life-changing relationships.

History of Kid's Hope USA

The birth of KHUSA began in the early 1990s in response to the growing number of at-risk students. Church leaders identified the need to assist troubled youth and asked experts in legal and social services how they could best provide assistance. The answer was to mobilize and train church members to build meaningful one-on-one relationships to make a difference in the life of a child (KHUSA, 2011).

In November of 1994, the KHUSA model was designed to give hope to at-risk elementary school children through mentoring and relationship building. Then, by February of 1995, KHUSA initiated three pilot sites in Michigan (KHUSA, 2011). As the program was being implemented, other schools and churches gained interest in the KHUSA model and requested more information. Today, KHUSA has helped over 700 Christian churches in 33 states mentoring and foster relationships with over 11,000 at-risk children. The objectives of the program are to improve positive behaviors and academic achievement through the vehicle of a positive relationship with a caring adult (KHUSA, 2011).

The Kid's Hope USA Way

One child. One hour. One church. One school. Described as the Kid's Hope USA Way, the model relies on the interdependence of the four integral parts:

- One child: an at-risk public elementary school child who needs a relationship with a caring adult;
- One hour: sixty critical minutes each week when a trained mentor befriends a child and helps him or her acquire basic academic skills;
- One church: a committed congregation who owns the program with its

neighborhood school and provides a trained mentor and a behind-the-scenes prayer partner for each child; and

- One school: a school that welcomes this proven intervention to increase the academic skills of at-risk children, at no cost to the school (KHUSA, 2011).

The KHUSA Impact on Students

Since 2003, KHUSA has contracted with the Carl Frost Center for Social Science Research to conduct an evaluation of its mentoring program. To conduct the evaluation, teachers at schools with 20 or more mentors, and whose programs were in place by November 2006, were asked to complete an online survey assessing student performance on program outcomes. Specifically, the online survey assessed the following outcomes: Positive behavior, self-regulation and control; attendance; academic skills; and motivation for schoolwork. In addition, the following specific content area skills were also evaluated: Reading level, mathematics achievement, writing achievement, and science reasoning and achievement. Teachers were also asked to report on the overall academic progress of these students during the year, to report biggest areas of improvement for each child, areas of greatest need, and how – if at all – the child had benefited from the KHUSA program (Warner, Mullins, & Van Ark, 2008).

Three hundred fifty-seven teachers from 39 different schools across nine states completed surveys on 708 students, yielding a response rate of 88.6%. Evaluations were completed for children in kindergarten through sixth grade, though grades first to fourth had the greatest representation. The following summary presents the key findings from this research:

With regard to student performance on general academic and social areas, teachers

indicated that:

- Reports of unsatisfactory behavior, self-regulation, and control dropped from 36.7% at the beginning of the school year to just 7.5% at the end of the year;
- 42.2% of students were considered to have unsatisfactory academic skills at the beginning of the year, while only 14.1% were still considered unsatisfactory at the end of the year;
- Over the course of the year, the percentage of students with excellent or good academic ratings doubled from 22.1% to 44.3%;
- The proportion of students with excellent or good motivation more than doubled, from 23.4% at the beginning of the school year, to 51.7% at its close;
- Students whose motivation was considered unsatisfactory declined from 39.3% to 11.0%; and
- Analysis of the data show that all of these changes were statistically significant (Warner, Mullins, & Van Ark, 2008).

Similar improvement was seen for children in each of the four specific content areas: Reading level, mathematics achievement, writing achievement, and science reasoning and achievement. In each content area the percentage of children who performed below grade level decreased, while the percentage of children who performed at or above grade level increased between the beginning and end of the school year (Warner, Mullins, & Van Ark, 2008).

Specifically, the subsequent findings are as follows:

- The percentage of students below grade level in Reading fell from 69.6% and the start of the year to 42.2% at the end of the year;

- Students below grade level in Math declined from 57.2% to 34.1%;
- At the end of the year, 50.2% were below grade level in Writing, as compared to 73.7% at the beginning of the school year; and
- The proportion of students below grade level in Science dropped from 47.4% to 27.2%.

Additionally, many teachers indicated that:

- Progress as occurring in academic skills achievement even if a student was still learning below grade level;
- Students were making improvements in behavior, attitude, motivation, and social skills; and
- A strong link exists between academic gains and changes in motivation and behavior (Warner, Mullins, & Van Ark, 2008).

Teachers reported that these students still very much need to improve upon their behavior, motivation, and academics, especially reading and writing. However, many stressed this greatest need in terms of keeping or continuing progress and improvements, or still needing more improvement in areas that have shown progress. Several said students needed the consistency and one-on-one attention KHUSA provides, as many students lack stability or support from home.

Teachers commented on the role the mentor plays in a child's life in describing the importance of the one-on-one time and attention the students get from their mentors; how children looked forward to the time with their mentors; and how KHUSA mentors are positive role models, and are "inspired," "committed," "dependable" and "interested," and "kind, patient and a great support" (Warner, Mullins, & Van Ark,

2008). These comments underscore the importance the students feel when they have someone that is there just for them.

Overall, this data shows that KHUSA is meeting its goals of fostering positive behaviors and academic achievement through the vehicle of a positive relationship with a caring adult. Regarding children's behavior, attendance, academic achievement, and motivation for doing schoolwork, there was a decrease in the percentage of children who were rated unsatisfactory for achievement and an increase in the percentage of children whose achievement was rated as good or excellent. A strong majority of teachers indicated students had made some progress or good progress in these areas during the year, and nearly all students (99.3%) were perceived to have benefited from the Kids Hope USA program (Warner, Mullins, & Van Ark, 2008). For students that may not have benefited from the program, researchers and program directors recognized the need to further analyze the impact time in the program has had on the student. This is an aspect of the present researcher's proposed study that will attempt to address in using time in the school-based mentoring program as a moderator variable.

While the success of this mentoring program is very apparent in qualitative measures, the evaluation design could be improved upon in order to create a more rigorous scientific picture of this program's achievements for its participants. Implementing these suggestions would strengthen the validity of future studies while giving a fuller picture of the roles that teachers, mentors, and directors play in the program, what practices are most productive, better prepare volunteers for the mentoring experience, and ultimately, lead mentors and students towards more productive relationships with one another and greater achievement of overall program outcomes

(Warner, Mullins, & Van Ark, 2008). As will be described in the next chapter, my proposed study will seek to analyze the impact of school-based mentoring –specifically the KHUSA program – on student achievement (as measured on state standardized test scores in math and reading) and school engagement (as measured by attendance rate, or absenteeism) on elementary aged at-risk students.

CHAPTER THREE

METHODOLOGY

An Overview

This chapter's purpose is to explain the methodology that will be used in this study. The content of this chapter includes a description of the research design, sample, setting, procedures, instruments, and statistical tests used for analysis.

Research Design

The current project is designed as an archival record study that answers questions on several levels. This study is designed to analyze the impact of school-based mentoring on academic achievement and school engagement in elementary aged at-risk students. To ascertain whether students are positively or negatively affected by the process of receiving mentorship through a school-based mentoring program, participants will be assigned into 1 of 2 groups within this study – specifically, mentoring or control. The first group will be comprised of 3rd through 6th grade students that have received school-based mentorship for at least one school year. The other participants in the study, which will form the control group, are from the same school as mentored students, and have not participated in school-based mentoring. The control group is a matching paired sample of students that mirrors the grade level, racial, socioeconomic and at-risk demographics of the mentoring group.

In this research design, archival data from the two groups of students will be examined in areas of academic achievement and school engagement. Specifically, academic achievement was measured by scale score performance on Texas state standardized tests (the Texas Assessment of Knowledge and Skills [TAKS]); and school engagement is measured

by the student's daily attendance rate (i.e., their number absences). As a result of using state standardized tests, participants must be limited to the grade levels where those standardized test are administered. In this case, in Texas, the TAKS is administered to students in grades 3 through 11.

Sample

For the purpose of this study, although there are many more students that are included in the school-based mentoring program at the participating school, only 3rd through 6th grade students receiving mentoring were chosen to participate in this study, and only 3rd through 6th grade students with matching demographics were placed into the randomized selection process to construct a comparable control group.

First, to construct the control group, the at-risk characteristics of the mentoring group were charted. For accountability and funding purposes, if a student has at-risk characteristics, that information is coded and stored on the student's profile via the district's online student information management system, which is called Chancery. This information is then available for viewing for those that have access to that student's file (i.e., the teacher of record for that school year and the school's administration). Having access to such information helps school leaders track and implement targeted strategies and interventions for the success of their at-risk student population. Once the at-risk characteristics were identified and charted for all the mentored students, a report of the school's entire at-risk population by grade level was used to identify students with matching racial and gender demographics and at-risk characteristic. For example, three 4th grade students in the mentoring group have at-risk coding for two characteristics: (a) Being Limited English Proficient (LEP) and (b) being retained in a grade level. In order to control for these at-risk

factors, only 4th grade students with those same two at-risk factors (i.e., LEP and previously retained) were identified and placed into a pool of potential control group matches. Once the entire pool of 4th grade at-risk students was complied, all student names were numbered. Using two staff members independent of this research study, numbered tiles were randomly drawn from a closed sack. The number on the tile was then matched to the number assigned to a specific student within the pool of potential control group of matches; that student was then included in the study as a control group participant. In this case, there were three 4th grade students in the mentoring group with that at-risk characteristic combination; the first three numbered tiles –and subsequently, the students assigned to them – pulled from the sack were included in the study. This process was replicated for each student in the mentored group. Each at-risk student – as well as their individual at-risk characteristics – in the mentoring group has a matching student in the control group with identical at-risk factors. In most cases, there were many control group eligible students with matching at-risk characteristics like the mentored students who students were also randomly matched for gender and race; however, there were a few cases where the at-risk factor combinations for the mentored students were very unique, which resulted in there being only one or two at-risk students in their grade level who matched those characteristics. In those cases, the students were only matched on at-risk factors; thus, gender and race may not be exact matches.

Because of the limitation of the grade levels of students that could have been included in the control group (i.e., 3rd through 6th only because of standardized testing) fewer school-based mentoring students were included in the study. To give the school-based mentoring group more depth in the analysis of the impact of school-based mentoring,

students that participated for at least two years are treated as separate, individual cases for data analysis purposes. For example, one student participated in school-based mentoring for three years; and, subsequently, in the data analysis, that student's data is separated by year as if it were three different students. Because students are being compared each year for the year in which they participated in school-based mentoring against a random, matching control group student in the same school year, this practice of separating the students with multiple years participating should not affect the analysis related to ascertaining the impact of school-based mentoring. With regard to the second research question, which examines the impact of time spent in the school-based mentoring program, the data for students with multiple years will not be separated by school year for data analysis. Those who have more than two years' experience with school-based mentoring will be compared to students with at least two years experience in school-based mentoring.

In total, there are 23 students in grades 3 through 6 that have participated in school-based mentoring for at least one year. In the data analysis, 14 of the 23 students participated for more than one year, resulting in a total of 40 individual data sets to be compared to the 40 control group students. When looking at the impact time in school-based mentoring has on academic achievement and school engagement, the testing and attendance data from the 9 students that participated only for one year will be compared to the 14 students that participated in school-based mentoring for more at least two years.

As described above, there are 2 student groups: control and mentoring. The control group has not received school-based mentoring, and students assigned to the control group were randomly selected after students' data was filtered by the district's database (Chancery) to ensure comparable demographic data to the experimental group.

The mentoring group is comprised of students that have received school-based mentorship for at least one school year in a small K-8 school in a large urban school district in Houston, Texas. Table 1 shows that demographic information on the 40 students in the mentored group.

Table 3.1

Demographic Characteristics of School (N=550) and Student Participation (N=40)

	School		Student Participant		Control Group	
Characteristic	n	%	n	%	n	%
Free & Reduced	500	90	40	100	40	100
Gender						
Male	272	49	31	78	31	78
Female	279	51	9	23	9	22
Grade						
3	57	10	15	37	15	37
4	66	12	12	30	12	30
5	46	8	11	28	11	28
6	58	11	2	5	2	5
At-Risk						
Hispanic	336	61	40	100	35	88
AA	169	30	0	0	5	12

Note: Free & Reduced = Free & Reduced Lunch; AA=African American.

