THE EFFECTS OF SCHOOL-BASED MENTORING ON STUDENT ACHIEVEMENT FOR JUNIOR HIGH SCHOOL STUDENTS

A Record of Study

by

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Submitted to the Office of Graduate and Professional Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

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December 2014

Major Subject: Educational Administration

ABSTRACT

The purpose of this study was to examine the effectiveness of the ISAGE program, a school-based mentoring program designed to facilitate the achievement of junior high school students who were deemed "at-risk." Participants included a total of 72 junior high school students from two separate junior high schools, grades 7 and 8, in Utopia Independent School District, a suburban school district in the southwestern United States. The 72 students were either placed in a treatment group (n = 36) using non-random selection or on a waiting list (i.e., control group) (n = 36). The dependent variables in this study are: (a) attendance, (b) discipline referrals, (c) report card grade averages in core courses, (d) TAKS (Texas Assessment of Knowledge and Skills) Mathematics scale scores, and (e) TAKS Reading scale scores. Data analyses included the use of two-way mixed analysis of variance (ANOVA) statistical procedures. The dependent variable data of students in the treatment group was compared with that of students in the control group over a consecutive two school-year period.

Results of the study indicated that the ISAGE program showed significant effects in the number of student's discipline referrals along with the TAKS Math scale scores. No significant differences were observed for mentees' report card grade averages in core classes, attendance, or TAKS Reading scale scores. These findings provide preliminary evidence that school-based mentoring programs, such as the ISAGE program, may have a positive impact on students who are placed "at-risk." The study concludes with

implications and limitations of the study, along with recommendations for future research of school-based mentoring programs.

DEDICATION

To Jenny, Abigail Grace, Mary Faith, Lucy Hope, and William Wayne

Jenny, you have been my mainstay throughout this journey. Thank you for your patience, for your unconditional love for me, for the sacrifices that you've endured, and for being the most amazing mother to our children. You motivate and challenge me to be the best leader I can be, you encourage me to be the best father I can be, and inspire me to be a better person. And you love me for who I am. With all of that being said, I should be.

Abby, Mary, Lucy, and Will, I love you all so very much. I want to thank you for understanding that "daddy had to go to work." I want you to know that each of you are perfect in God's way, and that I'm so proud to be your father. I look forward to the years to come, to watching you grow and excel, watching you utilize your unique talents and abilities, being there to celebrate your successes, and helping you through the difficult times. I hope each of you know that no matter what, your very best will always be enough. I love you the best of all.

The Lord has blessed me immensely, so much than I could ever deserve, by leading me into education. He has given me so many opportunities to positively impact lives, while working with such special people. I look forward in continuing to use the talents He has blessed me with to change as many lives for the better as possible.

ACKNOWLEDGEMENTS

The following individuals have influenced me throughout my life as a person, educator, coach, and leader. I appreciate the impact you have made on my life in helping me realize this accomplishment.

First, I would like to thank my second grade teacher at Bonham Elementary, Mrs. Anne Sanders. She loved me when I needed to be loved and ensured that my learning would not suffer. Most importantly, she never allowed me to give anything but my best. Although I haven't seen her or spoken to her in over 25 years, I'm forever grateful that she would afford me so much love. Thank you for believing in me, Mrs. Sanders.

Harry Francis, I'm extremely grateful for the opportunities that you've given me throughout my life. First, you believed in me enough as a player that allowed me to fulfill a boyhood dream and continue playing the game of baseball in college and into the professional ranks. Second, you were the key influence in my decision to enter the education profession. It has been one of the best decisions of my life. Thank you, Coach, for giving me the ball as a player, and then for allowing me to coach on your staff, as I entered teaching and coaching.

Dr. Chambers and Dr. Sandlin, thanks so much for taking me on and serving as my chairs. I have thoroughly enjoyed working with you, as it's very evident that you both truly care for your students. Thank you for your continuous insight, in challenging me to think in a different light to become a stronger educational leader. Dr. Saavedra, your experiences as a Superintendent of Schools definitely gave me some valuable,

practical knowledge throughout your classes. I appreciate you taking the time to ensure that we received the "real world" aspect of the program. Last, Dr. Hall, it's been fun working with you. I appreciate your patience in helping me along the way with "running the numbers." We both share the same love, the love for the game of baseball. I enjoyed our conversations together; I especially cherished those in which we reminisced about our Little League days in Bryan. Those were definitely great moments. Thank you for your continued friendship of me, my wife, and all of the Snodgrass Family.

Dr. Todd Stephens, I want to say thank you for your trust, continuous support, and encouragement in allowing me to develop and grow as an educational leader. I will be forever grateful for the leadership opportunities that you've afforded me, opportunities that have allowed me to work with amazing people, which includes students, teachers, support personnel, parents, administrators, etc.

Finally, Jill Balzer, I don't believe I could have survived this journey without you. I'm extremely thankful for the friendship that we've developed and will maintain for the rest of our lives. I appreciate our many phone conversations, the laughs we shared, as well as us helping each other through the frustrations and difficult times of our journey. You are an amazing leader, and I'm so grateful to call you my friend.

TABLE OF CONTENTS

Page

ABSTRACT ii

DEDICATION iv

ACKNOWLEDGEMENTS v

TABLE OF CONTENTS vii

LIST OF FIGURES x

LIST OF TABLES xi

CHAPTER I INTRODUCTION…. 1

- Background 1
- School-Based Mentoring 4
- Statement of the Problem 6
- Purpose of the Study 9
- Research Questions 10
- Significance of the Study 11
- Delimitations 12
- Assumptions 12
- Researcher's Perspective 13
- Definition of Terms 14
- Organization of Study 16

CHAPTER II REVIEW OF LITERATURE 17

- Conceptual Framework 19
  - Social and Emotional Development 20
  - Cognitive Development 22
  - Identity Development 23
- Characteristics of Students Placed "At-Risk" 26
- The History and Definition of Mentoring 34
- The Role and Function of Mentoring 35
- Types of Mentoring 38
- Types of Mentoring Programs 40
- Effects of Mentoring on Student Achievement of Students Placed "At-Risk" 44
- School-Based Mentoring 49
- Teachers as Mentors 52

Page

Summary 53

CHAPTER III METHODOLOGY 55

Overview 55
Research Design 55
Research Questions 58
Context 59
Participants 60
Mentees 60
Mentors 61
Measures 64
Procedures 64
Data Analysis 66

CHAPTER IV RESULTS 69

Introduction 69
Research Question #1 71
Research Question #2 87
Research Question #3 89
Research Question #4 91
Research Question #5 93
Summary 95

CHAPTER V CONCLUSIONS 97

Research Question #1 98
Research Question #2 102
Research Question #3 104
Research Question #4 106
Research Question #5 107
Implications 109
Limitations 111
Recommendations for Future Research 113
Summary 116

REFERENCES 118

APPENDIX A 143

Page

APPENDIX B 144

APPENDIX C 145

APPENDIX D 149

APPENDIX E 151

APPENDIX F 152

APPENDIX G 153

APPENDIX H 154

APPENDIX I 155

APPENDIX J 156

APPENDIX K 157

APPENDIX L 158

LIST OF FIGURES

FIGURE		Page
1	English/Language Arts Report Card Grade Averages…….....	73
2	English/Language Arts Treatment Group Report Card Grade Averages……	74
3	English/Language Arts Control Report Card Grade Averages……	75
4	Math Report Card Grade Averages…….	77
5	Math Treatment Group Report Card Grade Averages…….	78
6	Math Control Group Report Card Grade Averages…….	79
7	Science Report Card Grade Averages…….	81
8	Science Treatment Group Report Card Grade Averages…….	82
9	Science Control Group Report Card Grade Averages…….	83
10	Social Studies Report Card Grade Averages……...	85
11	Social Studies Treatment Group Report Card Grade Averages……..	86
12	Social Studies Control Group Report Card Grade Averages……..	87
13	Average Number of Absences…….	89
14	Average Number of Discipline Referrals……	91
15	Math TAKS Average Scale Scores…….	93
16	Reading TAKS Average Scale Scores…….	95

LIST OF TABLES

TABLE		Page
1	Distribution of Mentee Demographic Variables…….	61
2	Distribution of Mentor Demographic Variables……..	63
3	Means and Standard Deviations for English/Language Arts Report Card Averages for Participants…….	72
4	Means and Standard Deviations for Math Report Card Averages for Participants……..	76
5	Means and Standard Deviations for Science Report Card Averages for Participants……..	80
6	Means and Standard Deviations for Social Studies Report Card Averages for Participants……..	84
7	Means and Standard Deviations for Participants' Absences…….……..	88
8	Means and Standard Deviations for Participants' Discipline Referrals……..	90
9	Means and Standard Deviations for TAKS Math Participants……	92
10	Means and Standard Deviations for TAKS Reading Participants……...	94

CHAPTER I

INTRODUCTION

Background

Mentoring can be summarized as the matching of a youth to a nonparental adult figure who can serve as a role model and provide support for that youth (Anastasia, Skinner, & Mundhenk, 2012). Lerner (2007) asserted "the presence of adult mentors in the community is the most important developmental asset associated with positive youth development" (p. 217). In the United States, approximately 25% of all youth and 50% of minority youth live in single-parent households (Tierney, Grossman, & Resch, 2000). Tierney et al. (2000) posited that the increase in single-parent families, combined with the breakdown of neighborhood socialization, and a growing need for parents, especially single parents, to work long hours outside the home, has resulted in a rising number of youth isolated from adults. This separation may lead to a reduction in positive contact opportunities between youth and adults, a situation that stimulates the escalating interest and research into mentoring programs (Anastasia et al., 2012).

For the past 15 years in America, mentoring has been a widespread topic of discussion and has served as a highly accepted social intervention to improve the lives of disadvantaged youth (Walker, 2007). Mentoring has been implemented in many pieces of legislation, such as the Workforce Investment Act of 1998 to the Juvenile Delinquency Prevention Block Grant of 2005-2006. In addition, our highest elected officials realize the importance of the mentoring initiative. In 1997, then President Clinton, former Presidents Bush and Ford, former First Lady Nancy Reagan, and

General Colin Powell teamed up in Philadelphia to celebrate volunteerism and to recommend five essential "nutrients" as key to supporting disadvantaged youth (Walker, 2007). Mentoring was at the top of the list. In 2003, President George W. Bush recognized the importance of mentoring and proposed nearly half a billion dollars for two new mentoring initiatives (Walker, 2007). Finally, in 2008, President-elect Barack Obama reinforced the need for mentoring in a public service campaign for ServiceNation.org by highlighting the positive effects a mentor can have on a youth's life (Elliott, 2008).

In *Mentoring, Policy and Politics*, Walker (2007) posed the questions: "How did mentoring fare so well in these times? Is mentoring now a durable part of American social policy? If so—is this unalloyed good news?" (p. 3). Walker focused on the solutions to these questions by taking into account the concept of social policy trends, explaining that "social policy trends, like trends in any part of life, are not totally explainable by rational analysis and orderly chains of logic" (p. 4). He further elaborated on his viewpoint on the sustained popularity of mentoring by asserting five key points: (a) mentoring makes sense to most people, (b) mentoring fits neatly with dominant American cultural values, (c) mentoring has results, (d) mentoring has the Big Brothers Big Sisters Association as its exemplar, and (e) mentoring's costs are not high.

Although mentoring is not established social policy, Walker (2007) illustrated its popularity in Congress. Mentoring has benefited from the leadership of many in Congress, including former Representative Tom Osborne of Nebraska, who, in 2002, organized the creation and funding of a new federal grant program dedicated exclusively

to mentoring. Just two years later, this program was scheduled for a major increase, along with the inception of the Safe and Stable Family Program, a mentoring program for children of prisoners, as part of the Bush administration's proposal to expand the reach of mentoring. Representative Chaka Fattah and Senators Landrieu, Clinton, and Specter, among others, have also endorsed mentoring initiatives. Mentoring is now promoted or permitted in a broad spectrum of federal legislation, over a wide range of federal departments. Special mentoring initiatives are located in the Justice, Education, and Health and Human Services departments, such as Transition-to-Success Mentoring Act and Mentoring in the reauthorization of the Elementary and Secondary Education Act (ESEA) (MENTOR, 2013).

Mentoring is a flexible approach to youth development in which youth often identified as being "at-risk" for poor outcomes (e.g., low income, living in single-parent homes) are paired with unrelated adult volunteers in the hope that a nurturing and encouraging relationship will cultivate that serves to alleviate these risk conditions (Liang, Spencer, West, & Rappaport, 2013). Mentoring is being effectively delivered in a variety of settings (e.g., in communities, schools) with youth and has shown to promote gains in emotional, behavioral, and academic outcomes, including among higher risk youth (Bouffard & Bergseth, 2008; DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). The extent of the benefits of mentoring, however, is moderate and remains virtually unaffected over the last decade even as the understanding of the determinants of higher quality mentoring relationships has drastically increased

(DuBois, Holloway, Valentine, & Cooper, 2002; DuBois et al., 2011; Rhodes & DuBois, 2006).

School-Based Mentoring

School-based mentoring is often administered by established mentoring charities like Big Brothers Big Sisters that recruit and screen community volunteers, pairing them with youth (Wood & Mayo-Wilson, 2012). Other school-based programs may be organized by schools or by social workers. School-based mentoring accounts for a large part of new mentoring schemes (Jekielek, Moore, Hair, & Scarupa, 2002) and may have distinct advantages and benefits over other community-based programs. By comparison, organization and procedures may be simplified; some meetings can take place on school grounds, which is believed to be a safer environment. Teachers may strategically select youth who are likely to benefit from mentoring, and teachers can check that meetings occur and the program's objectives are being accomplished along with the needs of the mentees. Mentors may be novice or experienced teachers or older adolescents serving as mentors to youth in the same school (Wood & Mayo-Wilson, 2012). Adolescence is characterized by increased significance of peer relationships, and several studies identify harmful effects of ''deviant'' peer relationships that undermine prosocial behavior at school and in communities (Dodge, Dishion, & Lansford, 2006a, 2006b). Strong mentor relationships with adults or older students may replace or negate negative influences (Wood & Mayo-Wilson, 2012).

Recently, three relatively wide-ranging randomized controlled trials (RCTs) of the effectiveness of school based mentoring programs have been completed (Bernstein,

Dun Rappaport, Olsho, Hunt, & Levin, 2009; Herrera, Grossman, Kauh, Feldman, & McMaken, 2007; Karcher, 2008). The primary reports of these studies reached differing conclusions regarding the effectiveness of school-based mentoring as assessed at the end of one school year of participation. Herrera et al. (2007) concluded, based on an assessment of the Big Brothers Big Sisters of America (BBBSA) school-based mentoring program, that "impacts measured after one school year of involvement in the BBBSA school-based mentoring program showed that 'Littles' (youth assigned to receive mentors) improved in a range of school-related areas, including their academic attitudes, performance and behaviors" (p. 67). An evaluation of school-based mentoring provided within Communities In Schools of San Antonio's (CIS-SA) program determined that "school-based mentoring as typically implemented within a multi-component program may be of limited value for students in general and most helpful to elementary school boys and high school girls" (Karcher, 2008, p.112). Finally, revealed in an evaluation of programs financed through the U.S. Department of Education's Student Mentoring Program was that the programs analyzed "did not lead to statistically significant impacts on students in any of the three outcome domains [prosocial behavior, problem behavior, and academic achievement]" (Bernstein et al., 2009, p. xx).

In light of these results, numerous youth mentoring organizations began partnering with school districts across the United States to provide mentoring to youth in schools (Herrera et al., 2007). School-based programs developed during a period when increasing agreement was present that schools should be centers for a wide range of social, psychological and health services (Dryfoos, 1990). Furthermore, the No Child

Left Behind (NCLB) Act of 2001 began to promote increased pressure on schools to produce improved academic outcomes as demonstrated through standardized test scores, diminishing the enthusiasm of schools for investing in programs not recognized to be aligned with this goal (Portwood & Ayers, 2005). Thus, the surge of school-based mentoring has been somewhat dependent on its perceived promise to improve academic achievement (Wheeler, DuBois, & Keller, 2010).

Statement of the Problem

An increased emphasis on improving and refining educational standards and practices has occurred over the last 15 years. The NCLB Act and increased state graduation requirements in the core subject areas are requiring that schools require rigorous curriculum standards for all students (Hardman & Dawson, 2008). In addition, schools that do not improve their test scores annually by the standards set by adequate yearly progress (AYP) will face consequences such as losing federal funding or possibly be restructured by the federal government as well (Weaver, 2004). Furthermore, the revised Individuals with Disabilities Education Improvement Act (IDEA) signed by President George W. Bush in 2004 introduced the concept of "Response to Intervention," or RTI, which serves as a means of providing early intervention to all children for "at-risk" of failing school (Fuchs & Fuchs, 2006).

Despite the increased demands and mandates for educating all students, many secondary schools are struggling to identify and provide research-based interventions for students "at-risk" of dropping out (Coffman, 2009). Research on the implementation of RTI and effective targeted group interventions in secondary settings is extremely limited

(Bohanon-Edmondson, Flannery, Eber & Sugai, 2004; Windram, Scierka, & Silberglitt, 2007). Preliminary tracking and monitoring is recommended for students who are deemed "at-risk"; however, some students will enter high school on the verge of dropping out and in need of targeted interventions to reconnect them to the educational environment (Coffman, 2009; Kennelly & Monrad, 2007). Students who struggle with behavioral or academic performance at the secondary levels are more "at-risk" for dropping out of school (Coffman, 2009; Croninger & Lee, 2001; Thompson & Kelly-Vance, 2001). These students often have a history of inadequate academic performance, poor attendance, and behavior problems (Thompson & Kelly-Vance, 2001).

In 2012, the United States Census Bureau reported that approximately 2.5 million students age 16 to 24 were not enrolled in high school and had not earned a high school diploma or alternative credentials such as a General Equivalency Diploma (Child Trends Data Bank, 2013). These status dropouts accounted for 6.6% of the 38.8 million individuals that fell into this age category. An array of reasons have been shown to increase a student's risk of dropping out, including high rates of absenteeism, low levels of school engagement, low parental education, work or household responsibilities, problematic or noncompliant behavior, mobility during the ninth grade year, and attending a school with lower achievement scores (Balfanz & Legters, 2004; Christie, Jovliette, & Nelson, 2007; Rumberger, 2004; Suh & Suh, 2007). Dropping out from high school is linked to negative employment and life outcomes. Youth who drop out of high school are unlikely to possess the minimum skills and credentials necessary to function in today's increasingly complex society and technology dependent workplace.

The completion of high school is typically a requirement for accessing postsecondary education, and is a minimum requirement for most jobs (Laird, Lew, Debell, & Chapman, 2006). A high school diploma is correlated with higher incomes and occupational status and young adults with low education and skill levels are more likely to live in poverty and to receive government assistance (Chen & Kaplan, 2003; Dubow, Huesmann, Boxer, Pukkinen, Kokko, 2006; Fogg, Harrington, & Khatiwada, 2009; Miller, Mulvey, & Martin, 1995). Furthermore, MacLeod (1987) asserted that if students with "at-risk" factors do not have appropriate intervention strategies or some type of assistance from social services, many of them perceive that the value of a high school diploma is not worth the effort needed for success in school. Dropping out is a disengagement process that occurs over many years as a result of repeated difficulties in school (Anderson, Christenson, Sinclair, & Lehr, 2004). However, a sense of belonging and connectedness helps create a strong foundation to facilitate student engagement in academic activities (Catalano, Haggerty, Oesterle, Fleming & Hawkins, 2004; McNeely, Nonnemaker, & Blum, 2002; Payne, 1996). An established sense of belonging comes about as the result of positive relationships and connections a student makes with peers and adults within the school environment.

In recent years, heightened awareness has transpired in fostering the resilience and competence of children. One of the most consistent findings in the literature is that positive, supportive relationships with adults are associated with beneficial outcomes for children. According to Masten and Reed (2002), "the best documented asset of resilient children is a strong bond to a competent and caring adult, which need not be a parent"

(p. 78). Furthermore, relationships between teachers and students early in elementary school have long-term effects on students' academic and behavioral outcomes, particularly for negative aspects of these relationships (Hamre & Pianta, 2001). Similar results have been documented for middle school students and their teachers. For this age group, relationships between students and teachers have been associated with students' motivation, achievement, feelings of belonging, and affect in school (Roeser, Eccles, & Sameroff, 1998; Roeser, Midgley, & Urdan, 1996). In addition, middle school students' perceptions of support and caring from teachers have been linked to students' current interest in class and school, which in turn, were significant predictors of GPA the following year (Wentzel, 1998).

Presently, schools are forced to increase their load of responsibilities and duties, which far exceed the basic academic requirements. Today's educators must provide non-academic services to fully serve its students. Staff members wear many hats to build the necessary skills and confidence in students to help them succeed. As educators, we strive to accomplish these contemporary demands with school based mentoring programs. According to Wheeler, Keller, and DuBois (2010), mentoring has become one of the most popular interventions to improve the lives of "at-risk" youth. This proposed study will examine a targeted school-based mentoring program at junior high schools in Utopia Independent School District.

Purpose of the Study

The purpose of this study will be to evaluate the effectiveness of the ISAGE (Incentives for Students Achieving Great Expectations) school-based mentoring program

for junior high school students in Grades 7 and 8 in Utopia Independent School District (ISD). Used in this study will be current junior high school teachers whom function within the constraints of the traditional junior high school schedule on "at-risk" junior high school students. The study aims to add to the body of research on school-based mentoring programs at the junior high school level and extend the research on interventions in secondary school settings.

Research Questions

In this investigation, the following research questions will be addressed:

1. What is the difference in report card grade averages in core classes (i.e., English/Language Arts, Math, Science, and Social Studies) between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
2. What is the difference in attendance between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
3. What is the difference in discipline referrals between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

4. What is the difference in the TAKS (Texas Assessment of Knowledge and Skills) Mathematics scale scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

5. What is the difference in the TAKS Reading scale scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

Significance of the Study

"At-risk" youth and educators could both benefit from the results from this study. Currently, "at-risk" youth being mentored may be involved with mentoring programs in which the mentoring procedures are not based on the best research practices. Consequently, they may receive mentoring that is not as beneficial as it could be if supported by empirical research. In this study, through an analysis of the benefits received for the school-based mentoring participants, valuable information will be made available for educational practitioners that could allow them to develop and design an effective program that will better meet the needs of its participants. In addition, results from this study could assist mentors in the school-based mentoring process for "at-risk" youth to understand the most effective methods to perform their mentoring tasks and responsibilities.

Delimitations

The ISAGE mentoring program was selected for this study because it demonstrates a well-organized school-based mentoring program that targets "at-risk" youth in grades 7-8 in a suburban district in Texas. The program was also selected at the junior high level because those grades are critical to the success of "at-risk" students in high school. In *The Silent Epidemic*, 45% of young people surveyed, age 16-25, stated that they started high school poorly prepared, due to falling behind in elementary and middle school and could not make up the necessary ground (Bridgeland, Dilulio, & Morison, 2006). Furthermore, junior high school students who have been engaged in a mentoring relationship for 6 months or longer were selected as participants because the longer the mentor/mentee relationship, the greater the possibility of positive outcomes becomes (Deutsch & Spencer, 2009; Grossman & Rhodes, 2002). Finally, school-based mentoring was utilized because it is the fastest growing type of mentoring today (Jekielek et al., 2002).

Assumptions

The researcher assumes that mentees will accurately and honestly report the correct data on the appropriate instruments throughout the full duration of the mentoring relationship. The researcher also assumes that students will be able to participate in the mentoring program with full fidelity, contributing a solid, genuine effort to the mentoring relationship throughout the entire duration of the mentoring program.

Researcher's Perspective

I was the principal for two years at one of the junior high schools used in this study, including the 2010-2011 school year. Prior to this experience, I served as a teacher and athletic coach for six years at the high school level and served as a high school assistant principal for two years. I have always been intrigued by the social and emotional needs of the students that I have taught or coached, especially students who were placed "at-risk." I have witnessed and experienced the impact that a positive relationship between a student and teacher can have on both parties. In my opinion, there is nothing more rewarding than a former student returning and thanking me for impacting their life, for motivating them to be more than just "average." I believe that mentoring is a highly effective method of intervention that can most definitely help a student stay on the path towards success.

In today's society, there are many students who need someone to believe in them and show that they care. Without encouragement and support, students can easily get lost in school and put things such as sports, social standing, etc. ahead of their studies. Students today need positive role models who can explain the importance of getting a quality education, as this drive for an education is not something that many students intrinsically possess, particularly the "at-risk" youth.

On a personal note, I am extremely fortunate that I had some very influential educators in my own life that singled me out and became mentors to me. I can vividly remember conversations and moments that I had with two influential teachers that significantly impacted my life during some difficult trials in my childhood. My second

grade teacher, Mrs. Sanders, and my 7th grade teacher/coach, Coach Holder, both provided inspiration and motivation for me to continue to aspire to be the best that I could be in school and in life. I will be forever grateful to those two individuals for believing in me when I did not necessarily believe in myself. They pushed me to succeed and taught me the importance of a quality education at an impressionable time in my life.

As a principal, this study is important to me because I want to see the first hand benefits that a positive mentoring relationship might have on student achievement. I believe in the power of mentoring, as I have realized the emotional and psychological positive effects it has on youth. I am curious, however, to see the benefits on the student achievement side. In addition, the results may give educational practitioners further information on school-based mentoring programs and possible further ideas and strategies for intervention plans for struggling learners.

Definition of Terms

- "At-Risk" Youth

  Students who are deemed by educational practitioners to be in danger of failing in school and becoming academically disadvantaged in comparison with their peers. They may be labeled "at-risk" on the basis of such information as test scores, attendance, and discipline records. Students "at-risk" have a higher than average probability of dropping out of school (Ravitch, 2007). This is the way Utopia ISD has categorized these students as well.

- ISAGE

  The name of the school based mentoring program in Utopia Independent School District, which stands for Incentives for Students Achieving Great Expectations.

- Mentee

  One who receives guidance or coaching from a more experienced person (Ravitch, 2007).

- Mentor

  A trusted counselor or guide who tutors or coaches a newcomer or novice (Ravitch, 2007).

- NCLB

  No Child Left Behind, federal legislation that provides funding for "at-risk" students (Title I), professional development for staff (Title II) and English language learners (Title III). NCLB main components are the requirements of standardized testing for accountability and the employment of highly qualified teacher (Ravitch, 2007).

- School-Based Mentoring Program

  This term refers to the Utopia ISD ISAGE mentoring program, which is focused towards assisting students deemed "at-risk" who are in need of academic and social support.

- TAKS

  Texas Assessment of Knowledge and Skills (Grades 7-8)

Organization of Study

This dissertation is organized into five chapters. Chapter I introduced the background on the importance of mentoring and its increased popularity throughout the country over the years. In addition, the possible benefits that youth may receive from participating in school-based mentoring programs are also discussed. Furthermore, the statement of the problem, purpose of study, research hypotheses, and significance of the study were presented. At the conclusion of the chapter, delimitations, limitations, assumptions, researcher's perspectives, and definition of terms were provided.

Chapter II provides a review of literature related to mentoring that begins with a conceptual framework and continues with a discussion on the characteristics of "at-risk" youth. The history and definition of mentoring is then highlighted, along with the role and function of mentoring. In addition, the chapter focuses on the types of mentoring and mentoring programs. The chapter continues with a discussion of the effects that mentoring has on student achievement of "at-risk" students. The chapter concludes by focusing on school-based mentoring, specifically touching on the implementation procedures and best practices of effective school-based mentoring programs.

Chapter III outlines the methodology for this study. This chapter includes the context of the study, the human subjects, data instruments, data collection procedures, and data analysis. Chapter IV will present the results of this study. Finally, Chapter V will provide a discussion of the study and implications for future research.

CHAPTER II

REVIEW OF LITERATURE

While the idea of mentoring is familiar to most, in recent years awareness has heightened on programs designed to facilitate both formal and informal mentoring relationships, with practitioners, researchers, and policymakers looking to mentoring as a hopeful form of intervention for children and youth (Portwood, Ayers, Kinnison, Waris, & Wise, 2005). Popular national initiatives, such as America's Promise, along with the adoption of federal legislation promoting mentoring, including the No Child Left Behind Act of 2001 and Title IV-B of the Social Security Act, which provides for the Mentoring Children of Prisoners Program, reveal the prevalent belief that the presence of a mentor in the life of a youth not only supports healthy growth and development, but also serves as a protective barrier against many of the dangers that they face (Office of Juvenile Justice and Delinquency Prevention, 1998). These initiatives can be attributed to recent studies illustrating the benefits of mentoring on social and academic needs, along with the dire need of supportive relationships with an adult for young people to promote their development (Tierney, 1995). In addition, researchers have shown that mentoring introduces them to new relationships and opportunities, and helps in the development of problem-solving and decision-making skills that will allow them to be successful in school, work, and everyday life (Flaxman & Ascher, 1992).

Mentoring programs currently number well into the thousands and benefit with financial support from government agencies, businesses, and charitable organizations (DuBois & Karcher, 2005). Unfortunately, an insignificant amount of evaluation

research exists to support the effectiveness of mentoring programs (Royse, 1998), particularly those based in schools. The research on mentoring programs that is available is focused predominantly on "at-risk" students at the high-school and college levels (Dappen & Isernhagen, 2005; Jekielek, Moore, Hair, & Scarupa, 2002; Manza, 2001; Mecca, 2001; McCluskey, Noller, Lamoureux, & McCluskey, 2004). However, very little research exists on school-based mentoring programs for "at-risk" junior high school students. Portwood et al. (2005) asserted that schools constitute the clear locale in which to promote youth mentoring. Due to the many benefits linked to mentoring in the school environment, which includes an inexpensive approach and convenience to both the mentors and mentees, school-based mentoring programs have increased. The lack of existing research involving school based mentoring programs, along with the ideal setting of a school for identifying and serving "at-risk" youth, justifies the need for this study. Built upon the existing research literature, the purpose of this chapter is to acknowledge the growing numbers of "at-risk" youth and the dire effects that "at-risk" school dropouts have on our nation. In addition, the literature highlights the effects of mentoring on student achievement, which includes improvement in academic performance, behavior and attendance in school.

This chapter is divided into seven main sections. First, a conceptual framework will give an illustration of a conceptual model and lay the foundation for youth mentoring, discussing social and emotional development, cognitive development, and identity development of youth. Second, the characteristics of "at-risk" students will be described, which will include defining these students and elaborating on the adverse

effects that "at-risk" dropouts have on society as a whole. Mentoring will then be discussed in terms of its historical definition along with its role and function. Next, formal and informal mentoring will be explained, as well as examples of mentoring programs, which will give valuable information on the different types of mentoring programs utilized. This will be followed by a discussion on the effects of mentoring on student achievement for "at-risk" students. Last, school-based mentoring will be described, highlighting the benefits of such programs along with development and implementation ideas for effective programs.

Conceptual Framework

The model of youth mentoring processes is based upon the conceptual model proposed by Rhodes (2002). In this model, Rhodes (2002) concluded that mentors can influence their protégés' development in three important ways: (1) by improving social skills and emotional well-being; (2) by developing cognitive skills through dialogue and listening; (3) identity development.