While this study aims to analyze the impact of school-based mentoring on at-risk students, there are students participating in school-based mentoring and included in this study that do not officially posses at-risk characteristics that are coded into the system on their personal student profile. The large majority of the mentored group—60 percent—does have at least one official, coded at-risk factor. Although the remaining 40% of

students are not coded as at-risk per qualifications in the district and state, there were adverse factors in behavior and academics that lead the teacher to refer the student to the KHUSA school-based mentoring program. In the data analysis, these students will be compared against the control group like other mentored students that do possess at-risk factors and they will also be compared to the at-risk students within the mentoring group. A further description of the methodology will be included later this chapter.

Mentors. The process of selecting mentors for the school-based mentoring program (i.e., KHUSA) is independent of the participating school. As referenced in Chapter Two, in the closer look at KHUSA, the school-based mentoring program is part of a church community. While the mentors are members of a Christian church in downtown Houston near the participating school, members are taught and trained to not proselytize or engage the students to join their church or faith. The members take this seriously as they do not want or jeopardize their relationship with the school or district for not keeping separate issues of church and state.

Mentors are volunteers to the KHUSA program and do so because they understand the importance of education and are motivated to make a difference in the life of a child. Each year the school and the church have partnered – now entering into its fourth year – the administration of the school has gone to the church on a Sunday during service to speak to the congregation about the KHUSA school-based mentoring program and the needs of the students at the school. When member are moved to volunteer and become a mentor for an at-risk student at the participating school, they must commit to serving as a mentor for at least one academic year. This requirement of committing to mentoring for one year is in response and knowledge to the aforementioned research that indicates that

mentoring relationships lasting less than one year can have an adverse effect on the mentee. When mentors agree to serve as a mentor for one year, they register with the Co-Directors of KHUSA to begin the training and background checks. Because of the interaction with students, the KHUSA mentors must go through at least two extensive background checks – one with KHUSA, and one via the school district's background check for all district volunteers. Given that student safety is a top priority, the background checks are vital to ensuring that the mentors are fit to have access and contact to the school's student population.

Once the mentors clear the background checks, they receive extensive training in dealing and working with at-risk youth. In addition to the training requirements, the Co-Directors of KHUSA interview the mentor to assist the Co-Directors with the matching of mentors and mentees, which is essential to the quality of the relationship. In understanding the research and important aspect of matching, a tremendous amount of time is spent ensuring the mentor-mentee match is compatible. To ensure this as best as possible, the Co-Directors also interview the student to see what qualities, characteristics, and attributes the student really needs and desires to have their social, emotional, and academic needs met. Before the mentor meets the mentee for the first time, in addition to all training and background checks must be successfully completed, the mentors are given an orientation tour of the campus, which also includes meeting with the school's administration. When the student meets the mentor for the first time, the Co-Directors present the mentor to the student in a facilitated introduction; hence, this helps ensure that both the mentor and mentee are comfortable because of the familiarity with the Co-Directors. What transpires next and thereafter between the mentor and mentee is at their

discretion and interest.

The Mentoring Process

In order to receive school-based mentoring, a teacher first must refer students to KHUSA by filling out a Teacher Recommendation Form. On this form, teachers explain what has caused them to identify that particular student to the school-based mentoring program. Once the Co-Directors receive the referral form (See Appendix C), they meet with the teacher to gather more information that will assist them in matching that student to a mentor. Ideally, there would be a mentor queued and ready to take on the responsibility of mentoring the student, but often times, teachers and students must wait until a mentor has volunteered or been identified. Since the mentoring is conducted via a volunteer, there are typically more students in need of a mentor than there are available mentors. In cases where there are a limited number of available mentors, the Co-Directors have the difficult task of prioritizing the needs of the students to ensure that those most in need are the first to receive a mentor. Holding the post-referral meeting with teachers also helps facilitate the proper prioritization. After students are referred to the mentorship program, they must receive signed permission by the parents or guardians to participate in the school-based mentoring program.

As described in Chapter Two, the key to KHUSA (aside from also having caring individuals) is the program's model: One School, One Church, One Student, One Hour. Inherent within this model is the notion of "the power of one"; that is, mentors are only assigned to one student within one school – no exceptions. The idea that one caring, non-familial adult is there to see the mentee only is a huge factor in the mentor-mentee relationship building process. Often times, due to familial and financial concerns, many

at-risk students do not get the individualized attention they need and crave to develop appropriate social norms and behaviors (Jensen, 2011). Understanding this unfortunate reality that many students face, mentors are assigned to only one student and they meet every week for one hour throughout the entire school year. With coordination between the mentee's teacher(s) and mentor, the day and time for the mentoring to take place is decided. Typically, in order to avoid missing integral core content instructional hours, teachers and mentors select an hour in the week that will have the least amount of academic disruption to the student (i.e., during an enrichment activity or elective class like PE or Art). Since the mentoring takes place once a week, students are not missing out entirely in the elective courses, which the school and mentors understand is important for the overall development of the whole child.

When the mentor and mentees meet, there are additional requirements that safeguard student safety: Mentoring must take place on the school grounds and the student must be visible at all times. What is meant by "being visible at all times" is that if mentor and mentees are able to meet in a classroom that is empty at the time, the door may not be closed so their activities are not easily observed by others. Again, these measures are not in reaction to harm done unto students, but to ensure student safety at all times.

As stated above, what activities the mentor and mentee engage in are entirely up to them; however, the most successful mentors engage the students in their interests and curiosities to help facilitate productive sessions with the mentee. In particular, some of the typical activities the participants may engage in include the following: Playing board or card games, talking, and/or playing sporting games, such as throwing a football or shooting baskets on the basketball court. If mentors are made aware of academic

concerns, mentors may spend some of their hour helping the student with their academic issue. While the mentors are amicable to assisting the teacher with academic concerns, the main purpose of their hour together is not to address their academic needs; rather, to tap into, develop, and expand their social and emotional skills. Ideally, if mentors can assist the teacher and school in the socialization of the students, the subsequent hope is that the student will be more able and likely to be a productive academic member of the class, and thus, impacting their academic and life trajectory.

Instruments

Texas Assessment of Knowledge and Skills (TAKS). The instrument used to assess student achievement is the TAKS standardized test. TAKS is a criterion-based standards-referenced assessment that was administered in the state of Texas during grades 3-11. Administration of the TAKS began in 2003 and was replaced in 2012 by the new assessment, the State of Texas Assessment of Academic Readiness (STAAR). The TAKS was comprised of different subtests: Reading, Math, Science, Writing, and Social Studies. Only Math and Reading were given every year beginning in the 3rd grade. For the purposes of this study, only Math and Reading assessments were used in analysis of student achievement. Depending on the grade level, the TAKS test was administered annually in either March or April. Modified forms of the test were also available for students in Special Education and students that are Limited English Proficient (LEP). Campus-based committees determine eligibility for these modified exams. All TAKS tests were also available in Spanish for Grade 3 through Grade 6. Since there are identified students in the study who take one of the modified versions of the TAKS test, students in the control group also mirror the administration of the specialized tests.

The validity of the TAKS tests is content driven and based on the Texas Essential Knowledge and Skills (TEKS), which are the curriculum standards utilized within the state of Texas. In order to ensure internal consistency, the reliability of the TAKS test has been measured using the Kuder Richardson Formula 20 (KR20). A fully reliable measure is said to be reliable if the reliability is 1.0. Subsequently, the internal consistency reliability of the TAKS tests range between .87 and .90 (TEA Technical Digest, 2007-08).

To determine a score for a TAKS test, it is important to note that the raw score is the actual number of correct answers a student responded to and that raw score is specific to the specific test (i.e., Reading, Math). In addition to raw scores, TAKS data can also be represented in scale scores. Scale scores, unlike raw scores, can be used to for direct comparisons of student performance between tests. For this reason, the scale scores for each test will be used in this study. Lastly, with this in mind, the Texas Education Agency (2011) provides the following definition:

> A scale score is a conversion of the raw score onto a scale that is common to all test forms for that assessment. The scale score takes into account the difficulty level of the specific set of questions on which it is based. It quantifies a student's performance relative to the passing standards or proficiency levels.

Measures

The purpose of this research is to study the effects of school-based mentoring through student achievement and school engagement. The participants who were identified to be part of the study either participated in the mentorship or are the control

group used to compare the data. The following data points will be used to compare determine the impact:

1. Academic Achievement: Scale scores from TAKS exam from years students participated in the mentoring program.
2. School Engagement: The number of absences is used as a measure of connectedness to the school community.

Procedures

In order to ascertain the impact of school-based mentoring on student achievement and school engagement, students' archival test and attendance data were used for data analysis purposes. With regard to the use of archival data, students who were mentees between the 2008-09 and 2010-11 school years were not asked to engage or participate in any activities to be able to conduct this data analysis. Archival data was collected from the students' assessment history, which is located in their student profile in Chancery (the district's online student information management system). With historical access to data from the 2008-09 to 2010-11 school years, the information pertaining to their the academic achievement (i.e., scale scores from their performance on TAKS) and school engagement (i.e., the number of absences within the school year(s) student participated in the KHUSA school-based mentoring program) was charted on an Excel document for both the mentoring and control group. The information was charted and de-identified by a research assistant before the Primary Investigator conducted the data analysis. This process was completed in order to ensure confidentiality in the use of student information.

Data analysis. This research study aims to account for the impact of school-based mentoring on student achievement and school engagement for at-risk elementary aged students.

In order to understand this relationship, the following data analysis was conducted and explained in the next chapter using descriptive statistics:

- Comparisons of the mean TAKS scale scores between the mentoring and control groups
- Individual comparisons of the TAKS scale scores between mentored and control group matches
- Group growth comparisons of TAKS scale scores between the mentoring and control group
- Comparisons of the mean TAKS scale scores between the students mentored for at least two years and students mentored for only one year
- Group growth comparisons on TAKS scale scores between the students mentored for at least two years and students mentored for only one year
- Comparisons of the mean TAKS scale scores between at-risk mentored students and non-identified at-risk mentored students
- Group growth comparisons on TAKS scale scores between at-risk mentored students and non-identified at-risk mentored students

The same comparisons were made for school engagement as measured by the number of absences incurred during the year(s) students participated in the KHUSA school-based mentoring program. Instead of comparing TAKS scale scores, the number of absences for the various groups was compared.

CHAPTER FOUR

DATA ANALYSIS

This study attempts to address the following two research questions concerning the impact of school-based mentoring:

1. What is the impact of school-based mentoring on students' academic achievement and school engagement?
2. Is there a difference in academic achievement and school engagement between at-risk students that participate in school-based mentoring for 1 year in comparison to at-risk students that participate in school-based mentoring for at least 2 years?

As outlined in the previous chapter on the methodology used in this study, descriptive statistics were used to analyze the data. In addition, the specific comparisons to answer the research questions were also described. And, in order to study the impact of school-based mentoring on academic achievement and school engagement, a variety of group and individual comparisons on TAKS scale scores and the number of absences were made between the mentoring and control groups.

Mean Scale Score and Attendance Comparisons between Mentoring and Control Groups

The mean scale score in math for students in the mentoring group was 616, as compared to the mean score of 547 for students in the control group. Students in the mentoring group had a scale score in math that was 65 points higher on average than students in the control group. On the math TAKS, the maximum and minimum scores earned by the mentored students was 893 and 461. For the control group students, the maximum and minimum scale scores were 724 and

337.

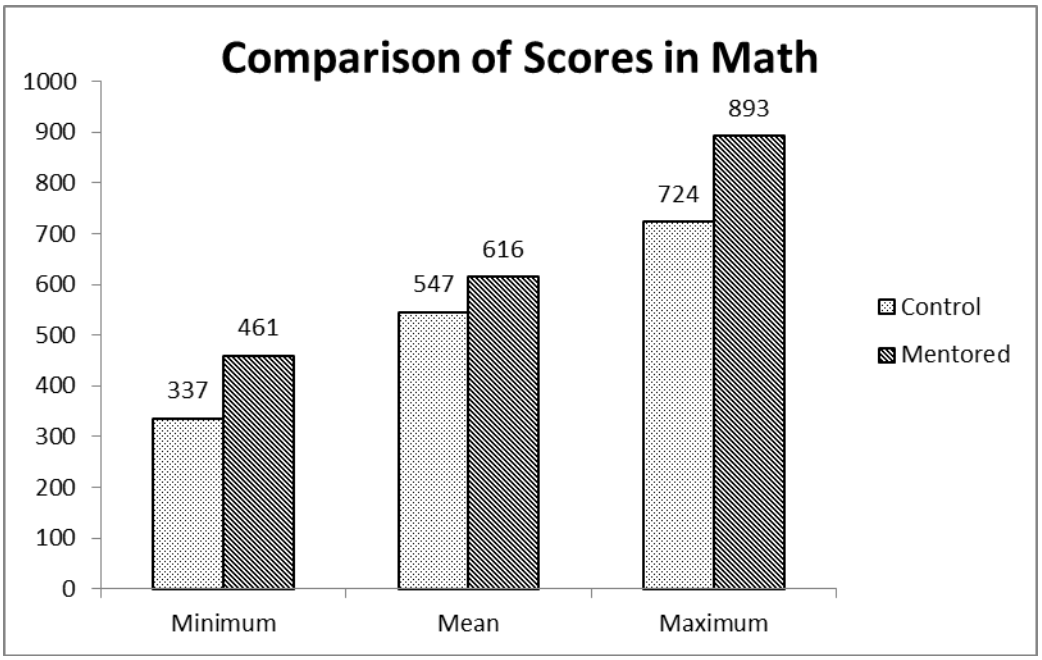

Figure 1. Comparison of scores in math. This figure illustrates the mean scale score math comparisons between the mentoring and control groups.

The mean scale score in reading for students in the mentoring group was 604 compared to the mean score of 549 for students in the control group. Students in the mentoring group had a scale score that was 55 points higher on average than students in the control group. On the reading TAKS, the maximum and minimum scores earned by the mentored students was 803 and 382. For the control group students, the maximum and minimum scale scores were 853 and 395. For both in math and reading, students that participated in school-based mentoring scored higher than their paired control group students.

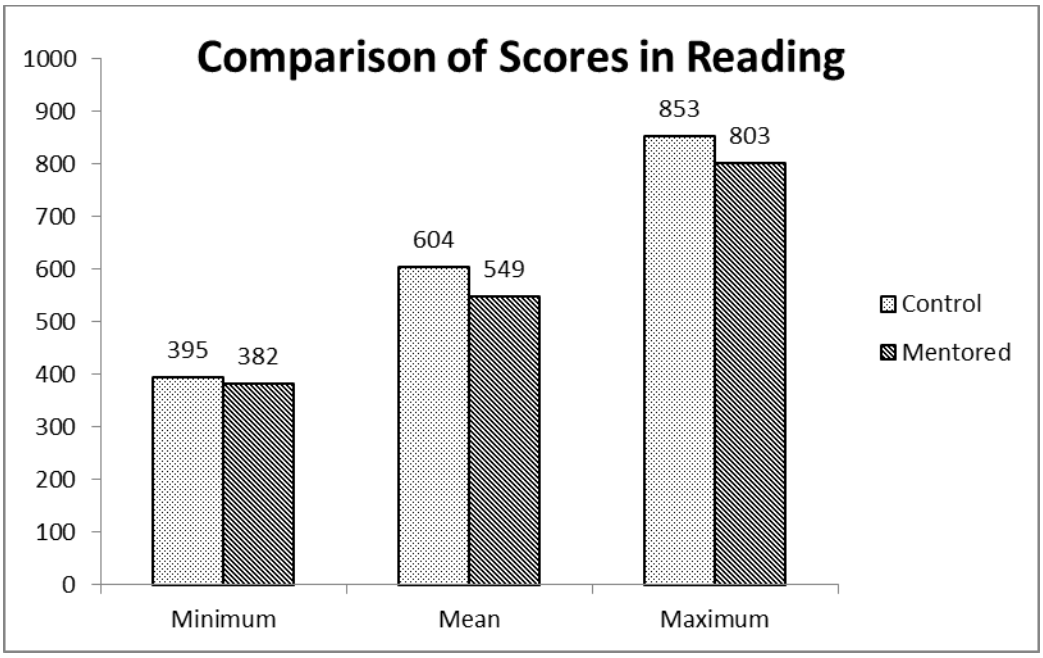

Figure 2. Comparison of scores in reading. This figure illustrates the mean scale score reading comparisons between the mentoring and control groups.

Analysis of the attendance data showed that over the course of a three-year period, students in the mentoring group accumulated a total of 290 absences from school; compared to 213 for students in the control group (See Figure 3 below). The mean number of absences for mentored students was 7.27 and 5.32 for students in the control group. The difference in the mean number of absences was 1.95 – essentially 2 school days. Individual comparisons and logical regression analysis will help dig deeper, but from a collective standpoint, students that participated in school-based mentoring had more absences from school than students in the control group.

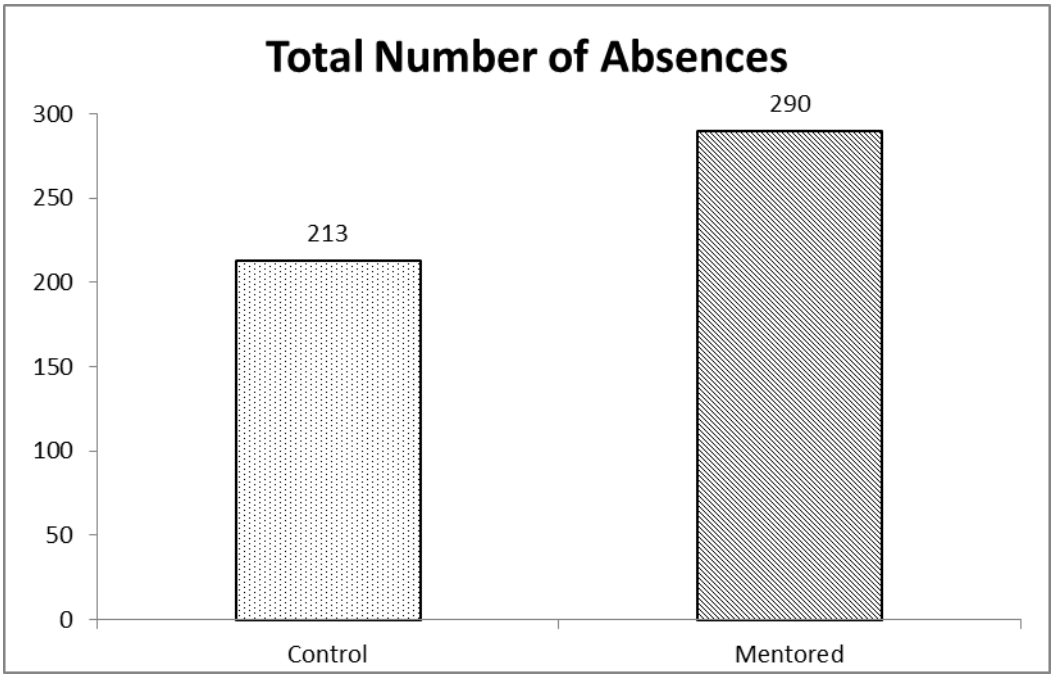

*Figure 3.*Total number of absences. This figure illustrates a comparison of attendance rates between the control group and students receiving in-school mentoring over a three-year period.

Scale Score and Attendance Individual Comparisons between Mentored and Control Group Matches

In total, there were 40 individual student comparisons over the course of three school years spanning 2008-2009 to 2010-2011. The following is a breakdown of 3rd -6th grade students that participated in the KHUSA school-based mentoring by school year:

- 2008-09: 7
- 2009-10: 14
- 2010-11: 19

Collectively, students in the mentoring group had a higher mean score than students in the control group. To further disaggregate the data to look at individual comparisons, of the 40 comparisons, 27 mentored students had a higher scale score in math than their control group

match, 2 students had the same scale score, and 11 mentored students had lower math scale scores than their control group counterpart. In reading, 28 mentored students had higher scale scores, 1 had the same score, and 11 students had lower scale scores than their control group matches. The maximum and minimum difference between scale scores in math for the mentoring and control groups was 333 and -125. The maximum and minimum difference between scale scores in reading for the mentoring and control groups was 351 and -148. While not all mentored students outperformed the control group students, the vast majority of students (68% for math and 70% for reading) showed better academic achievement than comparable students not receiving school-based mentoring.

The individualized comparison of attendance data shows that students in the control group missed fewer days of school than students in the KHUSA school-based mentoring program. Twenty-five mentored students of the 40 individual comparisons had more absences than their control group matches, 3 had the same number of absences, and 12 mentored students had fewer absences than their comparable control group matches. The maximum and minimum number of absences for the mentored group was 26 and 0 days absent. Comparatively, the maximum and minimum values for the number of days missed for the control group was 35 and 0. While the goal of school-based mentoring is to help build social and emotional bonds with students that will hopefully translate into better socialization in school and with their peers, the total number of absences may not accurately depict the true impact of school-based mentoring on school engagement. Further analysis will be conducted below to dig deeper into individual growth comparisons for attendance.

Scale Scores and Attendance Group Growth Comparisons between the Mentoring and Control Groups

To compare growth scores between the mentored and control groups, further analysis was conducted in addition to the mean score comparisons to control for previous performance and to look at growth score comparisons. To provide further depth to the descriptive statistical analysis, mentored and control group students' scale scores in reading and math were compared to their previous performance (except for participating 3rd graders taking the TAKS test for the first time) to demonstrate growth in performance from one grade level to the next. The student will either show growth, regression, or match their score from the previous year. For this analysis, only 25 individual student comparisons could be made because there were a total of 15 third-grade students included in the mentored group.

In the mentored group, out of the 25 student comparisons in math, 19 students (76%) showed improvement, or growth, from their previous performance; 5 students regressed in performance; and 1 student equaled their scale score from the previous year. Comparatively, the control group had 17 students (68%) show improvement; 6 students had lower achievement; and 2 equaled their score in math from the previous year. In terms of the overall aggregate, when all growth values (both positive and negative) were complied, the mentored group collectively improved their math performance by 668 scale score points and had a net of 2 mentored students that improved their student achievement from the previous year in math compared to their control group matches. The mean gain for students in both groups did vary greatly – specifically, 23 points for mentored students compared to 6 points for control group students. Under relatively the same school conditions (e.g. school climate and culture, teachers, administrative leadership, resources, etc.) and at-risk factors, you can see that there is a drastic improvement in math

improvement in terms of growth as it relates to participation in school-based mentoring.

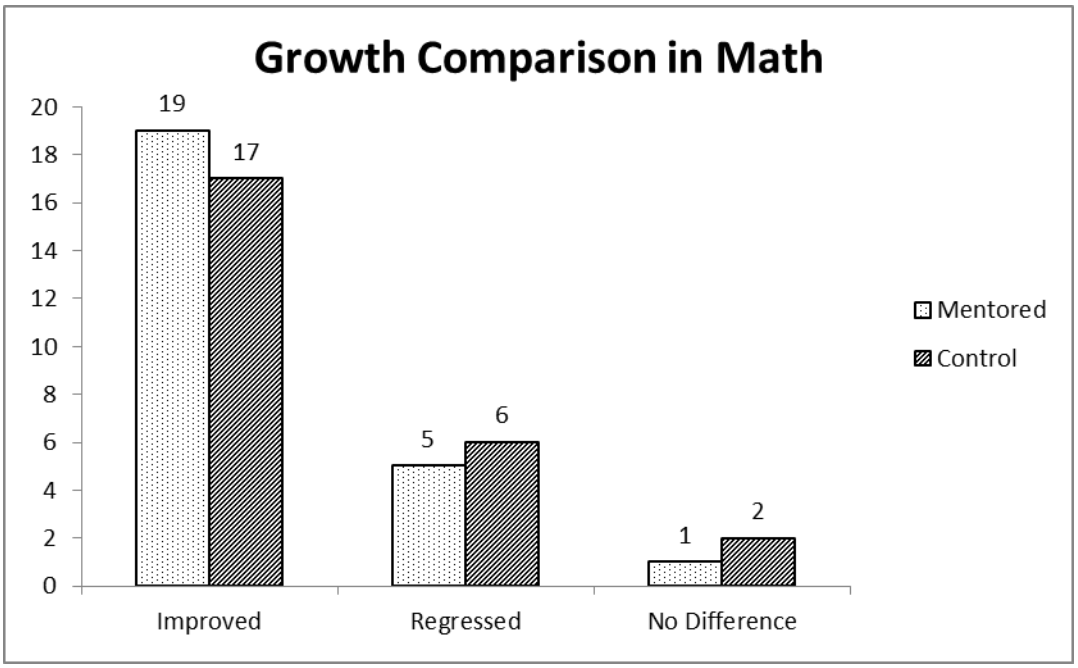

Figure 4. Growth comparison in math. This figure illustrates a comparison of the control group and those student who received mentoring in three separate subsets: Those who improved, those who regressed, and those who demonstrated no difference in math.