According to DuBois and Karcher (2005), the purpose of Rhodes' model is to conclude that the dynamics through which mentoring relationships can foster positive youth development are unlikely to form without a strong, interpersonal connection built upon mutuality, trust, and empathy. Furthermore, Rhodes, Spencer, Keller, Liang, and Noam (2006) posited that a meaningful connection can only occur if the mentee is willing to share his or her feelings and self-perceptions and is an actively engaged in the relationship. Dworkin, Larson, and Hansen (2003) conveyed this process in terms of both motivation and concentration, in which the youth is "involved in actively

constructing personal change" (p. 17). However, engagement does not happen instantaneously. DuBois and Karcher (2005) expressed that the successful mentoring of youth is most often predicated by "a series of small wins that emerge sporadically over time" (p. 32). However, this does not mean that the relationship will be void of mundane moments, which might include boredom, humor, and even frustration. DuBois and Karcher (2005) believed that these moments can strengthen the connection during moments of vulnerability or share triumph in moments of accomplishment. To sum it up, Herrera, Sipe, and McClanahan (2000) concluded that "at the crux of the mentoring relationship is the bond that forms between the youth and mentor" (p. 72).

Social and Emotional Development. Rhodes (2002, 2005) asserted that mentoring relationships may promote the social and emotional well-being of youth in the following methods: (a) provide opportunities for fun and relief from daily stresses; (b) corrective emotional experiences that initiate improvement in youth's other social relationships; (c) assistance with emotional regulation. Rhodes et al. (2006) suggested that the social and recreational interactions within the mentoring relationship may provide the youth with enjoyable experiences, especially those who face disadvantaged and challenging circumstances. Recent research on social support highlights involvement in jointly pleasurable social activities as an individual aspect of supportive relationships that has been referred to as companionship (Sarason & Sarason, 2001). Rook (1995) further stated that companionship is sparked by the longing to share in "purely enjoyable interaction, such as the pleasure of sharing in leisure activities, trading life stories, and humorous anecdotes, and engaging in playful spontaneous activities" (p.

440). The supportive mentoring relationships can help eliminate any negative perceptions or stigmas that the youth may initially possess.

The foundation for expecting that positive relationships can modify youths' perceptions of other relationships is derived largely from attachment theory (Bowlby, 1988). According to attachment theorists, youth create cognitive representations of relationships through their early experiences with primary care givers (Bretherton, 1985). These experienced-based expectations, or working models, are believed to be incorporated into the personality structure and to influence behavior in interpersonal relationships throughout and beyond childhood (Ainsworth, 1989; Bowlby, 1988). Working models are flexible in that they allow for opportunities for modification in response to changing life circumstances, particularly the opportunities to engage in different patterns of interaction presented by new relationships (Belsky & Cassidy, 1994; Bretherton, 1985).

In certain situations, mentors may function as a secondary attachment figure, providing a solid foundation from which youth can make key social and cognitive gains (Rhodes et al., 2006). Pianta (1999) asserted that mentors may allow youth to better understand, express, and regulate both their positive and negative emotions by serving as a sounding board and offering a model of effective adult communication. Similarly, Rutter (1990) suggested that youth may become more likely to solicit emotional support to deal with stressful situations or chronic adversity, thereby buffering the effects of negative adversity. In addition, Cowan (1996) postulated that the ability to control affective experiences, both alone and in relationships with others, is increasingly thought

to be an extension of a strong attachment relationship and a key component of healthy social and emotional development. DuBois and Karcher (2005) affirmed that mentoring relationships may alleviate the obstacles in everyday interactions for youth by promoting improved communication and emotional regulation. Similarly, other researchers have shown a correlation between mentoring relationships and improvements in perceptions by youth from peer relationships (Rhodes, Haight, & Briggs, 1999) and from important adults in their social networks (Dubois, Neville, Parra, & Pugh-Lilley, 2002).

Cognitive Development. According to Rhodes (2002), mentoring relationships may influence the cognitive development processes of youth through several mechanisms, including being introduced to new opportunities for learning, establishment of scholarly challenge and guidance, and advancement of academic success. This viewpoint is further supported by developmental theorists as they suggest that social interactions are a critical factor in expediting these cognitive changes (DuBois & Karcher, 2005). Regardless of the interaction, which may range from a trip to the library to enrolling in a course together, a mentor can approach these activities with the purpose of utilizing teachable moments (Rhodes et al., 2006).

The degree of scholarly focus and support provided by the mentor is believed to play a significant role in facilitating the cognitive progress of the youth (Rhodes et al., 2006). Vygotsky (1978) described a zone of proximal development in which learning takes place: the range between what a youth can accomplish when problem solving on their own and what he or she can achieve when working under adult supervision or with more capable peers. When a youth's interactions with a mentor take place within this

zone, the intellectual capabilities of the youth may progress and improve. Similarly, Rogoff (1990) described that within this framework, learning occurs in in a cooperative manner, with children appropriating from shared activities with more sophisticated thinkers. For example, caring adults may empower youth's authentic thoughts and ideas to emerge. Mentors may give the mentee a motivation to broaden their intellectual capability by assisting them in extending their thoughts.

In addition to the scaffolding provided by the mentor, the relational qualities of the mentoring relationship may also contribute to the youth's cognitive abilities (Rhodes et al., 2006). Meaningful conversations throughout the mentoring relationship could serve as a catalyst in the growth of the mentee's cognitive skill set. Research from the educational literature accentuates the social nature of learning, illustrating that positive perceptions of teacher-student relationships are directly related to increases in motivation academic proficiency and achievement, school value, level of engagement, and behavioral adjustment (Goodenow, 1992; Hamre & Pianta, 2001; Midgley, Feldlaufer, & Eccles, 1989; Reddy, Rhodes, & Mulhall, 2003; Roeser & Eccles, 1998; Ryan & Grolnick, 1986). Therefore, it is plausible that a mentor in a relationship built upon trust could authenticate and support the youth's existing intellectual interests or inspire curiosity and influence learning in new areas (Rhodes et al., 2006).

Identity Development. As stated previously, mentoring relationships may contribute to youths' positive identity development by shifting youth's conceptions of both their current and their future identity (Rhodes et al., 2006). Freud (1914) explained an identification process in which individuals incorporate the attitudes, behaviors, and

values they desire to pattern themselves after (as cited in Rhodes et al., 2006, p. 695). Similarly, Kohut (1984) postulated that youths connect themselves to an idealized parent "imago" whose qualities they internalize into their own personalities. Furthermore, Markus and Nurius (1986) have referred to possible selves - individuals' ideas of what they could turn out to be, what they would aspire to become, and what they fear becoming. Rhodes et al. (2006) asserted that such possibilities, which often emerge as youths evaluate the adults they are acquainted with, can influence current decisions and behavior. Indeed, many economically disadvantaged youths have limited contact with positive role models outside the immediate family and believe that their opportunities for success are constrained (Blechman, 1992).

Even among youths of middle class background, adult careers and vocations can be viewed as far-fetched and impossible (Larson, 2000). In addition, other youths have unrealistic expectations and little to no information on the level of education that is required for their career choice. Thus, the idea of possible selves is similar to Levinson's (1978) notion of the imagined self, which becomes refined over time and helps youths control the transition into early adulthood. As they relate with their mentors, youths may discover that their initial internalizations begin to modify, causing shifts in their sense of identity and social roles (Rhodes et al., 2006).

This process is evocative of what Cooley (1902) has described as the "looking glass self" - wherein important people in youths' lives become social mirrors into which the young people look to construct opinions of themselves. The opinions that the youth sees reflected back at them then become assimilated into their sense of self (DuBois &

Karcher, 2005). Additionally, Mead (1934) described how individuals can integrate the "reflected appraisal" of others' views of them—imagining how they are perceived by important people in their lives. For example, Harter (1988) contended that youths' determination of overall self-worth is centered not only on their self-evaluation of their ability in activities they believe to be important, but also on their perception of acceptance, support, and regard from others they value. As the mentor's perceived positive assessment becomes internalized into the mentee's sense of self, it may transform the manner in which the youth believes that parents, friends, teachers, and others view him or her (DuBois & Karcher, 2005).

Generally speaking, mentoring relationships may initiate the development of both social and cultural capital for youth by facilitating their use of community resources and by introducing them to educational or occupational opportunities (Dubas & Snider, 1993; McLaughlin, 2000). Participation in such new opportunities can also enable identity development by providing experiences on which youth can pull from to create their sense of self (Youniss & Yates, 1997). Actually, Waterman (1984) has suggested that such experiences provide opportunities for discovering unique talents and abilities and are thus a major source through which identity is shaped. In the same way, youths' participation in prosocial activities and settings could expose them to more socially desirable or high-achieving peer groups with whom they can then identify (DuBois & Karcher, 2005).

Characteristics of Students Placed "At-Risk"

It is becoming increasingly clear that the number students placed "at-risk" is growing and the long-term effects on society as a whole are both vast and daunting. In 1983, the U.S. Department of Education published *A Nation at Risk*, which revealed severe crises with the educational system in America, illustrating a 60% graduation rate and elevated levels of illiteracy (National Commission on Excellence, 1983; US Department of Education, 2008). This publication sparked a thorough analysis of "at-risk" students into the next decade.

According to the U.S. Department of Education (1999), there are approximately 6.3 million children in America's schools classified as "at-risk" due to a multitude of components that encompass race, ethnicity, poverty, language, substance abuse, lack of motivation, among other factors. Janosz, Le Blanc, Boulerice, and Tremblay (2008) defined "at-risk" students as individuals who display behavioral, attitudinal, or academic problems that lead to school dropout. In addition, characterized "at-risk" students are characterized as students who demonstrate poor grades and assessment scores, discipline issues in class, and persistent absenteeism (Fouad & Keeley, 1992; McLaughlin & Vachta, 1992; Rojewski, Wicklein, & Schell, 1995; Taylor, 2005. In addition, Suhyun, Jingyo, and Houston (2007) declared that the term, "at-risk", focuses on aspects of a student's background and environment that may lead to a higher risk of their educational failure.

Presently, young people are considered "at-risk" if they receive insufficient or unsuitable educational experiences in the school, family, or community, along with

facing the additional concerns of unexpected social and psychological pathways toward the failure of not graduating from high school (Pagani, Vitaro, Tremblay, McDuff, Japel, & Larose, 2008). Scott (2005) further explained that a significant number of "at-risk" students struggle with developing relationships with others. Relationships are critical for student success since all learning occurs in the framework of human relationships (Cohen, 2003). Wehlage and Smith (1992) contended that the educator-student relationship to be crucial in engaging students and promoting student achievement. Additionally, Murray and Greenberg (2000) established that students who reported positive or average relations with educators also reported positive or average perceptions of the educational environment and schools in general.

The National Center for Education Statistics (1992) conducted The National Education Longitudinal Study of 1988(NELS:88), which began in the Spring of 1988 and continued into 1990, and examined the characteristics of 25,000 eighth grade students from approximately 1,000 schools who were "at-risk" of school failure. The results of the study disclosed that the following groups of students were more likely to have insufficient academic skills in the eighth-grade and to have dropped out of school between their eighth to tenth grade years:

- Students from single-parent families, students who were over-age for their peer group, or students who had frequently changed schools;
- Eighth-grade students whose parents were not actively involved in the student's school, students whose parents never talked to them about

school-related matters, or students whose parents held low expectations for their child's future educational attainment;

- Students who repeated an earlier grade, students who had histories of poor grades in mathematics and English, or students who did little homework;
- Eighth-graders who often came to school unprepared for classwork, students who frequently cut class, or students who were otherwise frequently tardy or absent from school;
- Eighth-graders who teachers thought were passive, frequently disruptive, inattentive, or students who teachers thought were underachievers; and
- Students from urban schools or from schools with large minority populations. (p. vi)

The dropout issue continues to inflate and plague our nation as our government leaders seek solutions. During an interview, Secretary of Education, Arne Duncan, stated, "In this country, we have a 25% dropout rate. That's 1.2 million students leaving our schools for the streets every single year. That is economically unsustainable, and that is morally unacceptable" (Amanpour & Duncan, 2010, p. 4). Speaking at the America's Promise Alliance Grad Nation event, President Barack Obama pledged $900 million to improve the performance of low performing schools across the nation. In his speech, the President stated,

> This is a problem we cannot afford to accept and we cannot afford to ignore. The stakes are too high - for our children, for our economy, and for our country. It's

time for all of us to come together - parents, students, principals and teachers, business leaders and elected officials from across the political spectrum - to end America's dropout crisis" (The White House, 2010).

The Dropout Prevention Act of 2004 identified specific factors that cause dropouts such as low grade point averages and standardized test scores, disciplinary issues, grade retention, low socioeconomic status, poor attendance, and mobility (Sparks, Johnson, & Akos, 2010). Moreover, Vang (2005) supported these findings by identifying the five aspects of "at-risk" students according to educators. Stated in the first factor was that an "at-risk" student is one who has failed two or more courses in a semester. In the second factor, an "at-risk" student is two or more years older than his/her fellow students. Next, an "at-risk" student has received one or more school suspensions. Also, an "at-risk" student has been absent for more than 20% of his/her classes. Last, an "at-risk" student has moved three or more times in a school year. In *The Silent Epidemic*, an executive summary of a report conducted by Civics Enterprises, 35% of dropouts pointed out that their academic failures was a critical reason for leaving school, whereas 43% stated that continual absenteeism contributed to their decision to drop out (Bridgeland, Dilulio, & Morison, 2006).

Ethnicity and socioeconomic status play a major role in determining the propensity for a student to be classified as "at-risk". Although the national graduation rate is 68% or higher, the rate for children of color in low socioeconomic areas is much lower (Swanson, 2004). In addition, students that are raised in poverty are more likely to be retained, suspended, and expelled from school (Wood, 2003). In 2001, Orfield,

Losen, Wald, & Swanson (2004) determined nationally that only 50% of Black students, 53% of Hispanic students, and 51% of Native American students graduated from high school, with each group being under a 50% rate for male students. In 2009, according to the National Assessment of Educational Progress (NAEP) reading assessment, 49% of fourth grade students who were eligible for free or reduced lunch read below the Basic level, compared with only 21% of fourth graders not eligible for free or reduced lunch; in fourth grade, 53% of Black students and 52% of Hispanic students read below the Basic level, compared with 23% of White fourth grade students (National Center for Education Statistics, 2010). According to data from the federal, state, and local levels, 60% of all federal inmates were dropouts, approximately 75% of all state prison inmates were dropouts, and 70% of all jail inmates were dropouts (Harlow, 2003). Based on a 2001 study conducted by the Justice Policy Institute, 791,600 African Americans, age 17 or older, were in prison, compared to 603,032 enrolled in college (Moore & Ratchford, 2007). Given this information, it is evident that steps must be taken to prevent "at-risk" students of color from becoming a dropout statistic.

As socioeconomic status and ethnicity has a direct correlation with "at-risk" students and dropouts, researchers have documented that dropouts have an adverse effect on our nation's economy. America's Promise Alliance acknowledged that dropouts can become a heavy burden to society with lost wages, taxes, and productivity over their lifetime (Hu, 2008). According to the U.S. Department of Labor (2001), approximately 68% of men and 45% of women enter the workforce lacking a high school diploma. Weis, Farrar, and Petrie (1989) stated, "It has been estimated that the nation loses about

$77 billion dollars annually because of dropouts - $3 billion in crime prevention, $3 billion in welfare and unemployment, and $71 billion in lost tax revenue" (p. 32). It is estimated that the Class of 2009 will cost the nation $335 billion due to their dropout numbers (Alliance for Excellent Education, 2009). Additionally, it is predicted that if minority graduation rates increased to the levels of Caucasian students in the U.S. by 2020, then the national economy would see a potential boost of up to $310 billion (Alliance for Excellent Education, 2006).