For reading achievement, out of the 25 student comparisons, 17 students (68%) improved their performance; 6 students' scale scores dropped; and 2 matched their score from the previous year. As with math, a large majority of mentored students improved their performance in reading achievement. For control group students, only 11 of the 25 students (44%) demonstrated scale score growth; and 14 students (56%) regressed in scale score. That is a 24% difference in the number of students that improved their performance from the previous year. The composite growth value for the mentored group was 868 points, as compared to -610 for the paired control group, resulting in a group difference of 1478 scale score points in favor of the mentored students. The growth factor for reading was nearly twice the size of the growth factor for the control group

in relatively the same conditions. With school-based mentoring being the distinguishing factor, it speaks to the impact that school-based mentoring may have on at-risk students. Interestingly, in a previous comparison of mean gains in reading between mentoring and control groups, control group students outperformed mentored students in both mean score and maximum score; however, a closer look at the growth scores show that although the mentored students had lower mean scores and maximum scores, they exhibited a tremendous amount of growth that was not present in the control group students. The impact school-based mentoring has on reading achievement for at-risk students may not be easily discounted.

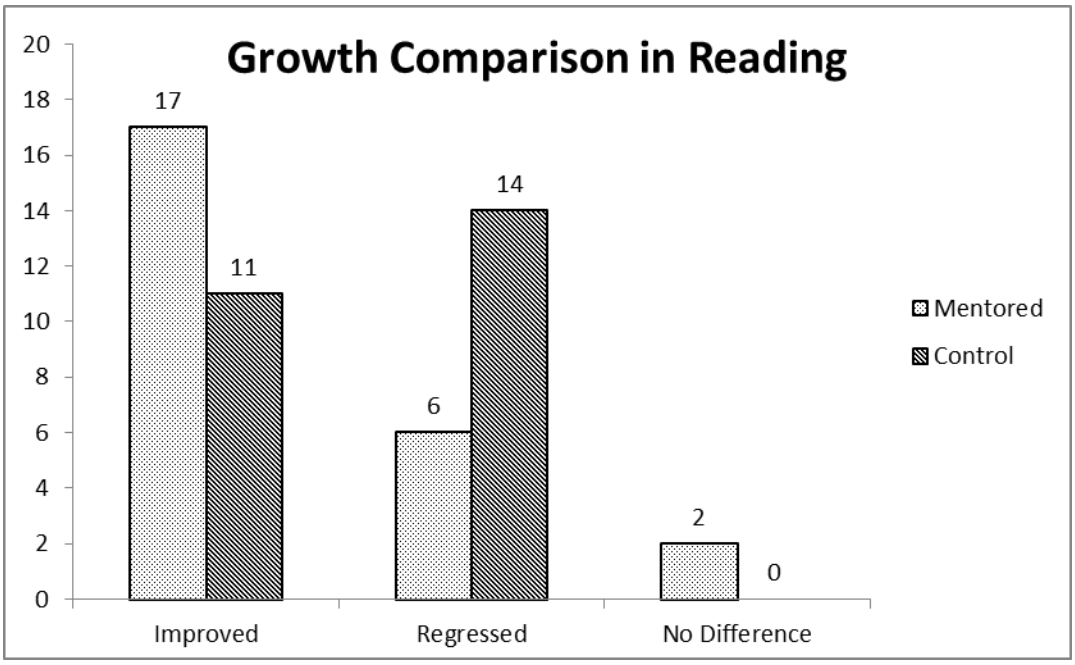

Figure 5. Growth comparison in reading. This figure illustrates a comparison of the control group and those student who received mentoring in three separate subsets: Those who improved, those who regressed, and those who demonstrated no difference in reading.

This growth practice was also applied to students' absences. For instance, to further analyze the impact of school-based mentoring, year-to-year differences in absences were calculated and compared. In this comparison, all 40 student matches were included to analyze

the impact of school-based mentoring on school engagement. Ideally and theoretically, students that participated in school-based mentoring would have higher school engagement via increased attendance (i.e., decreased absenteeism) and would decrease their year-to-year absences if they participated in school-based mentoring for more than one year. In the comparison of aggregate attendance data for the control and mentor groups, it was clear that mentored students had more absences than their control group counterparts. When taking the mentored students' attendance data for the year they participated in school-based mentoring and subtracting the number of days missed in the previous year, the difference value is generated and compared per match.

Based on individual growth comparisons, 17 out of 40 mentored students increased their absenteeism (i.e., they had more absences), 22 improved their attendance rate by reducing the number of absences, and 4 students had the same number of absences from the previous year. In comparison, the control group students had 26 out of the 40 students increase the number of days absent from school, 10 decreased absences, and 4 missed the same number of days as the previous year. Again, given identical school level factors and relatively the same at-risk factors, more than 50% of mentored students improved their attendance, and thus, also their engagement with their school community. Furthermore, mentored students had more than double the number of students improve their attendance compared to highly comparable control group pairs.

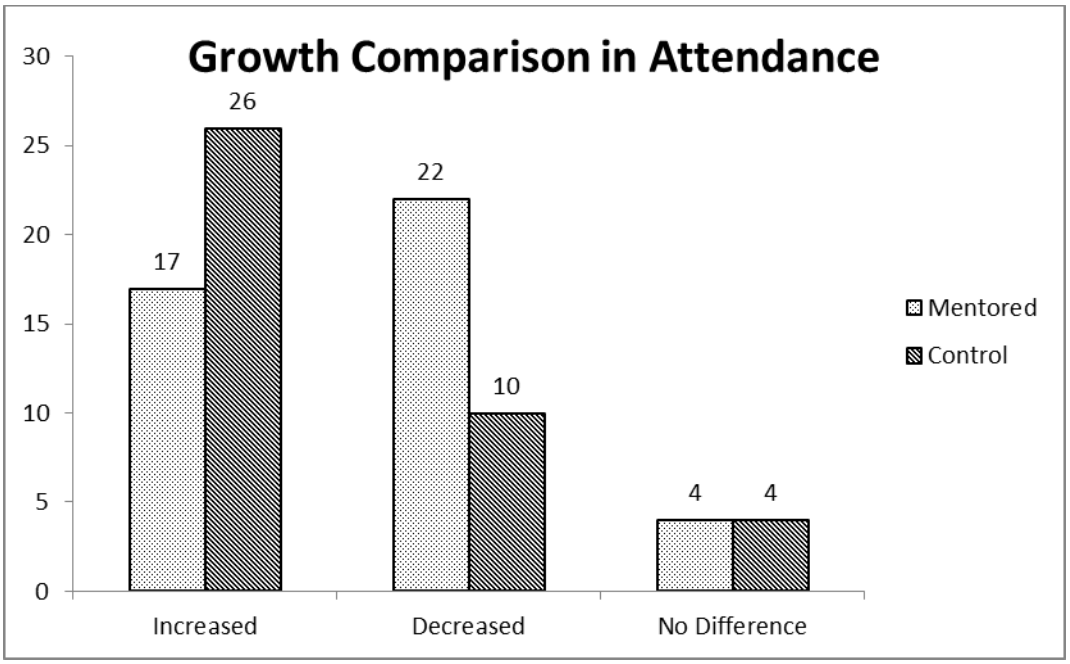

Figure 6. Growth comparison in attendance. This figure illustrates a comparison of the control group and those student who received mentoring in three separate subsets: Those who increased, decreased, or those who demonstrated no difference in attendance.

Moreover, compared to the 71 more days that the control group students missed in their previous year, the complied aggregate data for the difference in attendance growth showed that the mentored students collectively missed 9 days fewer than they had in their previous year. The difference in school days present between the mentored and control group was 80 days of schools over the 3 year period. 80 school days multiplied times nearly 8 school hours yields a net gain of almost 640 school hours for mentored students. Given the increased attendance for these mentored students, it is not surprising to see the academic gains in both math and reading. This is evidence to support the notion that participation in school-based mentoring has a positive impact on school engagement, as measured by student attendance. As discussed in Chapter Two, attendance is a factor in the student' overall engagement with the school community. Thus, school-based mentoring has shown to have a positive impact on school engagement, which is

correlated to have a direct impact on students dropping out of school. And, even in elementary school, the KHUSA school-based mentoring program is impacting students' future graduation. More in-depth research may be needed to determine if this assertion is accurate and consistent.

Mean Scale Score and Attendance Comparisons between Students Mentored for at Least Two Years and Students Mentored for Only One Year

For this analysis, only students that have been mentored are included. From 2008-09 through 2010-11, 9 students were mentored for only one year and 14 students were mentored for at least two years. The mean scale score in math for students mentored for only one year was 609, as compared to the mean score of 629 for students mentored for at least 2 years, which resulted in the students mentored for at least two years having a scale score in math that was 20 points higher on average than students that were mentored for at for only one year. On the math TAKS, the maximum and minimum scores earned by the students mentored for only one year was 788 and 460. For students mentored for at least 2 years, the maximum and minimum scale scores were 893 and 461. Collectively, one can observe that students that were mentored for at least two years had higher math achievement in terms of mean scale score and higher maximum score, which implies that these students have a better, or deeper, understanding of the grade level content. This analysis will be factored into the overall picture of the student performance data to help address the second research questions addressing the impact time participating in school-based mentoring has on student achievement and school engagement.

In the other half of the measurement of student achievement, in reading, the mean scale score for students mentored for only one year was 629, as compared to the mean score of 604 for students mentored for at least 2 years. Students mentored for one year only had a scale score in reading that was 25 points higher on average than students that were mentored for at least 2

years. On the reading TAKS, the maximum and minimum scores earned by the students mentored for only one year was 803 and 386. For students mentored for at least 2 years, the maximum and minimum scale scores were 763 and 382. Inversely, the students that displayed higher math student achievement in regards to mean scores and maximum value for the scale score were outperformed in both categories in reading by the students mentored for only one year. Having such a clear split in the analysis of student achievement as it relates to time participating in school-based mentoring clouds the overall analysis in terms of school-based mentioning's true impact on student achievement; however, it sheds some light into many of the academic issues – namely, poor reading skills – that plague poor, minority students (Jensen, 2011).

In analyzing the impact of time participating in school-based mentoring has on school engagement, the mean number of absences for the students mentored for only one year was compared to students mentored for at least two years. For students mentored for only one year, the mean number of absences was 4 absences, as compared to 8 absences on average for students mentored for at least two years. In the comparison to the control group, the mentored students overall had more absences, making it appear that school-based mentoring was not impacting school engagement via students' absences. A closer analysis demonstrated that mentored students were making great progress in reducing absences when controlled for previous attendance history and over a three-year period, as mentored students had 71 fewer absences over the three-year period. However, within the mentored group, there is no clear difference in the impact on school engagement as students participate in school-based mentoring for longer periods of time. The 2 days mean difference in attendance is not a significant number of days to be able to accurately say that the longer a student participates in school-based mentoring there

will be a decrease in absences from school.

Scale Score and Attendance Group Growth Comparisons between the Students Mentored for at Least Two Years and Students Mentored for Only One Year

Because there are not an equal number of students in school-based mentoring for at least two years and only one year, individual comparisons cannot be made. However, students' past performance can be controlled for as previously done in other analyses to determine the growth a student has shown from one test to the next from year-to-year. The growth values can also be complied and compared to look at group growth factors. In controlling for previous performance, all students that were mentored for only one year showed improvement in their scale score performance in both math and reading. Their collective growth score was 63 points higher when they participated in school-based mentoring than the previous year when they did not. For students that participated in school-based mentoring for more than two years, the vast majority improved in scale score performance, yet there were three students that actually regressed in performance and one student who matched their score from the previous year. The collective growth value for these students was 31 points in math and 35 for reading – both lower than the students only mentored for one year. Attendance data showed that the mean absences per student were similar – zero days for one year mentored students compared to an improvement of .4 school days – almost a half a day improvement in attendance for those students participating for at least two years. However, it should be noted that mentored students are experiencing overall improvements in their in attendance, as discussed earlier in this chapter. The overall improvements and having 50% of the students improve their attendance rate is significant in the lives of each individual when taking into account the adverse affects of school disengagement, and ultimately, dropping out of school.

Based on these results, there is not sufficient evidence to be able to determine or study the impact time participating in school-based mentoring has on student achievement or school engagement. It should be noted that students mentored for at least two years were among the first – and subsequently, the most at-risk – in the prioritizations of need and selection of mentors by the KHUSA Co-Directors. Considering these students were a higher risk priority, it can be inferred that these students had greater academic and social needs than students admitted later to the program – thus, potentially explaining the lack of discernable impact.