Johnson (2008) asserted that teachers may be familiar with students placed "at-risk", but may be blind to the definition and implications of these students that prevents teachers from enabling them to achieve at a high level in the classroom. In spite of this, Scott (2005) insisted that teachers are the essential ingredient to student achievement. He purported that when a positive environment is created by teachers for "at-risk" students, school becomes a desired place, instead of a place in which students try to avoid. Scott declared, "We must all be mindful that students will not remember everything we teach them, but they will always remember how we treated them" (p. 42).

According to Swadener and Lubeck (1995), the construct "at-risk" has been referred to as a "wolf in sheep's clothing" (Tyack, 1989), due to the definition of the term, its deficit model assumptions, and the potential for racism and classism. Fine asserts that "the term 'students at-risk' suggests that a small group of students are educationally and economically vulnerable; they are to be isolated and fixed" (p. 16). The inherent racism and classism in such a deficit-laden label is problematic.

Commenting on the fact that children labeled "at-risk" frequently are children of color from low socioeconomic situations, Winborne (1991) states,

> The distinctions must sharpen when one considers a term as detrimental as "at-risk." One cannot suppose that all those from a certain background run the risk of failure; often, thankfully, the failures do not occur. Many successes occur within traditional schools where students come from diverse cultural, ethnic, and racial backgrounds and are poor (p. 253).

As Winborne (1991) asserts, the term "at-risk," which appears often in education and social science literature, is derived from the field of medicine and refers to the threat of disease or injury. During the past decade, educational practitioners and researchers created this conceptual paradigm for clarifying educational problems. They defined those conditions that tend to affect children in adverse ways and decrease success in traditional school settings as producing risks, and gradually, educators developed a set of characteristics that place children "at-risk" for school failure.

Classifications of successful or failing responses to school tasks is based on the manner in which teachers interpret the behavior. Teacher interpretations are likely to be influenced by their expectations, by their propensity to expect success or to anticipate failure (Swadener & Lubeck, 1995). In addition, Hargreaves, Earl, and Ryan (1996) demand the need to make schools into better communities of caring and support for young people. Last, Swadener and Lubeck (1995) express the importance of culturally inclusive alliances, in which these alliances for children can begin to "transcend the

internalized oppression which is a major byproduct of the deficiency model embodied in the construct 'children and families at-risk' " (p. 41).

In their study to alleviate racial opportunity costs for students and maximize student learning, Chambers and Huggins (2014) focused on 5 factors in which schools could concentrate their efforts. First, they found that flexible school norms and values allow students to express themselves appropriately while still being viewed as academically successful. Second, an inclusive school community is imperative to allow students to feel wanted and supported. Next, teachers and administrators must initiate discussions regarding race and racism to help address, and hopefully prevent, racial incidents when they occur. Also, an open enrollment pattern prevents racial isolation and allows all students equitable resource allocation. Last, it is absolutely necessary to maintain a campus staff that is fully committed to supporting and encouraging all students on individual bases.

One of the negative aspects of *A Nation at Risk* has been the willingness to define student achievement solely by standardized testing, which may have prevented reform of policies focused on equally important aspects of student achievement (Guthrie & Springer, 2004). As Chambers and Huggins (2014) asserted, the current focus on test scores and other "objective" measures of student achievement causes a disconnect that prevents educators from looking at a broader, more inclusive vision of "schooling" (Louis, Leithwood, Wahlstrom, & Anderson, 2010) that allows room for students' diverse identities instead of demoralizing them. Understanding their aforementioned factors would allow educators to support their students' learning and academic

performance. This understanding may also help decrease the number of students being placed "at-risk" by educators, affording them equal opportunities to all educational resources.

The History and Definition of Mentoring

A valuable inheritance bestowed upon us through ancient Greek literature is the concept of mentoring (Nash & Treffinger, 1993; Noller & Frey, 1995). The history of mentoring can be derived from Homer's *The Odyssey*, in which the term "mentor" was originated. Historically, the term mentor has been utilized within literature to identify one who was responsible for educating and nurturing another (Provident, 2005). To a key extent, Mentor was responsible for the Telemachus' education, as well as his character development and psychological maturation. Over the years that followed, the term "mentor" became synonymous with trusted advisor, friend, teacher, and wise person (Shea, 2002). As illustrated in the literature, mentors have been present from as far back as Greek mythology. However, it has only been since the late 1970s that the concept has been researched and received attention in the professional literature. Over the years, the concept of mentoring has expanded significantly (Provident, 2005).

According to Jacobi (1991), many researchers have attempted to provide a succinct definition of mentoring. Nonetheless, an array of definitions derived from education, management, and psychology continues to embody the literature. Merriam (1983) addresses the problem of fluctuating definitions:

> The phenomenon of mentoring is not clearly conceptualized, leading to confusion as to just what is being measured or offered as an ingredient in

> success. Mentoring appears to mean one thing to developmental psychologists, another thing to business people, and a third thing to those in academic settings (p. 169).

For the purpose of this study, a representative sampling of definitions utilized by DuBois and Karcher (2005) is as follows:

> "Mentoring is a structured and trusting relationship that brings young people together with caring individuals who offer guidance, support, and encouragement aimed at developing the competence and character of the mentee" (MENTOR/National Mentoring Partnership, 2003).
>
> "…a relationship between an older, more experienced adult and an unrelated, younger protégé – a relationship in which the adult provides ongoing guidance, instruction, and encouragement aimed at developing the competence and character of the protégé" (Rhodes, 2002, p. 3).
>
> "…a powerful emotional interaction between an older and younger person, a relationship in which the older member is trusted, loving, and experienced in the guidance of the younger. The mentor helps shape the growth and development of the protégé" (Merriam, 1983, p. 162).

The Role and Function of Mentoring

Presently, children struggle with a complex array of issues, many of which they are unable to deal with on their own. Dappen and Isernhagen (2005) confirmed this dilemma by suggesting that today's youths experience an excessive number of obstacles that negatively affect their academic and social behavior. There is a growing trend that

believes that these individuals would greatly benefit from having a positive role model, such as a mentor, in their lives when faced with the aforementioned obstacles. Benard (1991) declared that an adult role model that can exhibit unconditional love assists the development of resiliency in children, which, in turn, serves as the basis for adult-youth. Benard (1995) stated:

> The presence of at least one caring person - someone who conveys an attitude of compassion, who understands that no matter how awful a child's behavior, the child is doing the best that he or she can given his or her experience – provides support for healthy development and learning. (p.1)

Such support may be especially important for "at-risk" youth, that is, young people from poor, struggling, often single-parent families who live in neighborhoods that offer few positive outlets and a limited number of positive role models. Mentoring programs can be seen as formal means for establishing and nurturing a positive relationship with at least one caring adult. The very foundation of mentoring is the idea that if caring, compassionate adults are available to young people, youth will be more likely to become successful adults themselves (Jekielek et al., 2002).

As evident in the literature, the mentor assumes numerous roles in their quest to establish the model relationship when working with a youth. The National Education Association classifies 13 critical roles of a mentor in an academic environment: a counselor, teacher, challenger, coach, observer, facilitator, trainer, master, tour guide, advocate, role model, reporter, and equal (National Education Association, 1999). Daloz (1986) suggested that the mentor must become a guide rather than a tour director and

provide reinforcement through listening, advocacy, sharing of self, establishing structure, highlighting strengths, and making the experience unique and positive. Similarly, Sipe (1996) asserted that mentoring serves as a one-to-one relationship in which an adult volunteer and youth meet often over a period of time, in which the mentors are primarily expected to act in a supportive and friendly role, rather than trying to change the youth's behavior. Additionally, whether implemented formally or informally, mentoring entails a relationship of coaching, counseling, and, most importantly, caring, which enables both mentor and mentee to grow and develop (Fresko & Wertheim, 2006). Lastly, Ferguson and Snipes (1994) asserted that to establish the most effective mentoring relationship, the mentor needs to work not only with the youth, but with others in the youth's life as well. Parents, teachers, mentors, and other service providers, such as police, social workers, corrections officers, and medical professionals, are all crucial components in assisting to develop youth. Each individual involved needs to understand and practice methods for sustaining the development of healthy identities.

According to Schwiebert, Deck, and Bradshaw (1999), the principal responsibilities of a mentor include: (a) to invest quality time in the mentoring relationship; (b) to commit to the time necessary to allow for in-depth, detailed discussion of the needs and goals of the protégé and the progress towards those goals; (c) to continuously maintain a supportive interaction. In addition, sharing resources, providing coaching in a non-threatening manner, encouraging and challenging the protégé to achieve his or her goals, helping with the development of a vision, ensuring

that learning exists, and fostering reflective practice are key responsibilities of the mentor (Provident, 2005).

Although parents play the most critical role in a child's life, these relationships may not always be positive and beneficial for the child. Therefore, it is imperative that children have non-related adults in their lives to foster psychological resilience (Masten & Coatworth, 1998). Relationships with parents are essential resources; however, other adults can offer support that is parallel to the support received from a parent (Jekielek et al., 2002). In a longitudinal study of a nationally representative sample of young adults, DuBois and Silverthorn (2005) established that those individuals who accounted having had a mentoring relationship during adolescence showed evidence of significantly enhanced outcomes within the domains of education and work (high-school completion, college attendance, employment), mental health (self-esteem, life satisfaction), problem behavior (gang membership, fighting, risk taking), and health (exercise, birth control use).

Types of Mentoring

Traditionally, mentoring has been classified into two categories, informal and formal, or planned mentoring. According to Noller and Frey (1995), informal mentoring happens naturally when an individual gives reinforcement or assists another person. Occasionally, these informal mentorships can facilitate the exhibition of unrecognized talents in troubled children and youth (McCluskey et al., 2004). Informal mentorships grow out of informal relationships and interactions between older and younger individuals. The relationships may be based on professional or non-professional issues.

From these interactions, protégés may illustrate the need for special attention and support. Mentors often select protégés with whom they share common ground with and with whom they are willing to establish and develop a relationship with (Chao, Waltz, & Gardner, 1992).

In other instances, mentoring may be implemented in a more formal approach. This type of planned, influential mentoring tends to be broad-based and methodical (Noller & Frey, 1995). Normally, formal mentorships are not based on initial informal relationships or interactions between two individuals. The match between mentor and protégé may vary from random assignment to a formal process completed by committee assignment or based on protégé files. In relation to informal mentors, formal mentors may not feel it is necessary to provide the extra support. Furthermore, a longer adjustment period may be required for the induction process between the formal mentors and protégés (Chao, Waltz, & Gardner, 1992).

According to the National Mentoring Partnership and their "Elements of Effective Mentoring Practices," a successful formal mentoring process must encompass the following: (a) recruit appropriate mentors and mentees according to the program's goals; (b) screen prospective mentors to ensure that they are qualified and truly committed to the endeavor; (c) provide the necessary training to the mentors to enable them to establish an effective mentoring relationship; (d) effective matching between mentor and mentee to promote lasting mentoring relationships; (e) monitoring mentorship relationship milestones and providing the necessary support and training opportunities to the mentors; (f) facilitate a closure process that allows both parties to

assess the mentoring experience (MENTOR/National Mentoring Partnership, 2009). Furthermore, the meta-analysis of mentoring programs conducted by DuBois, Holloway, Valentine, and Cooper (2002) determined that the following empirically based best practices produced the most favorable outcomes: (a) targeting the appropriate candidates to be effective mentors; (b) conducting mentoring activities outside of the school setting such as the workplace or community; c) mentorship program must entail a structured process for mentors/mentees, tracking system of program progress, clear and concise frequency of contact expectations for mentors, and parental support.

In addition to the matching of mentors and protégés, formal and informal mentorships may differ in degree of motivation for both participants. Informal mentorships occur due to the desire of the mentor to assist the protégé and a willingness on the part of the protégé to be receptive to advice and coaching from the mentor. Formal mentorships, on the other hand, sometimes entail a degree of stress; the mentor and the protégé may be required to participate in the mentorship program as a role of their positions. This added stress could decrease a mentor's desire to aid the protégé and diminish the protégé's willingness to be open to support from the mentor (Chao, Waltz, & Gardner, 1992).

Types of Mentoring Programs

Mentoring programs are developed to meet the different needs of participants. Becker (2004) identified six general types of mentoring programs:

1. Community-based programs, such as Big Brothers Big Sisters or Partners, Inc., all of which receive youth from numerous sources and recruit volunteers from the community;
2. School-based programs, such as school-sponsored or district-sponsored efforts in which the youth are identified by the campus, district, or school system, and mentors are recruited specifically to help the mentee with academic or school related issues;
3. Court-based programs, such as Volunteers in Probation, which assists professional probation officers with excessive caseloads.
4. Career or hobby-based programs, such as professional or union-sponsored efforts in which a more advanced individual assists a novice experienced person in developing specific skills.
5. Campus-based programs, such as Campus Compact's Campus Partners in Learning, which are supported by colleges and universities and focus on community service projects;
6. Church-based programs that recruit mentors from the church, and provide benefits to community youth, special populations, or their ministry.

According to McHale (1990), 10 forms of mentoring included: mentoring in the business community, career mentoring within specific groups as professionals or businesses, mentoring situations that demand special training, mentoring within educational settings, language-culture-gender or ethnic group mentoring, special

needs or focus groups, group mentoring, youth-to-youth mentoring, and cross-age intergenerational mentoring. (p. 321)

Jekielek et al. (2002) identified mentoring programs that have been evaluated by experimental, quasi-experimental, or non-experimental methods. Most of these programs evaluated were community based, compared to school-based, while targeting an "at-risk" population. These programs include:

1. **Across Ages**, based in Philadelphia, targets 6th graders in troublesome areas for mentoring by an older adult, with a special emphasis on preventing or reducing substance abuse and other harmful behaviors.
2. **Big Brothers Big Sisters** operates nationwide. This renowned, highly structured program targets 5-to-18-year-olds who come primarily from single parent families.
3. **The Buddy System**, based in Hawaii, utilized adult community volunteers to serve as mentors for 10-to-17-year-olds with discipline and academic problems.
4. **Building Essential Life Options through New Goals (BELONG)** provided opportunities for middle school and junior-high students to be mentored by undergraduates from Texas A& M University to improve academic performance and prevent substance abuse.
5. **Career Beginnings**, targets 11th- and 12th-grade students to prepare students for further education and future employment.

6. **Campus Partners in Learning**, a national program in which college students mentored 4th through 9th graders to improve academic performance and social outcomes, while increasing the mentors' leadership skills.
7. **The Hospital Youth Mentoring Program**, utilizes volunteers who work in hospitals in cities across the nation to mentor young people (ages 14-22), to decrease their chances of dropping out of school, introduce them to careers in the medical field, and promote positive development.
8. **Linking Lifetimes**, based in Philadelphia that allowed adult mentors to mentor "at-risk" juvenile offenders.
9. **Raising Ambition Instills Self-Esteem (RAISE)**, a 7-year program based in Baltimore, in which the participants began in the 6th grade and completed academic and provides recreational activities throughout the program.
10. **Sponsor-A-Scholar**, focused on Philadelphia high school students that provided academic and financial support to help students stay in school and enroll in college.

Over the past 12 years, the nation has witnessed an overwhelming increase in similarly focused programs that match caring, adult volunteers with youth from "at-risk" backgrounds (Rhodes & DuBois, 2008). Although mentoring programs focus on developing positive relationships between youths and non-parental adults, they differ widely in their goals, youths targeted, and structure and guidelines (Karcher, Kuperminc, Portwood, Sipe, & Taylor, 2006).

Approximately three million youth are in formal one-to-one mentoring relationships in the United States, which includes both community-based and school-based programs, and the financial backing and development essentials serve as catalysts for program expansion (MENTOR/National Mentoring Partnership, 2006). In his 2003 State of the Union Address, President Bush proposed $450 million to mentoring junior high students and children of prisoners (MENTOR, 2004). Since 2004, there has been a considerable boost in federal funding for mentoring programs, with annual congressional allocations being around $100 million (Rhodes & DuBois, 2008). This trend illustrates the willingness of our nation to embrace the idea of mentoring "at-risk" youth and the desire to financially support this cause.