Mean Scale Scores and Attendance Comparisons between At-Risk Mentored Students and Non-Identified At-Risk Mentored Students

While this research aims to study the impact of school-based mentoring on at-risk elementary aged students, there are students in the mentored group that were not officially coded or identified per district and state guidelines for at-risk status on the student's information profile. As discussed in the previous chapter on the participants, students are referred to the KHUSA school-based mentoring program because of academic and social concerns – typical concerns that potentially lead to official at-risk factors (e.g. retention, failure on TAKS, truancy, etc.). In this sense, the KHUSA school-based mentoring is used as a preventative intervention, similar to methods used in the Response to Intervention (RTI) model. Fundamental to the RTI model is the systematic delivery of interventions for students who are having difficulty learning. Using a three-tiered system, inventions become increasingly focused and individualized per student need. Using this comparison to the RTI model, the KHUSA school-based mentoring program can be seen as a Tier 3 level intervention, in which approximately 3 to 8 percent of the student population might be served, often individually. The mentored students included in this study comprise approximately 4 percent of the student population at the participating school. RTI is an

academic (i.e., cognitive) intervention; whereas school-based mentoring is typically viewed as a social and emotional (i.e., affective) intervention. Although as seen in other research presented in Chapter Two and in the analysis in this chapter, school-based mentoring has shown to have some positive academic impacts, most notably in math achievement and growth in reading achievement.

In the case of this data analysis, at-risk mentored students were compared only against non-identified at-risk students (with the same being true for the control group). The mean scale score in math for at-risk students was 574, as compared to 659 for non-identified at-risk students – for a mean difference of 85 points in favor of non-identified students. In comparison to the at-risk students in the control group, the mean scores for at-risk students in math were 531 and 550 for non-indentified students. The mean difference in the control group was only 19 scale score points. In reading, the mean score for at-risk students was 572, as compared to 642 for non-identified students, and for a difference in mean scores of 70. Control group students had mean scores of 521 for at-risk and 570 for non-identified students, for a difference of 49 scale score points. For school engagement analysis, the mean number of absences from school increased for all groups and the difference between the at-risk and non-identified in the control and mentored groups was within one increased absence on average for at-risk students compared to non-identified at-risk students.

For both groups, in both math and reading, the non-identified at-risk students outperformed the at-risk students; however, the control group students had a smaller gap between the at-risk and non-identified students – possibly implying that the at-risk control group students representing the campus are making more gains and closing the at-risk achievement gap faster than mentored at-risk students. While more information is needed to determine the veracity of

that statement, it should also be noted that the mean achievement in both reading and math for at-risk mentored students was higher than the mean achievement for the non-identified control group students. Based on this information, the impact of school-based mentoring on at-risk students cannot be discounted. And, although a larger at-risk gap remains in the mentored group, the at-risk mentored students have eliminated the at-risk gap in comparison to the non-identified control group.

Scale Score and Attendance Group Growth Comparisons between At-Risk Mentored Students and Non-Identified At-Risk Mentored Students

Similar to the descriptive analysis in the previous and other subsections, a similar procedure was used to compare the growth in scores and attendance from the previous year. In addition to analyzing the mean scores, the comparative growth analysis allows for previous performance to be controlled to determine year-to-year growth based on positive or negative growth values of scale scores.

After all gain totals were complied for the three years spanning the 2008-09 and 2010-11 school years, the total growth gains in math for mentored at-risk students was an increase of 477 scale points from the previous year's performance, as compared to the 3 year increase in scale score of 547 for non-identified at-risk students. On average, the mean gain for an at-risk mentored student was 40 points, as compared to the 50 point gain made by non-identified mentored students in math. In reading, the total growth composite value for at-risk mentored students is 560 scale score points, as compared to the 452 point increase made by non-identified at-risk mentored students for a 108 scale score point difference from the previous year's performance in favor of at-risk mentored students. On average, the at-risk mentored students had 47-point increase in their test performance, as compared to a 41-point scale score gain by non-

identified mentored students. As seen in other reading achievement analyses, mentored students may not have the higher overall maximum score or have a higher mean score, but it is clear that in every growth analysis in this chapter, mentored students – both at-risk and non-identified – are making great year-to-year improvements.

Summary of Analysis

Below is a summary of the descriptive statistics analysis of the mentored and control group students' academic achievement (scale scores) and school engagement (attendance) data as it relates to the impact of school-based mentoring on at-risk elementary aged students:

Academic Achievement

- Mentored students had higher mean averages on both math and reading compared to a matched pair control group;
- 68% of students in math and 70% for reading demonstrated more scale score growth than the control group;
- In math, mentored students had higher maximum and minimum scale scores and 8% more students demonstrated growth in comparison to the control group;
- In reading, mentored students had lower maximum and minimum score values, but 44% more students demonstrated growth in comparison to the control group;
- Collectively, mentored students had higher growth gains than the control group composite score, with mentored students' reading performance nearly doubling the growth value of control group students;
- At-risk students—both mentored and control group—had lower achievement in both math and reading than non-identified students, although at-risk students are

making large growth gains in reading; and

- At-risk mentored students outperformed non-identified at-risk control group students in both math and reading, thus eliminating the at-risk achievement gap in this study.

School Engagement

- Over a three year period, mentored students had more absences than the control;
- 63% of mentored students had higher absenteeism than the control group students, while 30% of mentored students increased attendance rates compared to control group students;
- 50% more students than the control group students increased attendance rate from their previous year;
- Students mentored for at least 2 years have more absences on average than students mentored for at least 1 year; and
- There is minimal difference—half school day—in the year to year growth comparison between control group students mentored at least 1 year or 2 plus years.

Case Studies

As will be discussed in the next chapter, although the data is very promising in some areas –namely, the at-risk mentored students outperforming non-identified control group students – to suggest that there is a positive impact of school- based mentoring, future empirical research will be needed to bolster these findings. Nonetheless, quantitative data can yield a great deal of information about the effectiveness of a program. Hence, this type of intervention of school-

based mentoring changes lives at the individual human level. The situations that students and families find themselves in at times cannot be fully explained by numbers. Life is messy and complicated; moreover, numbers may not accurately capture the full impact a program has on the lives of the participants. The use of data and quantitative measures is not being discounted; yet, to gain the full understanding of a program's true impact, the use of anecdotal evidence and qualitative measures should be explored.

In the case of the school-based mentoring program at Houston Academy (the participating K-8th grade school in an urban school district in Houston, Texas) there are two particular cases that help shed light onto the impact school-based mentoring has on at-risk students. For purposes of confidentiality, the names of participating individuals and places have been changed to protect their identities.

Isaac. As discussed above, the situations that students and families find themselves in can be difficult to manage if the family (especially parents) does not have a proper understanding on how to navigate the system, seek and receive the necessary support and resources to help their children, ask the right questions, or have the financial ability to pay for legal representation, if needed. Isaac came to Houston Academy for the 5th grade from a neighboring elementary school because Isaac was a student with special needs that displayed inappropriate behavior in the general education setting. Needing a more restrictive environment to accommodate his disability and behavior, he was placed in a special education behavior support class (BSC) at Houston Academy, as the neighboring school did not have a BSC program to support his behavior.

Teachers at Houston Academy soon noticed that Isaac was displaying behaviors that were not consistent with a 5th grader with just a reading comprehension learning disability. Isaac often reverted to childlike behavior and speech, rocked in his seat when agitated, had a short attention

span, was uncomfortable with changes to his daily routine, had difficulty initiating conversation with peers and maintaining appropriate peer relationships. Houston Academy staff and administration attempted on many occasions to engage Isaac in questions about himself to gather more information as to how he thinks and operates, yet he consistently avoided questions about his personal self. Teachers thought he needed more time to adjust to the new school and a more restrictive class setting. Phone calls and conversations with his mother proved fruitless, as she was often flippant and not overly concerned about the issues teachers and administrators brought forth to her. Isaac was not her only child and she often made comments in front of Isaac and teachers that she didn't have time to put up with his acing out. During an emotional conference after a dramatic outburst in the class by Isaac, the mother confided she never graduated from high school and hoped that Isaac would see how they struggled and suffered, making him see he needed to improve his behavior. It was apparent to the school's administration that the mother, despite her best intentions, could not assist her son with his behavior and academic issues.

In trying to give Isaac as alternative intervention avenue to address his needs, he was referred to the KHUSA school-based mentoring program at Houston Academy. Seeing his high level of need, the Director (there was only one at the time) of the KHUSA program immediately paired Isaac with a mentor, Sam. Once introduced, Sam and Isaac met weekly for the remainder of the year. Isaac continued to display his inappropriate behavior, but it was apparent to teachers, administration, and the KHUSA Director that Isaac was enamored with his mentor. He looked forward to their visits and would talk for days after about the activities they engaged in and the music that Sam had shown him. Sam too noticed the peculiar behaviors Isaac exhibited; nonetheless, Isaac slowly began making progress despite still displaying the aforementioned unusual behaviors. Ultimately, Isaac successfully completed the 5th grade and was going to a

middle school the next year. After establishing and developing a significantly strong bond with Isaac, and with permission from Isaac's mom, Sam continued to meet with Isaac through the summer (not required by the KHUSA school-based mentoring program).

Then, one day before their next meeting, Isaac's mom suddenly called Sam with the awful news that Isaac had been arrested for sexual assault on his sister. Isaac's mom and Sam were very shocked at the behavior and were extremely concerned for Isaac's future. Immediately, Sam began to take an advocate's role in collecting legal information and asking the questions of various officials that the mom was unaware of or unable to ask. In gathering the information, Sam noted that the incident was uncharacteristic of the behaviors he had seen routinely over the course of the last school year. Determined to make a difference, Sam began calling his contacts to see what recourses were available. Having thought all along – with teachers, administrators, and to some extent, Isaac's mom – that there were other factors involved in his disability and behaviors, Sam arranged and paid for Isaac to have a full external medical evaluation. In the end, it turns out that Isaac had a form of undiagnosed autism that was the root of his academic and social disabilities. With this information in hand, Sam assisted the mother in obtaining legal counsel to ensure that Isaac received the appropriate services he needed instead of punishment and criminalization.

In Isaac's life, the KHUSA school-based mentoring – especially his mentor, Sam – dramatically altered his life trajectory. Numbers cannot explain this relationship and the true impact a caring non-familial adult has had in the life of this child. Coincidentally, in the year that Isaac participated in the KHUSA school-based mentoring program with Sam as his mentor, Isaac improved his math and reading performance by 32 and 66 scale score points, respectively. In addition, he missed 6 fewer of days school than the previous year when he did not participate in

school-based mentoring.

The Rodriguez family. They came in hungry, disheveled, and without the basic necessities. In fact, in addition to their lack of school materials necessary for adequate school success, they also lacked appropriate clothes, shoes that fit properly, and basic medical care. There were four children in the Rodriguez family (two boys and two girls) ranging from kindergarten to the third-grade. The school nurse routinely came to the school's administration to detail the deplorable conditions the children would come to school in. In many cases, the children had no socks or underwear, even despite each one being giving a pair every week. In addition, there were no return calls from parents when they were called – event when called to be informed that one of their children had had a fever over 100 degrees and needed to be picked up from school. The teachers were concerned how the students frequently missed days of school for no apparent reason and that parents would not sign weekly communication folders from the school that outlined the behavior for the week and the academic progress students were making, or lack there of. By all observable accounts, the parents were negligent in the care of their children. Despite numerous efforts from administrators, truancy officers, the school nurse, and teachers, the parents did not seem to be concerned about the issues brought forth to them. Moreover, the parents would commit and say the right things in parent conferences, yet, ultimately, they would not follow through with any agreed upon arrangements.

Seeing that more resources and external assistance was needed, the Director of KHUSA was contacted and mentors for all students were secured. While the mentoring process was beginning, the Houston Academy staff remained concerned and filed multiple Child Protective Services (CPS) reports documenting the negligent behavior of the parents. Several months passed with similar incidents and complaints to CPS. During this time mentors began building

relationships to help the students cope with their situation. Fortunately for the students, yet unfortunate because of how the situation played out at the time, CPS came to Houston Academy without advanced notice and picked up the students because the parental rights were being suspended. CPS could not accommodate all four children with one family, which resulted in the boys and girls being separated from each other. Incidentally, the kindergarten student had a very close relationship with his oldest sister; therefore, he did not understand the situation and was inconsolable when told he could not see his sister. It was later revealed that because of the parents negligence, the older sister, a 3rd grader, was raising and caring for her brother as if it were her own child. The incident was not only traumatic and heartbreaking for them, but also for the teachers, administrators, and mentors who had built relationships with them. In the end, however, knowing that the students would be taken care of like children should be was all the comfort they needed to deal with their initial reaction.