Despite the lack of reliable scientific evidence on their effectiveness, school-based mentoring programs have grown immensely (Portwood & Ayers, 2005). In the Commonwealth Fund 1998 Survey of Adults Mentoring Young People, two thirds of the mentor participants in formal programs suggested that the program was sponsored by a school or institution (McLearn, Colasanto, & Schoen, 1998). According to DuBois and Silverthorn (2005), aside from family members, teachers are the individuals most often recognized as mentors. Therefore, this growth in program popularity has created a dire need for additional knowledge and information on school-based mentoring (Portwood & Ayres, 2005).

Effects of Mentoring on Student Achievement of Students Placed "At-Risk"

The positive effects of an effective youth mentoring program are indisputable. According to Grossman and Rhodes (2002), evaluations of volunteer mentoring

programs provide confirmation of positive benefits on youth outcomes, including academic achievement, self-concept, pro-social behaviors, and interpersonal relationships (Davidson, Redner, Blakely, Mitchell, & Emshoff, 1987; DuBois & Neville, 1997; Grossman & Tierney, 1998; LoSciuto, Rajala, Townsend, & Taylor, 1996). Despite a lack of information regarding how differences in the characteristics of mentoring relationships affect youth outcomes, an increasing amount of research exists illustrating that mentoring can positively influence young people and target many "at-risk" behaviors (Dappen & Isernhagen, 2005; Grossman & Rhodes, 2002).

Jekielek et al. (2002) established that youth who participated in mentoring programs experienced fewer incidents of physical violence against others, reduced drug and alcohol use, improved relationships with parents, and a decline in teen pregnancy. Mecca (2001) further supported these findings by asserting that mentoring decreased the possibility of dropping out of school, helped prevent teen pregnancy, and decreased the chances of gang membership. Moreover, in their study, King, Vidourek, Davis and McClelland (2002) ascertained that successful school-based mentoring programs correlate with improved school behavior, increased academic achievement, better attendance, and an enhanced student attitude toward school. Last, Curtis and Hansen-Schwoebel (1999) contended that a student who has experienced mentoring is more likely to exhibit an upbeat attitude towards school, trust his/her teachers, perform at a higher academic level, maintain a higher self esteem, and sustain positive relationships with adults and peers.

According Grossman and Rhodes (2002), youth who were involved in mentoring relationships that exceeded a year or longer reported progress in academic, psychosocial, and behavioral outcomes; whereas those students whose mentoring relationships failed to last a year obtained fewer positive effects. Skiba and Wu (2004) supported this stance by asserting that commitment to the relationship may be the most critical component of effective mentoring. Studies of the Big Brothers Big Sisters mentoring program recommended that the connectedness that occurs during mentoring relationships may convey into other positive relationships with parents and adults, thereby promoting academic achievement (Rhodes, Contreras, & Mangelsdorf, 1994). Karcher, Davis, and Powell (2002) proposed that spelling achievement increases were initiated by the developmental school-based mentoring program's ability to endorse or nourish interpersonal connectedness in the family. The presence of an effective mentor who works to make school meaningful and fun, along with engaging school activities and a strong instructional focus all play critical roles for a student's achievement gains and connectedness in the mentoring process (Karcher et al., 2002). According to the study, "Increasing Self-Esteem and Social Connectedness Through a Multidimensional Mentoring Program," King et al. (2002) analyzed a mentoring program focused on constructing relationships, improving self-esteem, creating goals, and offering academic support for students failing 2 or more subjects in the first quarter. The findings confirmed that positive student connections with school and family are linked to improved student achievement, as 71% of the students that participated displayed improvement in their grades (King et al., 2002).

Thompson and Kelly-Vance (2001) analyzed the Big Brothers Big Sisters mentoring program to determine whether or not the program had a significant impact on the academic achievement of "at-risk" students, while utilizing a standardized achievement instrument to measure performance. The final sample size consisted of 25 "at-risk" male youths, 12 participants in the treatment group, or mentoring group, and 13 participants in the control group. Participants in the mentoring group scored significantly better in reading and math on the standardized instrument than the participants who did not receive mentoring, thus leading to the conclusion that participation in a mentoring program that has a well-established foundation has a positive influence on academic achievement.

In addition, Tierney (1995) completed a study on the effectiveness of the Big Brothers Big Sisters mentoring program on academic achievement. There were a total of 959 "at-risk" participants, 487 youths in the treatment group and 472 in the control group, ranging from 10-16 years of age. The participants were approximately 60% males and 50% were students of color. The majority of the participants were from low socioeconomic areas, single parent homes, or histories of violence or drug abuse in the households. Students who had mentors were significantly less likely to be absent from school, as those students missed 52% fewer days and 37% fewer classes. In addition, girls who had mentors throughout the study missed 84% fewer days of schools than those who received no mentoring. The mentored group was 46% less likely to use drugs. Overall, the mentoring program was successful in improving the absenteeism rates, dropout rates, relationships among adults and peers, attitudes toward completing

school work, self-esteems. Mentored participants were also less likely to use drugs and commit acts of physical violence.

Although research has linked successful mentoring programs with academic achievement for "at-risk" youth, conflicting results were present when addressing the positive correlation (Thompson & Kelly-Vance, 2001). For example, Jekielek et al. (2002) suggested that further research was necessary to confirm whether mentoring improves grades. These researchers conducted analyses on mentoring programs to gauge their levels of effectiveness. When examining the Big Brothers Big Sisters program, they found modest gains in the participants' GPAs over time. On the other hand, youth who participated in the mentoring program, Across Ages, did not illustrate significant academic improvements. Participants in the BELONG program were less likely to fail math, but the program was not effective in other subject areas. Similarly, Slicker and Palmer (1993) assessed the effectiveness of a school-based mentoring program in a large, suburban school district in Texas. The authors evaluated 86 tenth grade "at-risk" students with initial results showing that there were no differences in dropout rates, student achievement, and self-esteem between the treatment group and the control group. However, after post hoc tests were conducted, the findings illustrated variations in the quality of mentoring. After categorizing the students based on effective or ineffective mentoring practices, effectively mentored students displayed lower dropout rates and higher GPAs than the ineffectively mentored group. These researchers implied that the quality of mentoring efforts is critical, as it can manipulate the academic achievement and dropout rates (Blue, 2004). Tierney (1995) added the following based

on their study, the "report does not provide evidence that *any* type of mentoring will work, but that mentorship programs that facilitate the specific types of relationships observed in the Big Brothers Big Sisters program work" (p. 51).

School-Based Mentoring

As the "at-risk" student population increases, the need for school-based mentoring programs is essential. To meet this need, school-based mentoring is the fastest growing facet of mentoring programs (Herrera, 1999). Manza (2001) documented a 40% increase in mentoring programs from 1996 to 2001, in which 70% of that growth was school-based programs. "Of more than 4,700 programs in a national database of mentoring programs, approximately one in four (28%) use a school-based format" (K. Zappie-Ferradino, personal communication, January 6, 2010) (Wheeler & Keller, 2010, p. 3). Program objectives for school-based mentoring span from decreasing dropouts and improving student attitudes toward school and school discipline to improving academic grades and standardized test scores (Blum & Jones, 1993; King et al., 2002; Slicker & Palmer, 1993; Tierney & Grossman, 1995; White-Hood, 1993). Traditionally, school-based mentoring programs occur at a school facility and are designed to help selected students with academic or school related issues. Herrera, Sipe, and McClanahan (2000) suggested that school-based mentoring to "at-risk" youth provides an optimistic counterpart to the traditional community-based model. Likewise, using school personnel as mentors might be financially efficient, simplify program operations, and offer opportunities for students to view school faculty in a positive manner (Evelo, Sinclair, Hurley, Christenson, & Turlow, 1996). Furthermore, under the

NCLB Act of 2001, initiatives have been set forth to increase school-based mentoring programs to meet the Safe and Drug-Free Schools Mentoring-Program by federally funded grants to qualifying schools, which aims to improve academics, relationships with teachers, adults, and peers, decrease the dropout rate, as well as to decrease the crime rate and gang activity (U.S. Department of Education, 2004). Dappen and Isernhagen (2005) concluded that the motives for the transformation from the community-based programs to school-based mentoring programs were due to the following:

(a) Students are most accessible in the school setting;

(b) Parents are unwilling or unmotivated to refer their child for a mentoring program;

(c) The school provides a safe haven for mentor volunteers who would not otherwise volunteer;

(d) School-based programs are less expensive than community-based programs;

(e) Availability of student diversity and support of the school setting promotes student matching for cross-raced, cross-gender, and special needs students;

(f) School-based programs have access to community resources which allow for a more effective program (p. 22).

Research-based best practices have concluded that a successful school-based mentoring program can be encapsulated into two phases: program development and program

implementation (Dappen & Isernhagen, 2005; Dubois et al., 2002; Herrera, 1999; Weinberger, 1992). When focusing on the program development phase, several factors must be considered. First, it is important to seek the involvement and support of all stakeholders involved such as the superintendent, the board of education, and administrators before entering the development phase. Next, one must identify the mentoring program boundaries, such as a detailed plan that encompasses the goals, the program purpose, student qualifications, grade levels, and all other possible resources used to implement the program. Last, it is imperative to search the community to establish the possibility of involving other partners in the process.

The implementation phase of the program must include critical steps to ensure overall success. To begin, student recruitment information must correlate with the goals of the program. It is also necessary that target audiences, such as service organizations, retirees, and businesses, be considered for mentor recruitment. Next, adequate training and support must be provided to allow the mentors to understand the scope of their role and the overall program. In addition, precise principles that reflect the program's goals must be established for effective mentor/mentee matching. To maintain direction, regular scheduled mentoring meetings must be conducted with clear and concise expectations. Also, opportunities for celebration and recognition, along with retention activities are vital for the program's success. Last, program evaluation is absolute for a superior mentoring experience.

The positive impacts of school-based mentoring potentially exist for all stakeholders involved in the process. Successful school based mentoring programs can

not only be advantageous to the mentees, but also to the entire school, by creating social support networks that incorporate compassionate adults from the nearby community (Solomon, Watson, Battistich, Schaps, & Delucchi, 1996). These networks can establish a sense of community for students, which promotes improved levels of school connectedness for students, shielding them from unfavorable behaviors (Battistich & Hom, 1997; Portwood, Ayers, Kinninson, Waris, & Wise, 2005; Simons-Morton, Crump, Haynie, & Saylor, 1999). Furthermore, according to Karcher (2008), DuBois et al. (2002) and Grossman and Rhodes (2002) proposed that school-based mentoring relationships might promote connectedness to teachers, classmates, and even to culturally different peers when matches are cross cultural (Sanchez & Colon, 2005). In addition, evidence of positive relationships was present in school-based mentoring, and this relational development is the first step toward accomplishing positive impacts (Herrera et al., 2000).

Teachers as Mentors

Portwood and Ayers (2005) claimed that teachers might be the best possible mentors for most students. This claim is further supported in the study conducted by Chambers and Huggins (2014). In this study, the stories that students shared about their relationships with teachers and campus personnel revealed that the influences of teachers and staff proved to be the most impactful aspect in helping or hindering their academic success. In addition, DuBois and Silverthorn (2005) suggested that mentors with educational backgrounds may have an advantage in promoting outcomes such as college attendance and decreasing the risk of drug use. Furthermore, social support from

teachers and school faculty has been directly related to increased levels of academic achievement (Malecki & Demaray, 2000). Portwood and Ayers (2005) suggested that students may see their teachers as role models for learning. Based on this viewpoint and teachers' proximity, it is easy to understand why students often seek mentoring-type advice from their teachers and establish informal-type mentoring relationships (Bisland, 2001; Dubois & Silverthorn, 2005).

Summary

This literature review focused on the characteristics of students placed "at-risk" and the effects that mentoring has on this population group. Despite the lack of research relative to the effects of school-based mentoring on junior high school students and student achievement, the existing literature supports the need for this study. The literature undoubtedly illustrates the impacts that positive mentoring relationships have on "at-risk" youth. With the "at-risk" youth population increasing, the need for mentoring programs is essential. This can be explained by the growth of school-based mentoring programs in recent years. Although these programs can be beneficial, it is important to understand the intricate details and components of a quality mentoring relationship and program. The literature supports this position by illustrating the positive outcomes of a well designed mentoring program and purposeful mentoring relationship.

The literature exemplifies that mentoring remains a popular and effective intervention for "at-risk" youth. With positive mentoring relationships as the foundation, student achievement can improve with increased attendance, improved

relationships with teachers, parents, and peers, improve academic performance, decrease chances of drug use or violent activity, increase communication and decision-making skills, and decrease likelihood of dropping out. While existing literature demonstrates positive results for school-based mentoring, there is an apparent need to evaluate student outcomes more fully and with increased accuracy (Portwood et al., 2005). The question of whether school-based mentoring programs that are confined to the school environment produce meaningful outcomes should continue to be explored (Portwood et al., 2005). In addition, although Dubois et al. (2002) revealed that even thorough school-based mentoring program evaluations are open to biased outcome measures, they advocated that future studies should include objective measures such as archival criminal or behavioral records and educational achievements to evaluate the effectiveness of the programs (Converse & Lignugaris/Kraft 2009). Therefore, the literature demands the need for this study to contribute to the existing body of research on this topic.

CHAPTER III

METHODOLOGY

Overview

This chapter includes an overview of the methodology used to conduct the research on the effects that school-based mentoring has on student achievement for junior high school students. The chapter is divided into six sections. The first section of this chapter will provide a description of the research design used by this study of the ISAGE school-based mentoring program. In addition, this section contains the research questions that directed the study along with descriptions of the independent and dependent variables. The second section explains the context of the study. The third section includes the subjects utilized in the study, including descriptions of the mentors and mentees. Next, the data collection instruments used throughout the study will be discussed. Last, the types of data analysis tools that will be used to answer the research questions will be explained.

Research Design

To address the research questions established by the ISAGE school-based mentoring study, a retrospective quasi-experimental, non-equivalent comparison group design (Gall, Gall, & Borg, 2007) was used. This type of research design was selected because the independent variable, school-based mentoring, is categorical, and the dependent variables are continuous. The dependent variables in this study were: (a) attendance, (b) discipline referrals, (c) report card grade averages in core courses, (d) TAKS (Texas Assessment of Knowledge and Skills) Mathematics scale scores, and (e)

TAKS Reading scale scores. A non-equivalent comparison group design was selected because random assignment was not possible due to mentors voluntarily selecting their mentees. For those mentors who did not select a mentee, they were assigned mentees by the campus principal. Due to a shortage of available mentors, additional eligible students were placed on a waiting list or control group. The treatment and control group are non-equivalent because, without random assignment, it is not possible to ensure that both groups are equivalent to one another in regards to the pretest values of the dependent variables (Gall et al., 2007).

Similar to the Dupuis (2012) study, age and gender of the mentees were used as the control variables in this dissertation research. Grossman and Rhodes (2002) documented that mentor/mentee matches serving older youth, ages 13-16 years, were more likely to terminate than were mentor/mentee matches serving younger individuals, ages 10-12 years. Grossman and Rhodes (2002) asserted that older youth experience more abbreviated mentoring relationships due to developmental changes that occur throughout adolescence. Furthermore, Herrera, Grossman, Kauh, Feldman, and McMaken (2007) determined through a rigorous nationwide evaluation of the Big Brothers Big Sisters program that students in a secondary setting might benefit more academically from mentoring than elementary youth. Accordingly, student age was included as a control variable because it has the potential to influence the intimacy and duration of mentoring relationships, as well as the potential to impact academic performance.

Gender was also controlled in this study as the literature indicates its influence on the dependent variables posed by this study. The social identities of males and females are different, and it is likely that these variations affect their mentoring experiences (Darling, Bogar, Cavell, Murphy, & Sanchez, 2006). For example, girls may be more closely associated with family during their teenage years, especially in more intimate, interpersonal matters (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996), and girls' relationships are more likely than are boys' relationships to be exemplified by emotional closeness (Buhrmester, 1990; Clark & Ayers, 1993). Personal relationships are more significant in the lives of girls (Chodorow, 1987; Jack, 1991; Jordan, Kaplan, Miller, Stiver, & Surrey, 1991), and good quality relationships are more likely to affect girls' psychosocial outcomes than boys' psychosocial outcomes (Berndt & Keefe, 1995), including depression (Greenberger, Chen, & Beam, 1998; Jack, 1991). Boys and girls also seek out peers and parental support differently for guidance in solving interpersonal and other problems (Sullivan, Marshall, & Schonert-Reichl, 2002). Thus, girls' natural social networks are more likely to be characterized by devoted emotional relationships, which they are more likely to utilize in times of need and which affect them more strongly than boys (Darling et al., 2006). Portwood et al. (2005) posited that "the effects the effects of mentoring by gender should continue to be explored to determine not only how outcomes may differ, but also how various components of the mentoring relationship (e.g., type of mentoring activity, duration) may impact these outcomes" (p. 142).

Research Questions

In this investigation, the following research questions were addressed:

1. What is the difference in report card grade averages in core classes (i.e., English/Language Arts, Math, Science, and Social Studies) between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
2. What is the difference in attendance between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
3. What is the difference in discipline referrals between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
4. What is the difference in the TAKS Mathematics test scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
5. What is the difference in the TAKS Reading test scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

Context

The setting for this study was two junior high schools located in a suburban school district, Utopia ISD, of the southwestern United States. Utopia ISD is a pseudonym for the actual school district involved in the study. Utopia ISD has experienced a tremendous amount of growth in the past 20 years. Over a 15 year span alone, Utopia ISD has realized a student enrollment increase of 158%, going from 4,600 students in 1995 to approximately 11,800 students in 2010. In addition, the district has seen a 237% growth in the number of economically disadvantaged students, going from approximately 1,400 to almost 4,900 students over this same period. In regard to ethnic distribution of the district, Utopia ISD has witnessed a 539% increase in their Hispanic student population over this 15 year period, going from approximately 500 Hispanic students in 1995 to 3,100 in 2010. The African American student population has decreased by 78%, with approximately 110 students in 1995 and 24 students in 2010. Last, the White student population has increased by 109%, going from approximately 3,900 students in 1995 to almost 8,150 in 2010.

The two junior high schools included in this study schools had enrollments of approximately 920 students in Grades 7 and 8. Junior High School "A" was located on the west side of the district, whereas Junior High School "B" was located on the east side. School "A" had an ethnic breakdown of; 70% White, 25% Hispanic, 3% African American, and 2% Other. The school had an economically disadvantaged student population of 47%. School "B" had an ethnic breakdown of; 72% White, 22% Hispanic, 2% African American, and 4% Other. The school had an economically disadvantaged

student population of 29%. In this research investigation, 72 students were included. Gender, ethnicity, and economically disadvantaged status was not taken into account in the selection of participants for this research.

The schools began the ISAGE school-based mentoring program during the 2010-11 school year. To qualify for inclusion in the mentoring program, students were identified as "at-risk" due to being classified in Scenarios 11, 12, 16, or 17 based on INOVA data. The INOVA tool was a data-driven instructional tool that connected standardized test results with instructional intervention. Students were classified in the aforementioned scenarios due to experiencing a drop in their scale scores on their Math or Reading TAKS test in the 2009-10 school year. Approximately 110 students met the criteria for inclusion in the mentoring program.

The purpose of the ISAGE program was to provide an individualized psycho/social intervention program supporting student mentees to improve their academic performance, attendance rate, completion rate, and scores on the Reading and Mathematics Texas Assessment of Knowledge and Skills (TAKS) tests for students "at-risk" of academic and social failure based on the INOVA data mentioned above. Students were required to receive parent consent to participate in the mentoring program.

Participants

Mentees. The sample size for this study was 72 "at-risk" junior high school students within the Utopia Independent School District. The 72 students were either placed in a treatment group (n = 36) or on a waiting list (i.e., control group) (n = 36). Students were placed in the treatment group by using non-random selection. Of the 72

students, 39 were female and 33 were male; 24 students were in Grade 7 during the 2010-11 school year and 48 students were in Grade 8. Of the 72 students in this research investigation, 54 of the students attended Junior High School "A" in Utopia ISD, whereas 18 of the mentees attended Junior High School "B." Table 1 gives the distribution of the demographic variables of the mentees.

Table 1

Distribution of Mentee Demographic Variables

Demographic Characteristic	*n*	%
Gender		
Female	39	54
Male	33	46
Grade		
7th Grade	24	33
8th Grade	48	67
Ethnicity		
White	44	61
Hispanic	21	29
African American	1	1
2 or More Races	6	8

Mentors. Any teacher interested in becoming a mentor in the ISAGE mentoring program was able to apply. They were required to complete an application and submit it to the campus principal. The campus principal was responsible for matching the mentors and the mentees. Specific criteria were present to participate as a mentor in the ISAGE mentoring program. These criteria included: (a) Must serve as a full-time classroom teacher ; (b) Must attend a preliminary interest session regarding the ISAGE

program; (c) Must complete a mentor application and submit to principal; (d) Must attend a best practices training and sign a release form; (e) Must complete a student survey with their respective mentee(s); (f) Must meet with mentee(s) one hour per week; (g) Monitor and document core class grades, attendance and discipline referrals through teacher contact every 3 weeks; (h) Contact the key person(s) in the mentee's life each 9 weeks; and (i) Must complete all documentation forms and submit to the campus principal.

As mentioned previously, the mentors must have been current certified teachers in the Utopia ISD. As defined in Texas Education Code 5.001(2), "classroom teacher" means an educator who is employed by a school district and who, not less than an average of 4 hours each day, teaches in academic instructional setting or a career and technology setting. The term does not include a teacher's aide or a full-time administrator.

Mentors were awarded stipends for their participation in the program. All mentors who satisfactorily completed the required documentation and activities were awarded a $500 stipend, payable on July 1, 2011. For mentors who were mentoring Grade 7 students, if they moved individual mentees 2011 Math TAKS data scenario from baseline to center or any advancement on the continuum, then they were awarded an additional $1,605, payable in September 2011. For mentors who were mentoring Grade 8 students, if they moved individual mentees 2011 Math and/or Science TAKS data scenario from baseline to center or any advancement on the continuum, then they

were awarded $803 for Math and/or $802 for Science, payable in September 2011. Mentors were awarded for each of their assigned mentees who met the target(s).

There were a total of 24 mentors that participated in the mentoring program. Of the 24 mentors, 20 were female and 4 were male. See Table 2 for the distribution of the mentor demographic variables. Mentors were given the opportunity to choose their mentee(s) from a list of eligible mentees created by the INOVA data. The mentoring relationship between the teacher and student lasted from approximately mid-October 2010 until the end of May 2011.

Table 2

Distribution of Mentor Demographic Variables

Demographic Characteristic	*n*	%
Gender		
Female	20	83
Male	4	17
Teaching Experience		
0 Years	0	0
1-5 Years	4	17
6-10 Years	7	29
11-20 Years	5	21
Over 20 Years	8	33
Ethnicity		
African-American	0	0
White	23	96
Hispanic	1	4

Measures

In this section of Chapter III, how the key variables were measured in the ISAGE study will be described. Key variables in this investigation were: student report card grade average in core subjects; scale scores on the reading and math TAKS tests; attendance; and discipline referrals. Student report card grade averages were collected for their core academic classes (i.e., English/Language Arts, Math, Science, and Social Studies). Pre and post academic data were retrieved for the 2009-2010 and 2010-2011 school years from computerized student records. The TAKS Math and Reading scale scores were available through computerized student records. Pre and post standardized testing data for the 2009-2010 and 2010-2011 school years were retrieved for all students involved in this study.

Attendance was measured by the number of days each student was absent from school and the number of times tardy to school. Pre and post attendance data were retrieved for the 2009-2010 and 2010-2011 school years from computerized student records. Discipline was calculated by the number of times a student was assigned out-of-school suspension, in-school suspension, and detention. Pre and post discipline data were also retrieved for the 2009-2010 and 2010-2011 school years from computerized student records. Finally, mentor and mentee demographic information was retrieved via student and employee computerized records.

Procedures

A total of 72 "at-risk" junior high school students in Grades 7 and 8 in Utopia ISD consented to participate in the ISAGE school-based mentoring study. Students were identified as "at-risk" and eligible for the ISAGE school-based mentoring program from INOVA data, a data-driven instructional tool utilized by the district. Upon receiving

consent, students were assigned a mentor in the treatment group based on their level of need or personal connections already established with staff members who requested to mentor these specific students. Students who did not already have an informal mentoring relationship in place with a teacher or who were not matched with a teacher after the mentoring pairs were established were placed on a waiting list (i.e., control group). The study and control groups were equivalent groups based on similar inclusion criteria determined by the INOVA data, which includes students being classified within Scenarios 11, 12, 16, or 17.

Consent to participate in the study was obtained by face-to-face or phone communication, notifying parents/guardians that their child has been selected to participate in the program. In addition, parents were also mailed a notification letter informing them of their child's selection into the ISAGE program. All consent communication was monitored by the ISAGE campus coordinators of both junior high school campuses.

Prior to the mentor/mentee matching, aspiring ISAGE mentor teachers were required to complete an application process. Once the campus principal selected the appropriate mentors for the program, the matching process was completed. Upon meeting with their mentees, the mentors were required to attend a best practices training and sign a mentor release statement confirming that they would abide by the rules and regulations of the ISAGE mentoring program.

The quantitative data collection was completed by the mentors throughout the entire duration of the mentoring relationship utilizing existing instruments. These

instruments were created by the district committee responsible for the development and implementation of the ISAGE program in Utopia ISD. The mentors were responsible for submitting their quantitative data to the campus principal at the end of every grading period, or every nine weeks. They were also responsible for recording and documenting the mentee's attendance, discipline information, academic grades, and their mentor/mentee contact log as part of the data collection procedures. The data collection process began in October 2010 and ended at the conclusion of the 2010-2011 school year, or the end of May 2011.

Data Analysis

To determine the extent to which statistically significant differences were present between students in the school-based mentoring program and students in the control group for the 2009-2010 and 2010-2011 school years, inferential statistical procedures were used. Because two independent groups of students were present and because the dependent variables were interval level data, a two-way mixed analysis of variance (ANOVA) statistical procedure was used. A mixed ANOVA compares the mean differences between groups that have been split on two "factors" (also known as independent variables), where one factor is a "within-subjects" factor and the other factor is a "between-subjects" factor. The primary purpose of a mixed ANOVA is to determine if there is an interaction between these two factors on the dependent variable ("Mixed ANOVA," n.d., para. 1).

For the first research question involving report card grade average differences in four core classes (i.e., English/Language Arts, Math, Science, and Social Studies)

between students who participated in the school-based mentoring program and students who were in the control group, four separate two-way ANOVAs were calculated, with repeated measures on the 8 grading periods over the two year time period. In each case, two groups were present and the dependent variable of grade point average constituted interval level data. The conventional alpha level of .05 was used to determine the presence of statistical significance for these statistical analyses. That is, an alpha level of .05 or below was interpreted to mean that the difference between the averages of these two groups was highly unlikely to have occurred by chance.

With respect to the second research question regarding attendance between students who participated in the school-based mentoring program and students who were in the control group, a two-way repeated measures ANOVA was calculated. Again, two student groups were present and the dependent variable of attendance constituted interval level data. The conventional alpha level of .05 was again used to determine the presence of statistical significance for these statistical analyses.

Regarding the third research question on discipline referrals between students who participated in the school-based mentoring program and students who were in the control group, a two-way repeated measures ANOVA was conducted. Two student groups are again present and the dependent variable of discipline referrals comprised ratio level data. Congruent with the inferential statistical analyses for the first two research questions, an alpha level of .05, customary in educational research, was used to determine the presence of statistical significance.

Finally, for the last two research questions involving TAKS Math and Reading scale scores for students who participated in the school-based mentoring program and students, two two-way repeated measures ANOVAs was calculated; one for each subject area. Two student groups were again present, and the dependent variables of the TAKS Math and Reading scale scores constituted interval level data. The conventional alpha level of .05 was used to infer the presence of statistically significant results for these analyses.

For any statistically significant results at the .05 level, the effect size or practical significance was ascertained. Not only is it important to know whether a result is highly unlikely to have occurred by chance, it is also very important to know the importance or relevance of the result. Reporting effect sizes is beneficial because "they provide an objective measure of the importance of an effect" (Field, 2005, p. 32). To what extent does the result matter? In the case of this research investigation, the effect size can provide information on the magnitude of the impact of the school-based mentoring program. Because two-way repeated measures ANOVA were calculated to answer the research questions, Wilks' Lambda (λ) distribution constituted the effect size metric. A Wilks' λ distribution aims to test whether there are differences between the means of identified groups of subjects on a combination of dependent variables.

CHAPTER IV

RESULTS

Introduction

The purpose of this study was to evaluate the effectiveness of the ISAGE school-based mentoring program for junior high school students in Grades 7 and 8 in Utopia ISD, which is located in a southwestern United States, suburban school district. This study occurred over a two-year period, during the 2009-10 and 2010-11 school years, in which the school years began at the end of August and lasted until the end of May. Used in this study were current junior high school teachers, who operated within the constraints of the traditional junior high school schedule for "at-risk" junior high school students. The study aimed to add to the body of research on school-based mentoring programs at the junior high school level and extend the research on interventions in secondary school settings.

This chapter includes the results of this study. Results of data analysis are presented in the order in which the research questions were tested. The dependent variables included report card grade averages in core classes, attendance, discipline referrals, TAKS Math scale scores, and TAKS Reading scale scores. For these variables, a two-way, repeated measures mixed analysis of variance (ANOVA), with repeated measures on time, was used. The statistical analyses were performed in the Statistical Package for the Social Sciences (SPSS), version 22.0.0, to analyze group differences, changes across times, and the possible interaction effect of group membership with change across time. Prior to conducting the analysis, dependent

variables were inspected to screen data for normality and homogeneity of variance/covariance matrices. Assumptions for performing repeated measures ANOVA were met. For all analyses conducted, alpha was set at a value of .05.

In this study, the following research questions were addressed:

1. What is the difference in report card grade averages in core classes (i.e., English/Language Arts, Math, Science, and Social Studies) between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
2. What is the difference in attendance between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
3. What is the difference in discipline referrals between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
4. What is the difference in the TAKS (Texas Assessment of Knowledge and Skills) Mathematics scale scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
5. What is the difference in the TAKS Reading scale scores between students who participated in the school-based mentoring program and students who

were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

Research Question #1

What is the difference in report card grade averages in core classes (i.e., English/Language Arts, Math, Science, and Social Studies) between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

A two-way repeated measures ANOVA was used to analyze the effects of mentoring on student's report card grade averages in English/Language Arts, Math, Science, and Social Studies. Report card grading periods were based on a nine week grading period, making four grading periods for Year 1 and four grading periods for Year 2. Therefore, there were 8 grading periods, which were the repeated measures in this analysis. Multivariate tests and descriptive statistics were evaluated to determine if any significant differences or interactions exist in report card grades for the four core subjects in either the treatment or control groups from Year 1 to Year 2.