To help the children cope with their new environment and isolation from their siblings, the KHUSA mentors were instrumental in easing the effects of their traumatic transition; that is, they were able to obtain the name of the families and locations where the students were staying. After explaining their relationship with the temporary foster family, the mentors were able to visit and update them on the status of their siblings. The mentors also eased the worries of the Houston Academy staff by informing them the students were safe, happy, and taken care of. The mentors remained in contact for a few weeks, but after the students were becoming adjusted to their new environment, mentors made a last visit to properly end their relationship (so not to create any feelings of abandonment or resentment). Ultimately, the mentor's actions were in the best interest of the students, which also allowed students to experience life without having reminders about their unpleasant recent past.

As stated above, these are but two of many stories that are just as telling and indicative about the resilient students and absolute dedication of the KHUSA mentors. Most importantly, such tales fill in the gaps where the data may not accurately depict the true impact of school-based mentoring.

CHAPTER FIVE

DISCUSSION

In explaining education in 1848, Horace Mann—widely recognized as the father of American education—said, "Education, then, beyond all other devices of human origin, is the great equalizer of the conditions of men -- the balance wheel of the social machinery." The central idea Mann speaks to is the immense power and influence education can have on the trajectory of one's life. While stated over 164 years ago, this statement still rings true today – that is, education can still change the cycle of poverty for many families (Jensen, 2011). Understanding this statement and being living proof to its veracity, the data presented in Chapter One about the inability of our school systems to adequately prepare *all* students to be successful and be productive members of society is all the more alarming and disturbing. Without a quality education system for all students and communities, students are not afforded the opportunity to equalize life's playing field.

First, the primary purpose of this study was to examine the impact an intervention (i.e., school-based mentoring) has on at-risk students. Specifically, this research study aims to answer the following two questions:

1. What is the impact of school-based mentoring on students' academic achievement and school engagement?
2. Is there a difference in academic achievement and school engagement between at-risk students that participate in school-based mentoring for 1 year in comparison to at-risk students that participate in school-based mentoring for at least 2 years?

Secondly, this research serves as a program evaluation of the KHUSA school-based mentoring program at Houston Academy. The aim of this study is to shed more light on the true impact that school-based mentoring has on at-risk students at Houston Academy. If shown to be effective, the intervention of school-based mentoring can be implemented with other students to provide them with a Tier 3 level intervention for the most at-risk students in the school population at Houston Academy, as well as other schools and districts.

Academic Achievement

In relation to the first research question of the impact of school-based mentoring on students' academic achievement in reading and math as measured by scale scores on the Texas standardized test (TAKS), the data show mixed, yet promising results. Given similar school and at-risk characteristics, the mentored students had higher mean scores in math and reading than their paired matches in the control group. With school-based mentoring the distinguishing factor, it speaks to the effectiveness of the intervention. Additionally, mentored students showed better year-to-year improvement, or growth, in both reading and math. Particularly interesting was the mentored students' performance on the reading test: mentored students had lower overall mean achievement and had lower maximum and minimum scale scores than their control group counterparts. While that analysis showed mentoring was possibly not effective in improving reading achievement, when performing the analysis on the growth score comparisons, the mentored students significantly outperformed control group students (they nearly doubled the composite scale score growth value). What the analysis demonstrates is that students made great gains in comparison to their highly comparable control group matches because of their participation in the KHUSA school-based mentoring program. Lastly, and most impressively,

school-based mentoring was the distinguishing characteristic between the at-risk mentored students and non-identified control group students when the analysis showed that the at-risk achievement gap was eliminated in this study. In actuality, at-risk students equaled and surpassed the achievement in reading *and* math for students not at risk of dropping out.

This last analysis proves to be the most indicative of the impact school-based mentoring has on at-risk elementary aged students. While more research is needed to say this definitively; nevertheless, based on the descriptive statistical analysis of the data in this study, school-based mentoring has a positive impact on student achievement.

School Engagement

As discussed in the literature review in Chapter Two, school engagement is a difficult construct to measure because many of the indicators of engagement are internal and based on feelings and perceptions, which are not easily observable. In this research study, the use of attendance (days absent) as the measure to determine school engagement was used to ascertain the impact of school-based mentoring on at-risk students. The descriptive statistical analysis does not paint as clear of a picture as was presented in the previous analysis. Mentored students proved to have more overall absences than the control group; thus, reinforcing data that at-risk students are more likely to exhibit absenteeism. However, as with academic achievement, when analyzed for year-to-year growth, mentored students made great gains, which again implies the positive impact of school-based mentoring. Fifty percent more students than the control group improved their attendance from the previous year; hence, marking a huge improvement not exhibited in the control group. This analysis cannot be underscored enough. For example, mentored students may continue to miss more days than the control group students; however, because at-risk students are more inclined to be absent from school, the growth of year-to-year

attendance rate is a better indication as to the impact of school-based mentoring. For example, Isaac (from the Case Studies) missed 27 days of school the year before he participated in the KHUSA school-based mentoring program at Houston Academy. The year he participated in school-based mentoring, he improved his attendance, but was still missed 21 days of school. Many might see the overall number of absences and conclude that school-based mentoring has no impact on school engagement via attendance rates. However, considering the 22% improvement in attendance after one year in school-based mentoring, the impact cannot be discounted. The data suggests that school-based mentoring may not eliminate the factors that lead at-risk students to be more absent, but is useful in building a connectedness to the school that results in better attendance and engagement – that is, factors that ultimately lead to better school success and a decrease in risky behaviors. Using deductive reasoning, school-based mentoring helps keep students engaged in school to be more likely to graduate from high school. That is a powerful impact.

Limitations and Recommendations

One limitation to this study is the sample size (N= 40). For analysis purposes, there were 40 student comparisons, but because students who had participated in school-based mentoring for more than one year were separated as individual, separate student performances to add depth to the analysis. In actuality, there were only 23 third through sixth-grade students included in this study. While it is not uncommon for many of the research studies conducted on school-based mentoring to have small sample sizes, more student participants will be needed to be able to run more rigorous statistical tests (t-test, ANOVA, etc.) to be able to generalize these findings to other at-risk students outside of Houston Academy.

As for recommendations for future research, in addition to increasing the sample size, a

more rigorous and empirical investigation and research design is needed to state with probability the statistical impact of school-based mentoring. In addition, as stated at the end of Chapter Four in the Case Studies section, qualitative measures are needed to round out the quantitative measures. While I presented two stories that illustrate the anecdotal impact of school-based mentoring, it is recommended to obtain more qualitative research through interviews and focus groups of the various stakeholders, such as students, teacher, mentors, and parents. This information can shed more light into the personal feelings, attitudes, and perceptions of school-based mentoring by the various stakeholders. Armed with this information, the Co-Directors and Houston Academy administration – or anyone else interested in implementing school-based mentoring as an intervention – could make more specific changes or alterations to the practices within the KHUSA school-based mentoring, if needed.

To measure school engagement, this study solely focused on using attendance. While research presented in Chapter Two shows how attendance is the greatest factor in school engagement, to help bolster the analysis, other measures should be included to gain further insight into the affective impacts to at-risk students. The Co-Directors and administration have researched several tools that may be able to provide more information about impacts to students' social and emotional behavior. One such tool in consideration is the School Social Behavior Scales, Second Edition (SSBS-2) and the accompanying Home & Community Social Behavior Scales (HCSBS) (See Appendix C for examples of each scale). Both of these scales are intended to assess social competence and anti-social behavior of children and youth. Teachers and administrators complete a Likert type SSBS-2 measuring the following constructs: Social Competence as measured by peer relations, self-management/compliance, and academic behavior; and Antisocial Behavior as measured by hostility/irritability, antisocial/aggressive, and

defiant/disruptive. Parents and mentors would complete the HCSSB measuring the same constructs minus the academic behavior and defiance/disruptive measures. To be able to accurately measure growth in these areas, stakeholders would complete a pre and post survey to compare the results of each scale. Using this behavioral and attendance data, researchers have more information to dig deeper, make data driven decisions, and create focused interventions based on the new information. As this study also serves a program evaluation of the KHUSA school-based mentoring program at Houston Academy, this recommendation of adding this measure has been accepted as a way of assessing the true affective impact of the school-based mentoring program.

Lastly, more racial diversity is needed in the mentored population to be able to generalize these results to all at-risk students. The KHUSA school-based mentoring at Houston Academy services 100% Hispanic population. Of the student body at Houston Academy, 88% is Hispanic and 12% African-American. To help put the discrepancy in service into context, it should be noted that the African-American population at Houston Academy is largely homeless, and they are residing at the nearby homeless shelter, Guiding Light. And, due to the transient nature of the homeless population, it is difficult to predict which students will remain at Houston Academy long enough to reap the benefits to a school-based mentoring relationship. Moreover, because aforementioned research indicates that relationships lasting fewer than six months have an adverse affect on the students, the school-based mentoring intervention model is not appropriate for this target group. The Houston Academy administration and staff have other resources and systems to mitigate the at-risk factors that often plague homeless students. As a result, the context of the situation helps put into perspective the discrepancy in percentage of Hispanic students served in the school-based mentoring in relation to their overall student body population.

Implications for School Leadership

This research is meant for practical use by school leadership – not just at Houston Academy, but also for any leader that serves students in danger of dropping out of school and has the passion, or minimally, the professional responsibility, to make a difference in the lives of children. The impacts of disengaging and dropping out of school are devastating (NCES, 2011), and educators have the power to do something to prevent that from happening. Underlying leaders' motivation to run a school or district in an underprivileged area is the belief that great education changes lives (apropos, Horace Mann called it the great equalizer); thus, it is a crucial part of sustainable development, enabling people to fulfill their potential and empowering communities to realize the real changes they care about.

Values and beliefs. That is the crux of education and the foundation on which educators must firmly stand. Without these essential beliefs and values that unfetter in the face of opposition, which passionately drive decisions in the best interest of *students* (as opposed to adults), and which relentlessly pursue academic and social success for all students, our schools – students, actually – will continue to fail. The purpose of this study is not to simply draw further attention to this critical issue; rather, the intention here is to gain better understanding of effective interventions that will assist at-risk students in fulfilling their academic potential and become productive citizens for their personal life, as well as the overall welfare of our country.

In his book, *Teaching with Poverty in Mind*, Jensen (2011) states that a deepening of understanding to the critical nature of this issue is important, yet that schools must embody a new mission to change a culture of pity ("oh bless their little hearts, they have

such hard lives") to empathy (balancing high expectations with a compassionate heart of understanding). Looking at students through eyes of pity lowers expectations for what educators think these students can achieve. It is widely recognized in school culture and change theory that the school leader is central to leading the charge in the change and that values and beliefs cannot be taught; thus, they are inherent and deeply rooted in experience and learning (McREL, 2011). The implications for leadership are clear: You either care about success of all students or you don't. Hence, there is no in between, and the right thing for students cannot be compromised for what is easiest for adults or how much money someone can make off the deal. Furthermore, as school leaders, potential teachers must be screened not only for their content and pedagogical acumen, but also for their ability to embody respect, embed social skills in their teaching, build relationships, and be inclusive in ideology and practice. Anything less for underprivileged, at-risk, minority, or poor students is already placing them at a disadvantage before they ever step foot into the teacher's classroom.

Relevant curriculum. Schools are not just about reading, writing and arithmetic, but about how education relates to the broader issues of development and empowerment. Educators need to create a space to explore how education and schools can innovate to more strongly relate to the lives and challenges faced by students not currently successful in American schools – specifically, poor and minority students. School leaders must also aim to contribute to a reform and a shift from simply "Education for All", which utilizes a factory schooling model and methods, to recognition of the rights of marginalized communities for a relevant and useful education for all. Moreover, educators cannot mistake that ideology as a watered-down or vocational track educational system that

panders down to and segregates students. Students learn from an evolving curriculum, using innovative teaching methods and being responsive to the needs of the larger school community. Educators must not fool themselves in thinking their current practices are not failing many of our students. Instead, a new, more relevant and contextualized learning experience rooted in real world application must be created for all schools, not just the specialty schools. Once again, at the helm are the school leaders that motivate, inspire, and prepare their teachers and staff to make extraordinary things look routine.

For leaders, there are a few principles that should be held as important in learning, such as keeping learning contextual, children being free to express themselves, content being relevant, and learning taking place in an active way. Some of these ideas may appear rather elementary; but, in hundreds of thousands of schools, containing millions of children, they are being overlooked.