Upon analysis of the English/Language Arts statistics, it was concluded that no statistically significant interaction exists, Wilks' $\lambda = .946$, $F\ (7, 64) = .526$, $p = .812$, $\eta^2 = .054$. An illustration of the non-interaction is displayed in Figure 1. In addition, there were no significant main effects on the groups or time using both the between-subjects and within-subjects testing. The means and standard deviations for report card grade averages for English/Language Arts are reported in Table 3. The means for report card

grades for the four grading periods for the treatment group for Year 1 and Year 2 can be seen in Figure 2. Conversely, the means for Year 1 and Year 2 for the four report card grade averages for the control group are illustrated in Figure 3. In summary, the report card grade averages were not significantly different through time for either the treatment or control groups. Last, when looking at the standard deviations as reported in Table 3, a reduction in variability occurs for both groups as the school years conclude. This reduction in variability will be discussed in further detail in Chapter V.

Table 3

Means and Standard Deviations for English/Language Arts Report Card Averages for Participants

Time	**Grading Period**	**Group**	***M***	***SD***	***N***
Year 1	1	Treatment	80.14	15.31	36
		Control	78.72	16.05	36
	2	Treatment	78.36	14.90	36
		Control	77.61	16.94	36
	3	Treatment	77.75	8.02	36
		Control	76.78	16.11	36
	4	Treatment	78.22	7.85	36
		Control	79.36	7.45	36
Year 2	1	Treatment	79.61	15.71	36
		Control	81.14	6.40	36
	2	Treatment	80.22	15.48	36
		Control	81.50	6.64	36
	3	Treatment	81.94	6.39	36
		Control	81.97	5.03	36
	4	Treatment	83.25	6.52	36
		Control	80.61	9.24	36

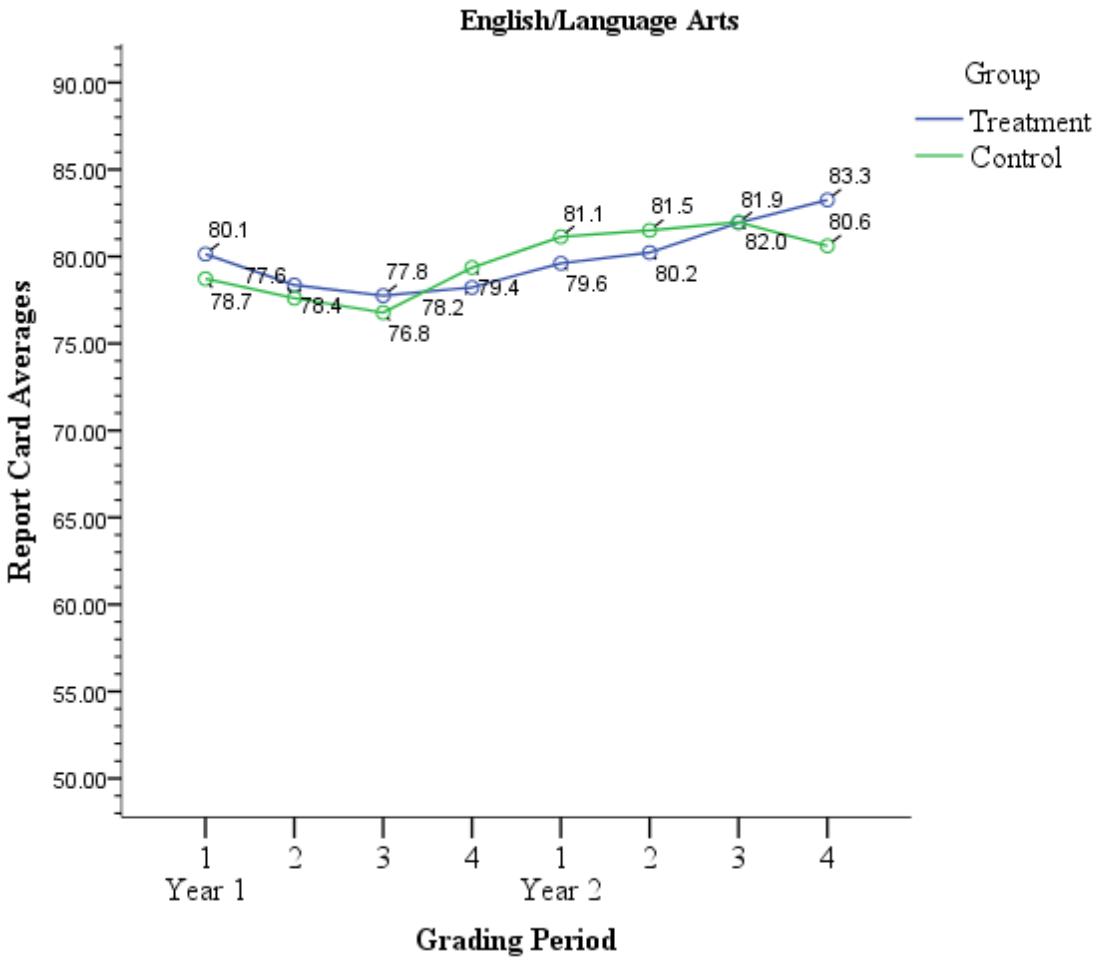

Figure 1. English/Language Arts Report Card Grade Averages

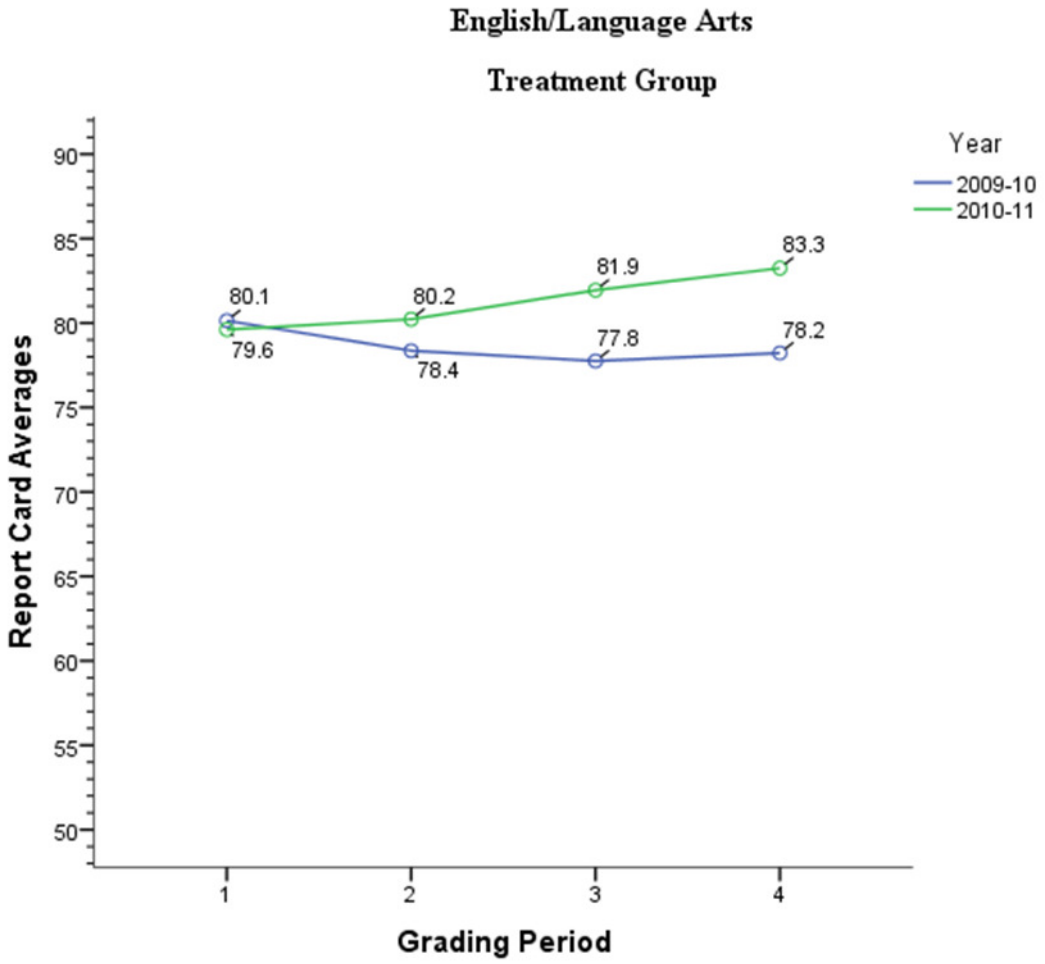

Figure 2. English/Language Arts Treatment Group Report Card Grade Averages

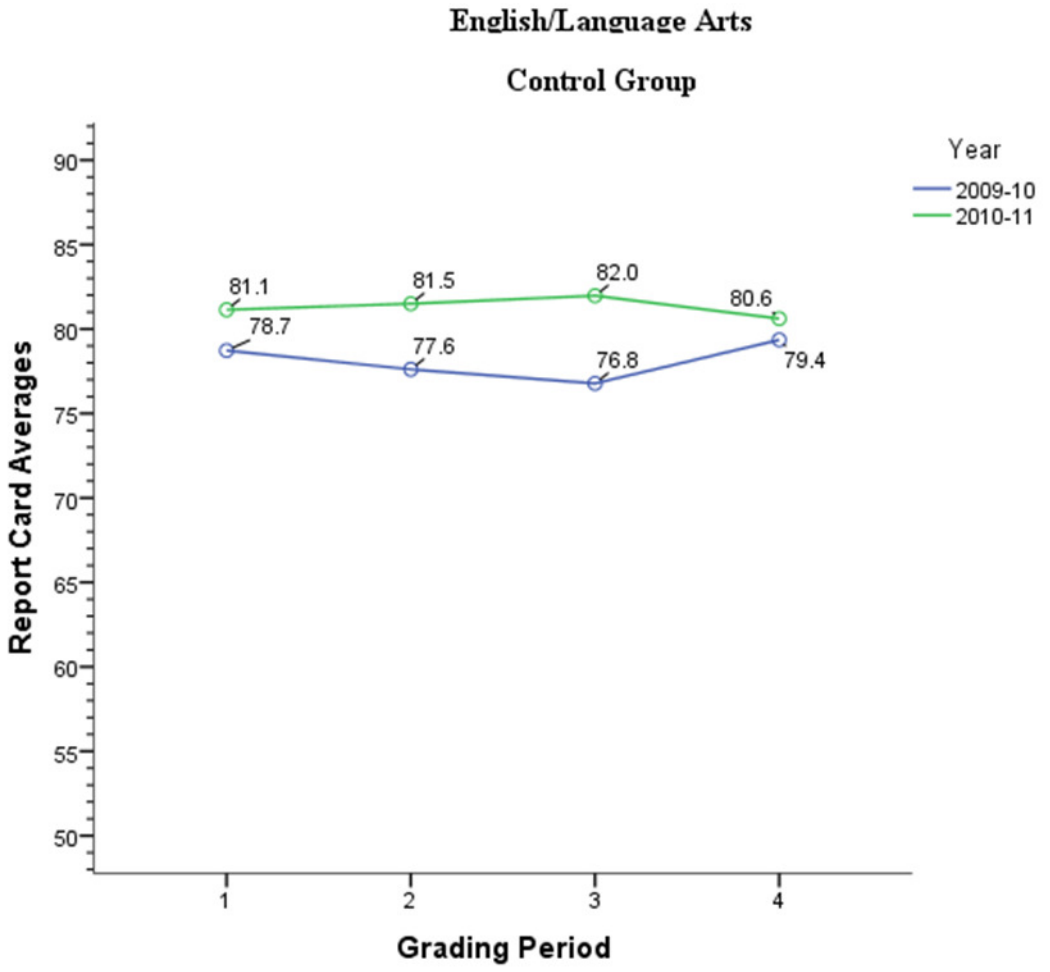

Figure 3. English/Language Arts Control Report Card Grade Averages

After reviewing the statistics for the report card averages for Mathematics, it was concluded that no statistically significant interaction exists, Wilks' $\lambda = .632$, $F\ (7, 64) = .728$, $p = .728$, $\eta^2 = .065$. An illustration of the non-interaction is displayed in Figure 4. Similar to English/Language Arts, there were no significant main effects on the groups or time using both the between-subjects and within-subjects testing. The means and standard deviations for report card grade averages for Mathematics are reported in Table

4. The means for report card grades for the four grading periods for the treatment group in Year 1 and Year 2 can be seen in Figure 5. On the other hand, the means in Year 1 and Year 2 for the four report card grade averages for the control group are shown in Figure 6. Despite no group effect, the means for the treatment group were higher than those of the control group for 6 out of the 8 grading periods during the two year period. In addition, similar to the variances in the English/Language Arts results, the variability is less at the end of both years for the Mathematics report card averages.

Table 4

Means and Standard Deviations for Math Report Card Averages for Participants

Time	**Grading Period**	**Group**	***M***	***SD***	***N***
Year 1	1	Treatment	78.92	15.81	36
		Control	77.11	15.42	36
	2	Treatment	75.92	15.66	36
		Control	73.83	14.59	36
	3	Treatment	76.81	8.86	36
		Control	74.03	15.21	36
	4	Treatment	76.22	9.16	36
		Control	75.22	9.39	36
Year 2	1	Treatment	74.86	19.48	36
		Control	76.94	8.21	36
	2	Treatment	73.31	19.80	36
		Control	73.53	8.41	36
	3	Treatment	78.19	9.37	36
		Control	75.33	10.47	36
	4	Treatment	81.08	8.42	36
		Control	76.72	9.92	36