Community building. The end point of education is not to be educated; rather, the essence of education lies in its application at the individual, human level – that is, the capacity that it brings to their lives and the impact upon that greater community. As discussed in Chapter One, with regard to the adverse economic outlook for the individual and the collective impact the lack of education and dropouts has on the country in social services and unrealized taxes, businesses and community partners are needed to support the schools and the needs of the students. By helping the school leaders in developing relevant partnerships to address the issues plaguing students, the business and community partners are making a strategic investment not only in the lives of the student, but in the community they occupy. Epstein and Sheldon (2002) discuss the importance of establishing business and community partnerships, and for those community and business

leaders to understand their contributions should not just include monetary gifts, but also time the employees or volunteers give to build relationships with students which is critical for the development of the child and the health of the partnership. School leaders need not feel like they must be Superman to afford their students with the best possible educational experience, but rather use their professional skills to seek out strategic partnerships that will make their students feel as strong academically and socially as Superman. In the end, school leaders must be advocates and champions of the students they serve, and show business and community leaders that if given the necessary resources, the school and students will put them to effective use and with the relentless pursuit of achievement for all, that these contributions will actually make a difference.

Schools are just one part of the process of empowering communities; hence, there needs to be part of an integrated approach to development. The right kinds of school-business-community partnerships are necessary in enabling a better kind of development – specifically, one where entire communities are the creators of their own futures.

While the three areas of values and beliefs, relevant curriculum, and community building were discussed in detail, here are other recommendations and relevant information for school leaders to remember and act upon:

- The process of dropping out of school starts with a long process of disengagement that starts as early as elementary school
- Schools that are test prep factories are part of the disengagement process because the learning is irrelevant and lower level
- School leaders must analyze their discipline policies and practices as they cannot build safe schools for students and criminalize them at the same time

- Absenteeism is a key factor in the disengagement process; leaders must examine truancy practices to ensure proper follow up on the most truant students
- Building healthy relationships with students is paramount to their level of connectedness and identification with the school community
- A student's positive connection to the school community decreases risky behavior

Conclusion

As stated previously, many of the students in American schools are not having their needs met. In short, therefore, the American educational system has failed those it has been charged with serving and educating. Furthermore, if there is to be a remedy to this tragedy, educators must bridge the gap between teaching and learning and restore excellence to education. We must create structural and sustainable changes to our practices and policies that can dramatically improve educational opportunities for students in the United States.

As a final thought, this quote stated by Jonathan Kozol (2005) speaks to the calling of this research study: "The ones I pity are the ones who never stick out their neck for something they believe, never know the taste of moral struggle, and never have the thrill of victory." Take action, change lives, and taste the thrill of victory.

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APPENDICES

APPENDIX A

COMMITTEES FOR THE PROTECTION OF HUMAN SUBJECTS

UNIVERSITY of HOUSTON

DIVISION OF RESEARCH

May 2, 2012

Steven Gutierrez
c/o Dr. Angus MacNeil
Educational Leadership & Cultural Studies

Dear Steven Gutierrez,

Based upon your request for exempt status, an administrative review of your research proposal entitled "The Impact of School Based Mentoring Programs on Student Achievement and School Engagement in At-Risk Elementary Aged Students: Implications for Leadership" was conducted on April 25, 2012.

In accordance with institutional guidelines, your project is exempt under **Category 4**, contingent upon the following:

- The response to question 10 of the application should indicate, "No Informed Consent" only. Appendix B - waiver of informed consent must be completed.
- The response to question 25 of the application should confirm that data will remain on UH property (provide room number or name of individual responsible.)
- The response to question 6.01 of the application should indicate, "80" to be consistent with the response to question 11 of the application.

The required revisions to your application must be submitted online via the Research Administration Management Portal (RAMP), by May 25, 2012 or the Committee's sanction may be revoked. To expedite review; please highlight the changes made for all revised documents that will be uploaded.

As long as you continue using procedures described in this project, you do not have to reapply for review.
* Any modification of this approved protocol will require review and approval by the Committee.

If you have any questions, please contact Alicia Vargas at (713) 743-9215.

Sincerely yours,

Kirstin Rochford, MPH, CIP, CPIA
Director, Research Compliance

Protocol Number: 12383-EX

316 E. Cullen Building Houston, TX 77204-2015 (713) 743-9204 Fax: (713) 743-9577
COMMITTEES FOR THE PROTECTION OF HUMAN SUBJECTS

APPENDIX B

IDENTIFICATION OF SIGNIFICANT RISK FACTORS

CHART A-1. Steps in Risk Factor Identification

Step 1: Risk Factor Literature Search

Summarized major trends in risk factors
- Searched recent, relevant literature
  - ERIC & other e-databases, 1980-2005
  - NDPC/N library materials
  - Internet search
  - References in key documents
- Reviewed literature and summarized major trends in risk factors

Step 2: Key Risk Factor Domains and Categories Identification

Identified key factor domains and categories for factor search
- Developed sample matrix with domains, factor categories, and sample risk factors
- CIS staff rated domains and factor categories for relevance and importance
- Identified risk factor domains and categories for NDPC/N search

Step 3: Study Selection Criteria

Reduced citations to specific research studies
Reviewed only those articles that included all of the following:
(1) Direct analysis of data source
(2) School dropout and/or high school graduation as outcome
(3) Longitudinal data over at least two years
(4) Variety of predictors in several domains
(5) Use of multivariate statistics/models
(6) Sample size of 30 or more students classified as dropouts

Step 4: Initial Risk Factor Matrix Development

Identified risk factors from selected studies
- Selected 21 studies based on 12 data sources
- Searched for factors in individual and family domains and in the school environment category of school domain
- Developed initial matrix with all significant factors from each source
- Collapsed similar factors into single factor

Step 5: Significant Risk Factor Identification

Identified significant risk factors from selected studies
- In final selection from initial matrix, factor was:
  (1) Significantly ($p \leq .10$) related to school dropout in multivariate analysis
  (2) Significant in at least two data sources

Step 6: Risk Factor by School Level Identification

Identified significant risk factors by school level
To be identified as a primary risk factor at a particular school level, factor was:
(1) Measured at a particular grade or school level in the analysis
(2) Significantly ($p \leq .10$) related to school dropout at that grade or school level in multivariate analysis
(3) Significant in at least two data sources

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CHART A-2. Significant Risk Factors by School Level

Significant Risk Factors by School Level*

Risk Category and Risk Factor	Elementary School	Middle School	High School
Individual Background Characteristics			
• Has a learning disability or emotional disturbance		✓	✓
Early Adult Responsibilities			
• High number of work hours		✓	✓✱
• Parenthood			✓✱
Social Attitudes, Values, & Behavior			
• High-risk peer group		✓✱	✓
• High-risk social behavior		✓✱	✓
• Highly socially active outside of school			✓
School Performance			
• Low achievement	✓✱	✓✱	✓✱
• Retention/over-age for grade	✓✱	✓✱	✓✱
School Engagement			
• Poor attendance	✓✱	✓✱	✓✱
• Low educational expectations		✓✱	✓✱
• Lack of effort		✓	✓
• Low commitment to school		✓	✓✱
• No extracurricular participation		✓	✓✱
School Behavior			
• Misbehavior	✓	✓	✓✱
• Early aggression	✓	✓	
Family Background Characteristics			
• Low socioeconomic status	✓✱	✓✱	✓✱
• High family mobility		✓✱	
• Low education level of parents	✓	✓	✓✱
• Large number of siblings	✓		✓
• Not living with both natural parents	✓	✓	✓✱
• Family disruption	✓		
Family Engagement/Commitment to Education			
• Low educational expectations		✓✱	
• Sibling has dropped out		✓	✓
• Low contact with school		✓✱	
• Lack of conversations about school		✓✱	✓

*Key: ✓ indicates that the risk factor was found to be significantly related to dropout at this school level in one study. ✓✱ indicates that the risk factor was found to be significantly related to dropout at this school level in two or more studies.

6

APPENDIX C

MENTORING RESOURCES

Student Referral Form

KIDS HOPE USA
Student Referral Form

CONFIDENTIAL
For
KIDS HOPE USA,
Teacher and Staff
ONLY

Student's Name _____ Age_____

Grade _____School _____

Teacher _____ Date _____

Student is available (times): _____

To help us better understand how to meet the mentoring needs of your student, please complete the following:

1. What do you notice as positive characteristics of this child?

2. Why do you wish to enroll this student in the KIDS HOPE USA mentoring program?

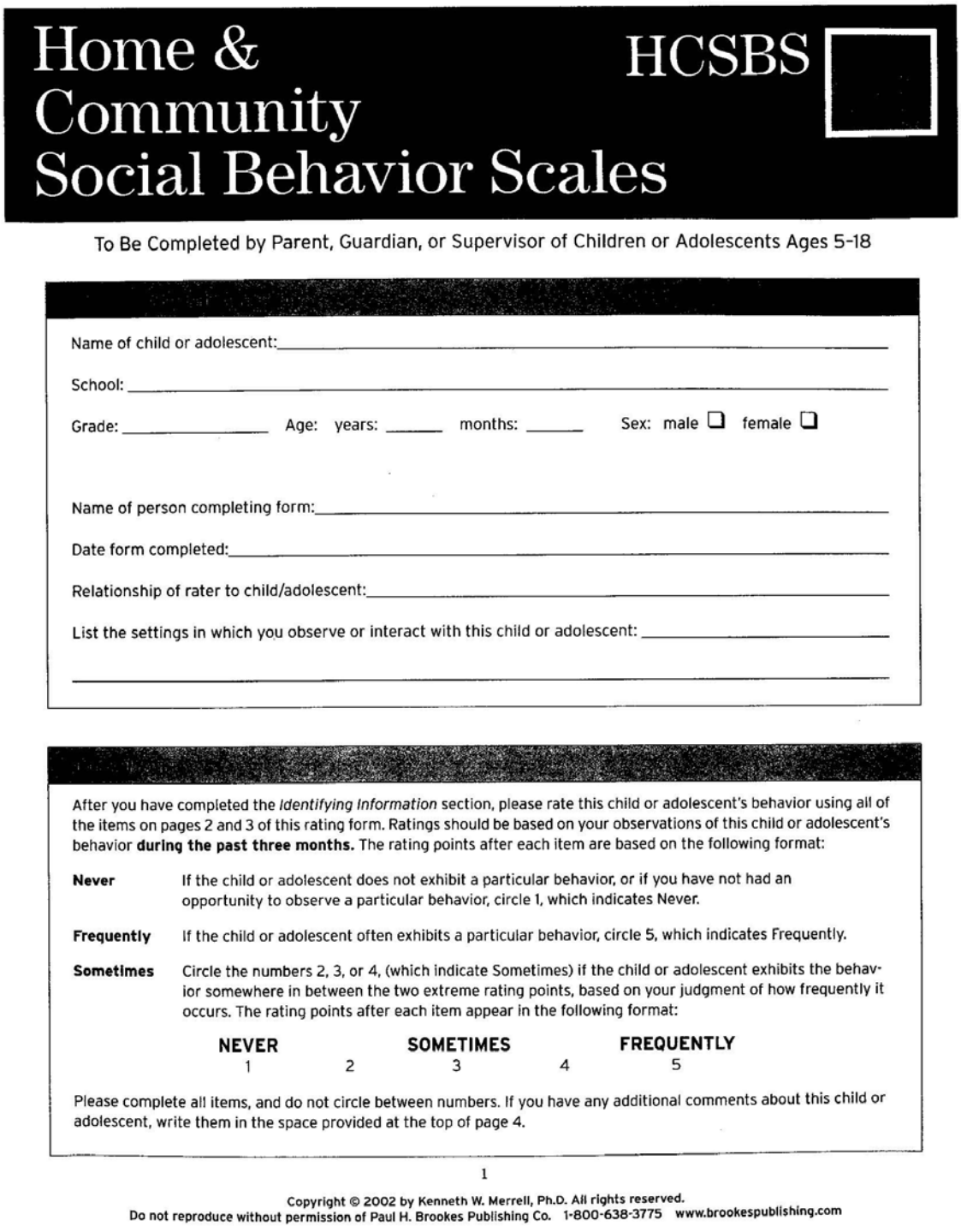
3. How do you feel a volunteer Mentor could help this student develop academic skills?

4. Please define a specific objective for the Mentor and materials to develop this student's academic skills.

5. Please comment on any other information that might be helpful in working with this student (special interests, hobbies, family situations). Use other side of sheet if necessary. **This information is kept confidential.**

A:16

Examples of Social Behavior Scales



Home & Community Social Behavior Scales

HCSBS

To Be Completed by Parent, Guardian, or Supervisor of Children or Adolescents Ages 5–18

Name of child or adolescent: _____

School: _____

Grade: _____ Age: years: _____ months: _____ Sex: male ❑ female ❑

Name of person completing form: _____

Date form completed: _____

Relationship of rater to child/adolescent: _____

List the settings in which you observe or interact with this child or adolescent: _____

_____

After you have completed the *Identifying Information* section, please rate this child or adolescent's behavior using all of the items on pages 2 and 3 of this rating form. Ratings should be based on your observations of this child or adolescent's behavior **during the past three months.** The rating points after each item are based on the following format:

Never If the child or adolescent does not exhibit a particular behavior, or if you have not had an opportunity to observe a particular behavior, circle 1, which indicates Never.

Frequently If the child or adolescent often exhibits a particular behavior, circle 5, which indicates Frequently.

Sometimes Circle the numbers 2, 3, or 4, (which indicate Sometimes) if the child or adolescent exhibits the behavior somewhere in between the two extreme rating points, based on your judgment of how frequently it occurs. The rating points after each item appear in the following format:

NEVER 1 2 **SOMETIMES** 3 4 **FREQUENTLY** 5

Please complete all items, and do not circle between numbers. If you have any additional comments about this child or adolescent, write them in the space provided at the top of page 4.

1

1.	Cooperates with peers	1	2	3	4	5		
2.	Makes appropriate transitions between different activities	1	2	3	4	5		
3.	Completes chores without being reminded	1	2	3	4	5		
4.	Offers help to peers when needed	1	2	3	4	5		
5.	Participates effectively in family or group activities	1	2	3	4	5		
6.	Understands problems and needs of peers	1	2	3	4	5		
7.	Remains calm when problems arise	1	2	3	4	5		
8.	Listens to and carries out directions from parents or supervisors	1	2	3	4	5		
9.	Invites peers to participate in activities	1	2	3	4	5		
10.	Asks appropriately for clarification of instructions	1	2	3	4	5		
11.	Has skills or abilities that are admired by peers	1	2	3	4	5		
12.	Is accepting of peers	1	2	3	4	5		
13.	Completes chores or other assigned tasks independently	1	2	3	4	5		
14.	Completes chores or other assigned tasks on time	1	2	3	4	5		
15.	Will give in or compromise with peers when appropriate	1	2	3	4	5		
16.	Follows family and community rules	1	2	3	4	5		
17.	Behaves appropriately at school	1	2	3	4	5		
18.	Asks for help in an appropriate manner	1	2	3	4	5		
19.	Interacts with a wide variety of peers	1	2	3	4	5		
20.	Produces work of acceptable quality for his or her ability level	1	2	3	4	5		
21.	Is good at initiating or joining conversations with peers	1	2	3	4	5		
22.	Is sensitive to the feelings of others	1	2	3	4	5		
23.	Responds appropriately when corrected by parents or supervisors	1	2	3	4	5		
24.	Controls temper when angry	1	2	3	4	5		
25.	Enters appropriately into ongoing activities with peers	1	2	3	4	5		
26.	Has good leadership skills	1	2	3	4	5		
27.	Adjusts to different behavioral expectations across settings	1	2	3	4	5		
28.	Notices and compliments accomplishments of others	1	2	3	4	5		
29.	Is assertive in an appropriate way when he or she needs to be	1	2	3	4	5		
30.	Is invited by peers to join in activities	1	2	3	4	5		
31.	Shows self-control	1	2	3	4	5		
32.	Is "looked up to" or respected by peers	1	2	3	4	5		
							Totals	
							PR	SMC

1.	Blames others for his or her problems	1	2	3	4	5		
2.	Takes things that are not his or hers	1	2	3	4	5		
3.	Is defiant to parents or supervisors	1	2	3	4	5		
4.	Cheats on schoolwork or in games	1	2	3	4	5		
5.	Gets into fights	1	2	3	4	5		
6.	Is dishonest; tells lies	1	2	3	4	5		
7.	Teases and makes fun of others	1	2	3	4	5		
8.	Is disrespectful or "sassy"	1	2	3	4	5		
9.	Is easily provoked; has a "short fuse"	1	2	3	4	5		
10.	Ignores parents or supervisors	1	2	3	4	5		
11.	Acts as if he or she is better than others	1	2	3	4	5		
12.	Destroys or damages others' property	1	2	3	4	5		
13.	Will not share with others	1	2	3	4	5		
14.	Has temper outbursts or tantrums	1	2	3	4	5		
15.	Disregards feelings or needs of others	1	2	3	4	5		
16.	Is overly demanding of attention from adults	1	2	3	4	5		
17.	Threatens others; is verbally aggressive	1	2	3	4	5		
18.	Swears or uses offensive language	1	2	3	4	5		
19.	Is physically aggressive	1	2	3	4	5		
20.	Insults peers	1	2	3	4	5		
21.	Whines and complains	1	2	3	4	5		
22.	Argues or quarrels with peers	1	2	3	4	5		
23.	Is difficult to control	1	2	3	4	5		
24.	Bothers and annoys others	1	2	3	4	5		
25.	Gets into trouble at school or in the community	1	2	3	4	5		
26.	Disrupts ongoing activities	1	2	3	4	5		
27.	Boasts and brags	1	2	3	4	5		
28.	Is not dependable	1	2	3	4	5		
29.	Is cruel to other persons or to animals	1	2	3	4	5		
30.	Acts impulsively without thinking	1	2	3	4	5		
31.	Is easily irritated	1	2	3	4	5		
32.	Demands help from peers	1	2	3	4	5		
						Totals		
							DD	AA

HCSBS

Please use the following space to provide any additional information about this child or adolescent that you believe would be useful for understanding his or her social behavior:

HCSBS Scales	Raw Score	*T*-Score	Percentile Rank	Social Functioning Level
Peer Relations (PR)				
Self-Management/Compliance (SMC)				
Social Competence Total				
Defiant/Disruptive (DD)				
Antisocial/Aggressive (AA)				
Antisocial Behavior Total				

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School Social Behavior Scales SECOND EDITION

SSBS

RATING FORM

To Be Completed by Teacher or Other School Personnel for Students in Grades K-12

Identifying Information

Name of student: _____

School: _____

Grade: _____ Age: years: _____ months: _____ Sex: male ❑ female ❑

Name of person completing form: _____

Date form completed: _____

Relationship of rater to student: _____

List the settings in which you observe or interact with this student: _____

_____

Directions

After you have completed the *Identifying Information* section, please rate this student's behavior using all of the items on pages 2 and 3 of this rating form. Ratings should be based on your observations of this student's behavior **during the past three months.** The rating points after each item are based on the following format:

Never If the student does not exhibit a particular behavior, or if you have not had an opportunity to observe a particular behavior, circle 1, which indicates Never.

Frequently If the student often exhibits a particular behavior, circle 5, which indicates Frequently.

Sometimes Circle the numbers 2, 3, or 4, (which indicate Sometimes) if the student exhibits the behavior somewhere in between the two extreme rating points, based on your judgment of how frequently it occurs. The rating points after each item appear in the following format:

NEVER 1 2 **SOMETIMES** 3 4 **FREQUENTLY** 5

Please complete all items, and do not circle between numbers. If you have any additional comments about this student, write them in the space provided at the top of page 4.

Scale A	Never		Sometimes		Frequently	Scoring Key		
1. Cooperates with other students	1	2	3	4	5			
2. Makes appropriate transitions between different activities	1	2	3	4	5			
3. Completes schoolwork without being reminded	1	2	3	4	5			
4. Offers help to other students when needed	1	2	3	4	5			
5. Participates effectively in group discussions and activities	1	2	3	4	5			
6. Understands problems and needs of other students	1	2	3	4	5			
7. Remains calm when problems arise	1	2	3	4	5			
8. Listens to and carries out directions from teachers	1	2	3	4	5			
9. Invites other students to participate in activities	1	2	3	4	5			
10. Asks appropriately for clarification of instructions	1	2	3	4	5			
11. Has skills or abilities that are admired by peers	1	2	3	4	5			
12. Is accepting of other students	1	2	3	4	5			
13. Completes school assignments or other tasks independently	1	2	3	4	5			
14. Completes school assignments on time	1	2	3	4	5			
15. Will give in or compromise with peers when appropriate	1	2	3	4	5			
16. Follows school and classroom rules	1	2	3	4	5			
17. Behaves appropriately at school	1	2	3	4	5			
18. Asks for help in an appropriate manner	1	2	3	4	5			
19. Interacts with a wide variety of peers	1	2	3	4	5			
20. Produces work of acceptable quality for his or her ability level	1	2	3	4	5			
21. Is good at initiating or joining conversations with peers	1	2	3	4	5			
22. Is sensitive to feelings of other students	1	2	3	4	5			
23. Responds appropriately when corrected by teachers	1	2	3	4	5			
24. Controls temper when angry	1	2	3	4	5			
25. Enters appropriately into ongoing activities with peers	1	2	3	4	5			
26. Has good leadership skills	1	2	3	4	5			
27. Adjusts to different behavioral expectations across settings	1	2	3	4	5			
28. Notices and compliments accomplishments of others	1	2	3	4	5			
29. Is assertive in an appropriate way when he or she needs to be	1	2	3	4	5			
30. Is invited by peers to join in activities	1	2	3	4	5			
31. Shows self-control	1	2	3	4	5			
32. Is "looked up to" or respected by peers	1	2	3	4	5			
						Totals		
							PR	SM	AB

Scale B	Never		Sometimes		Frequently	Scoring Key: HI	AA	DD
1. Blames others for his or her problems	1	2	3	4	5			
2. Takes things that are not his or hers	1	2	3	4	5			
3. Is defiant to teachers or other school personnel	1	2	3	4	5			
4. Cheats on schoolwork or in games	1	2	3	4	5			
5. Gets into fights	1	2	3	4	5			
6. Is dishonest; tells lies	1	2	3	4	5			
7. Teases and makes fun of other students	1	2	3	4	5			
8. Is disrespectful or "sassy"	1	2	3	4	5			
9. Is easily provoked; has a "short fuse"	1	2	3	4	5			
10. Ignores teachers or other school personnel	1	2	3	4	5			
11. Acts as if he or she is better than others	1	2	3	4	5			
12. Destroys or damages school property	1	2	3	4	5			
13. Will not share with other students	1	2	3	4	5			
14. Has temper outbursts or tantrums	1	2	3	4	5			
15. Disregards feelings or needs of other students	1	2	3	4	5			
16. Is overly demanding of attention from teachers	1	2	3	4	5			
17. Threatens other students; is verbally aggressive	1	2	3	4	5			
18. Swears or uses offensive language	1	2	3	4	5			
19. Is physically aggressive	1	2	3	4	5			
20. Insults peers	1	2	3	4	5			
21. Whines and complains	1	2	3	4	5			
22. Argues or quarrels with peers	1	2	3	4	5			
23. Is difficult to control	1	2	3	4	5			
24. Bothers and annoys other students	1	2	3	4	5			
25. Gets into trouble at school	1	2	3	4	5			
26. Disrupts ongoing activities	1	2	3	4	5			
27. Boasts and brags	1	2	3	4	5			
28. Is not dependable	1	2	3	4	5			
29. Is cruel to other students	1	2	3	4	5			
30. Acts impulsively without thinking	1	2	3	4	5			
31. Is easily irritated	1	2	3	4	5			
32. Demands help from other students	1	2	3	4	5			
					Totals			
						HI	AA	DD

SSBS-2

Additional Information

Please use the following space to provide any additional information about this student that you believe would be useful for understanding his or her social behavior:

SSBS-2 Score Summary (for scorer use only—refer to Appendix A or B in User's Guide)

SSBS-2 Scales	Raw Score	*T*-Score	Percentile Rank	Social Functioning Level
Scale A: Social Competence				
Peer Relations (PR)				
Self-Management/Compliance (SM)				
Academic Behavior (AB)				
Social Competence Total				
Scale B: Antisocial Behavior				
Hostile/Irritable (HI)				
Antisocial/Aggressive (AA)				
Defiant/Disruptive (DD)				
Antisocial Behavior Total				

Higher Social Competence scores indicate greater levels of social adjustment.
Higher Antisocial Behavior scores indicate greater levels of social behavior problems.

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