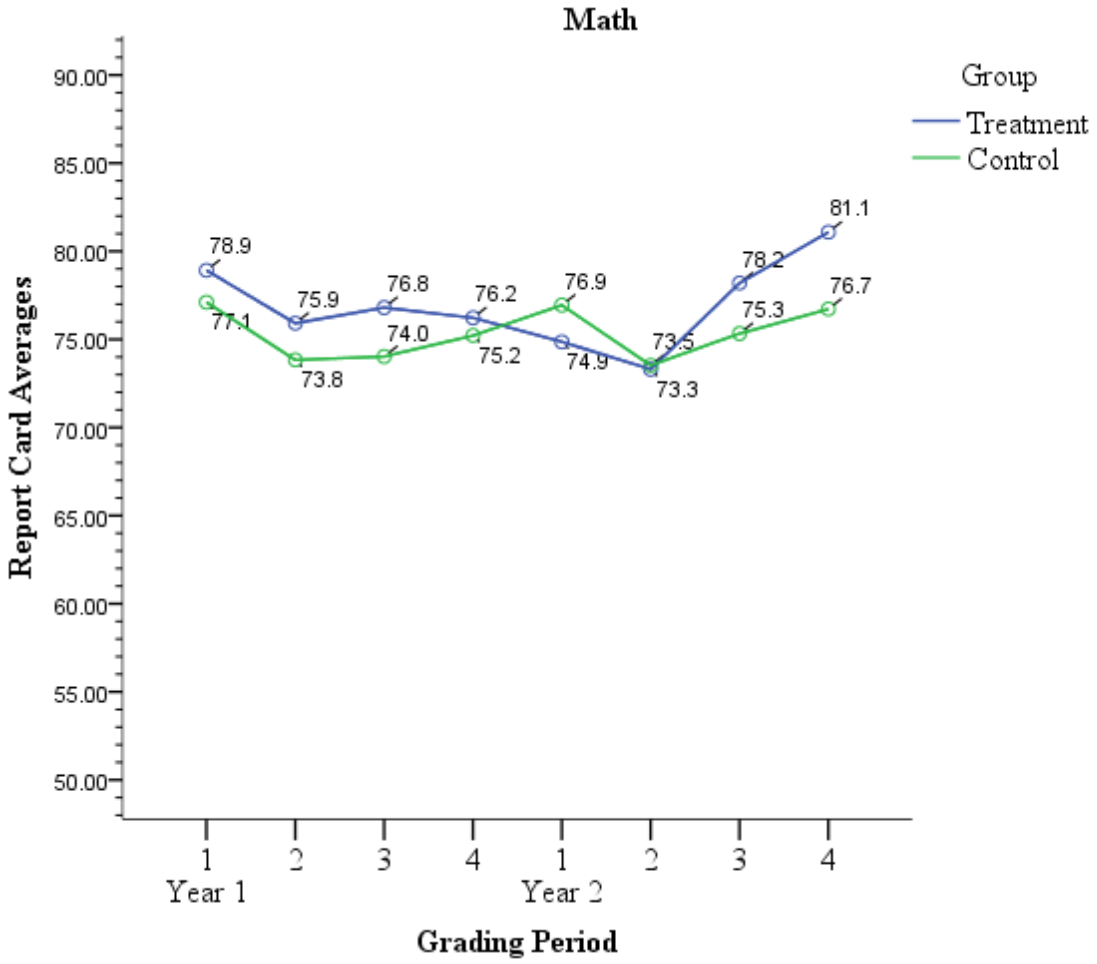

Figure 4. Math Report Card Grade Averages

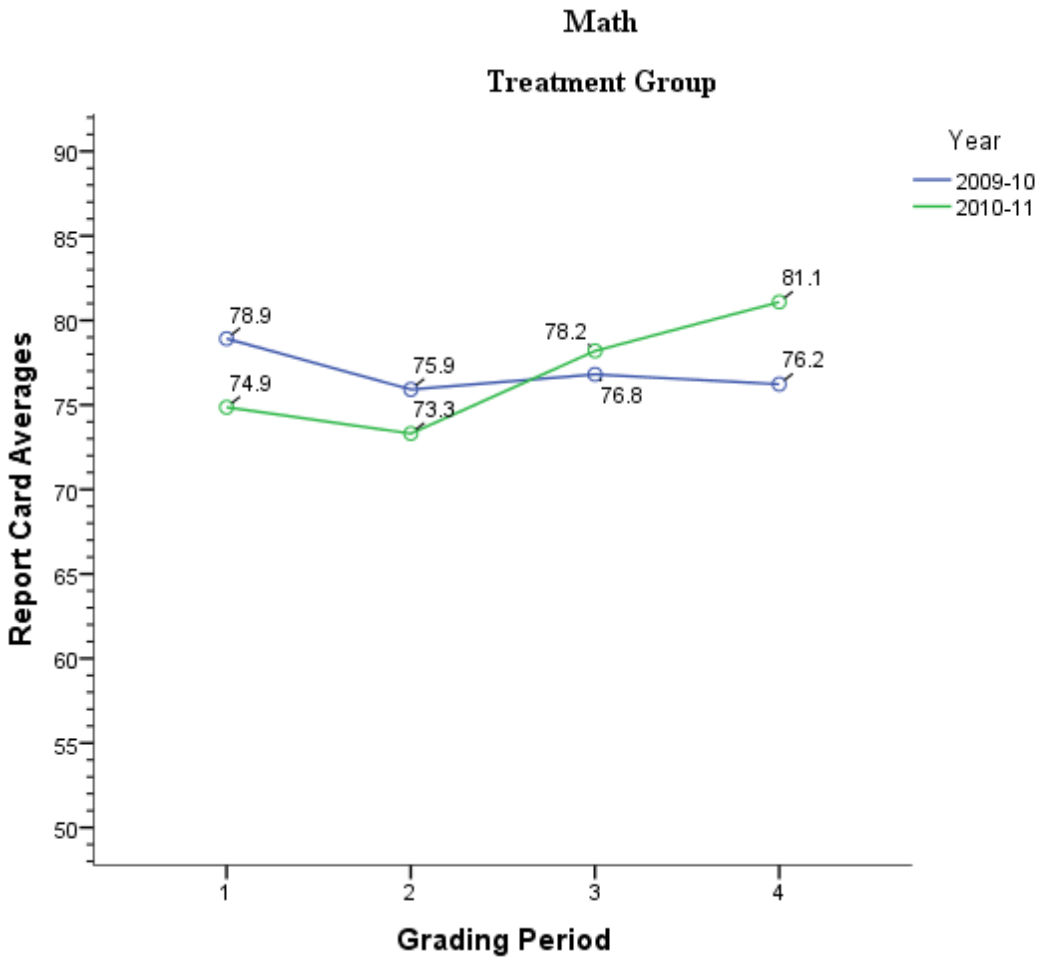

Figure 5. Math Treatment Group Report Card Grade Averages

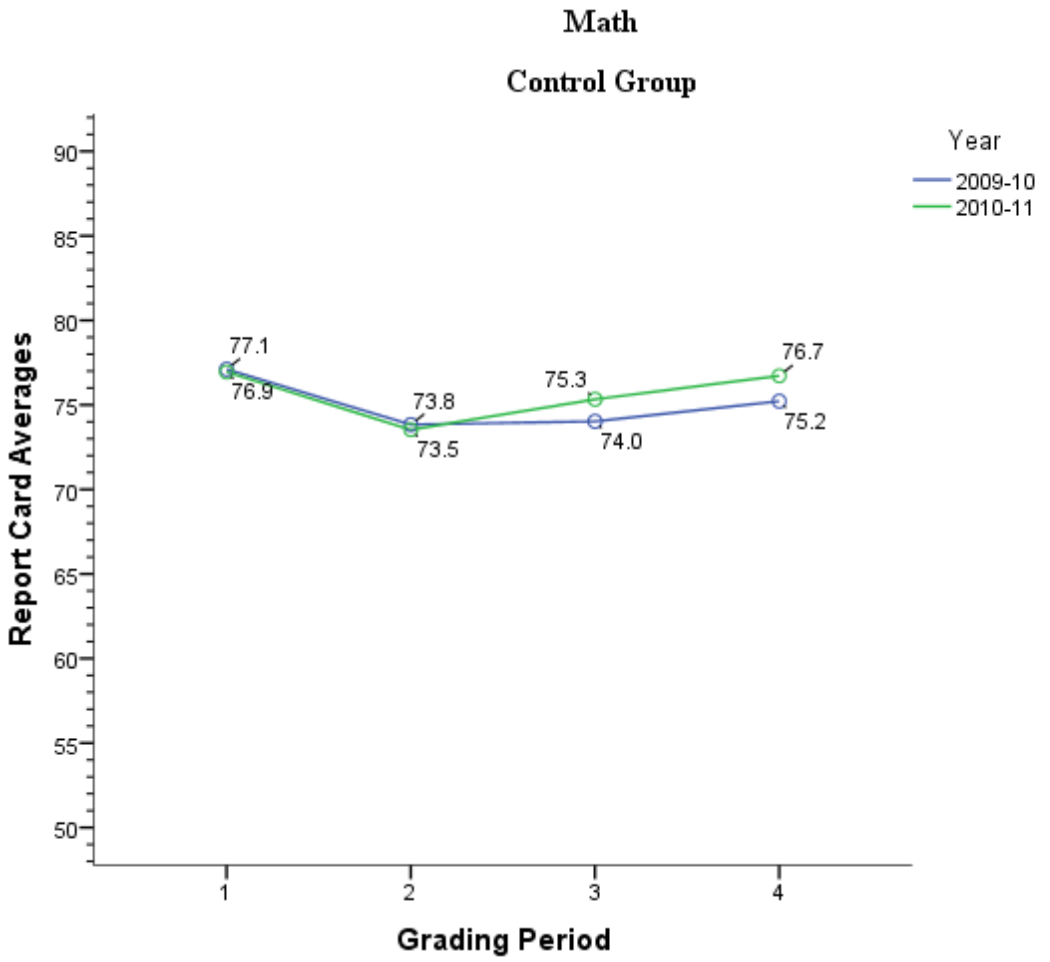

Figure 6. Math Control Group Report Card Grade Averages

Last, similar to English/Language Arts and Math, the statistical analysis for Science report card grade averages found no significant interaction to exist between the treatment and control groups over time, Wilks' $\lambda = .856$, $F\ (7, 64) = 1.536$, $p = .171$, $\eta^2 = .042$. An illustration of the non-interaction is displayed in Figure 7. In addition, there were no significant main effects on the groups or time using both the between-subjects and within-subjects testing. The means and standard deviations for report card grade

averages for Science are reported in Table 5. The means for report card grades for the four grading periods for the treatment group in Year 1 and Year 2 are shown in Figure 8. In addition, the means and standard deviations in Year 1 and Year 2 for the four report card grade averages for the control group are illustrated in Figure 9. Although the mean averages for the treatment group remained higher throughout the two years, both groups followed similar patterns. Both groups' averages increased and decreased at almost identical levels for six out of the eight grading periods.

Table 5

Means and Standard Deviations for Science Report Card Averages for Participants

Time	**Grading Period**	**Group**	***M***	***SD***	***N***
Year 1	1	Treatment	78.67	15.65	36
		Control	77.58	15.45	36
	2	Treatment	79.61	15.49	36
		Control	76.25	15.16	36
	3	Treatment	80.89	5.44	36
		Control	76.61	5.44	36
	4	Treatment	78.14	7.29	36
		Control	78.06	8.62	36
Year 2	1	Treatment	78.75	14.63	36
		Control	81.64	7.04	36
	2	Treatment	76.69	14.59	36
		Control	76.92	9.14	36
	3	Treatment	77.64	10.73	36
		Control	74.03	11.38	36
	4	Treatment	78.97	8.12	36
		Control	78.75	7.92	36

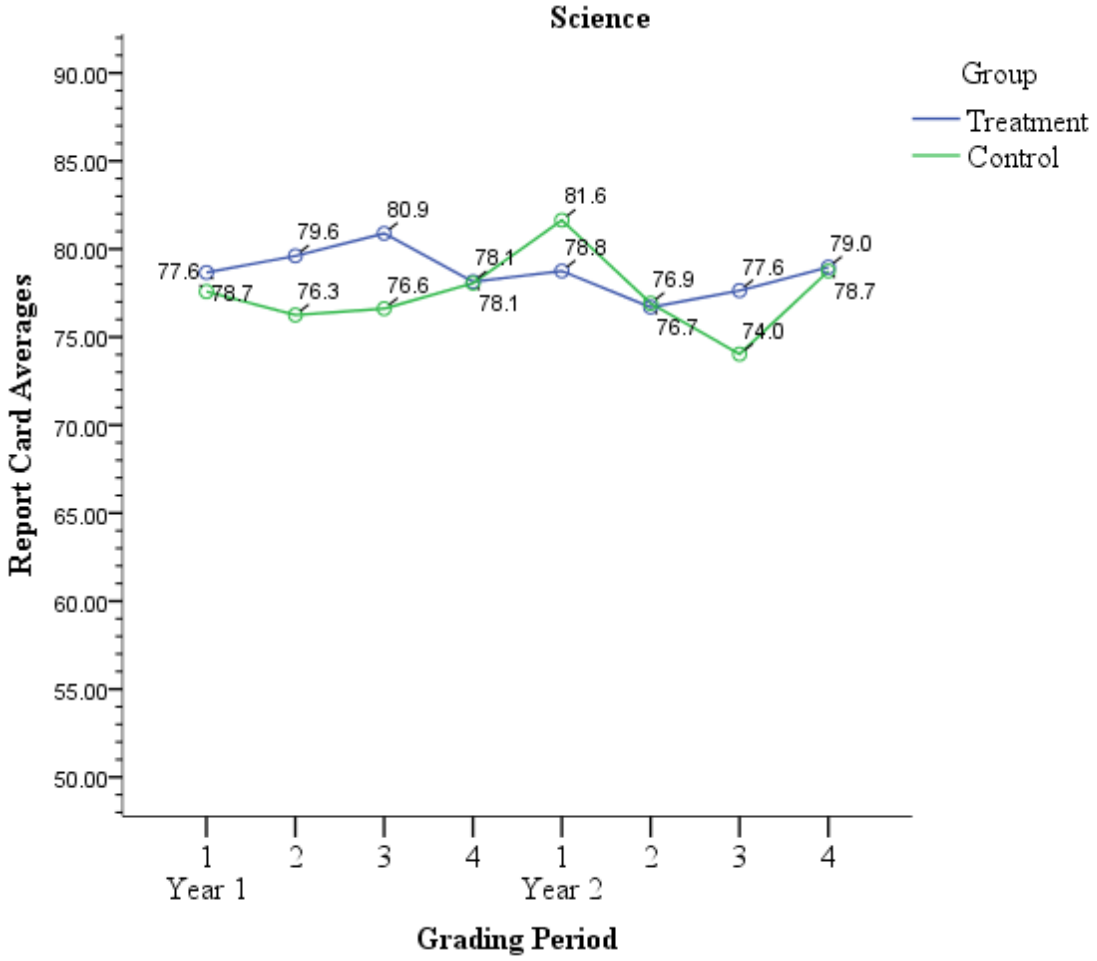

Figure 7. Science Report Card Grade Averages

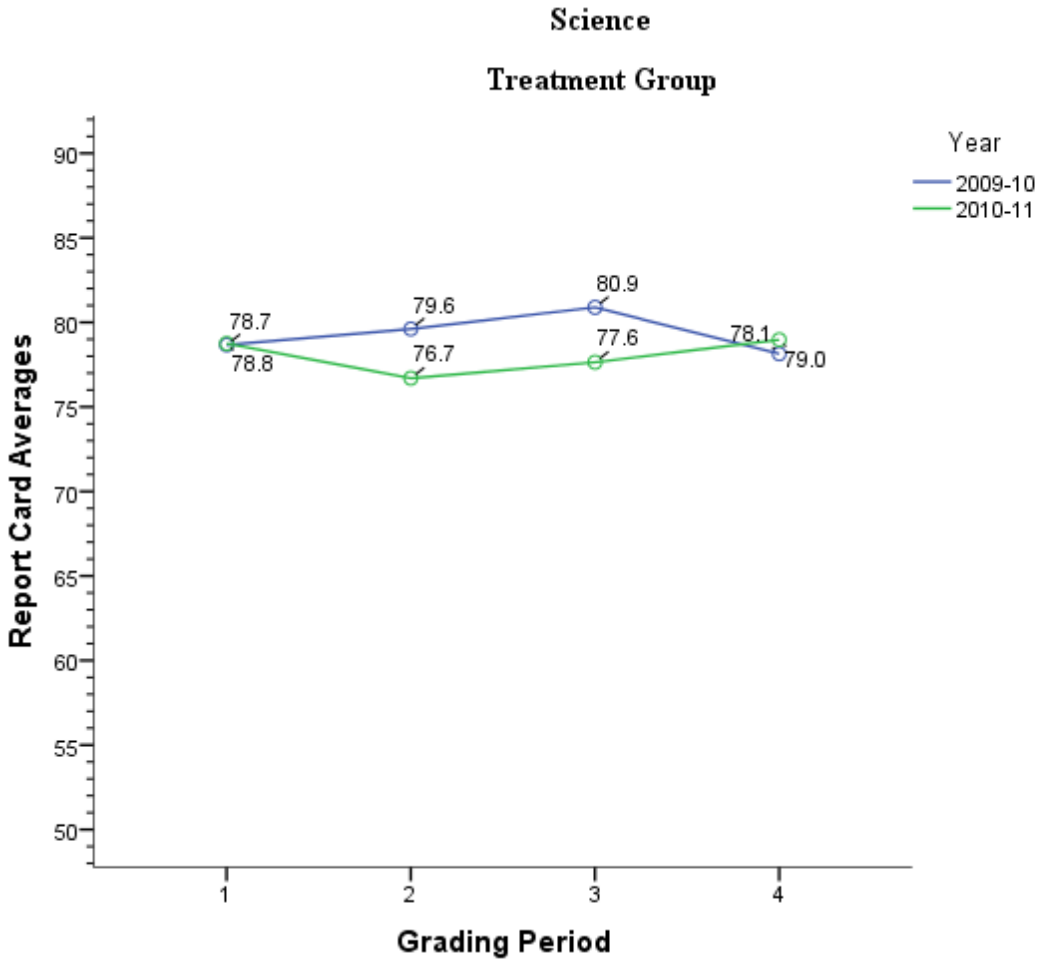

Figure 8. Science Treatment Group Report Card Grade Averages

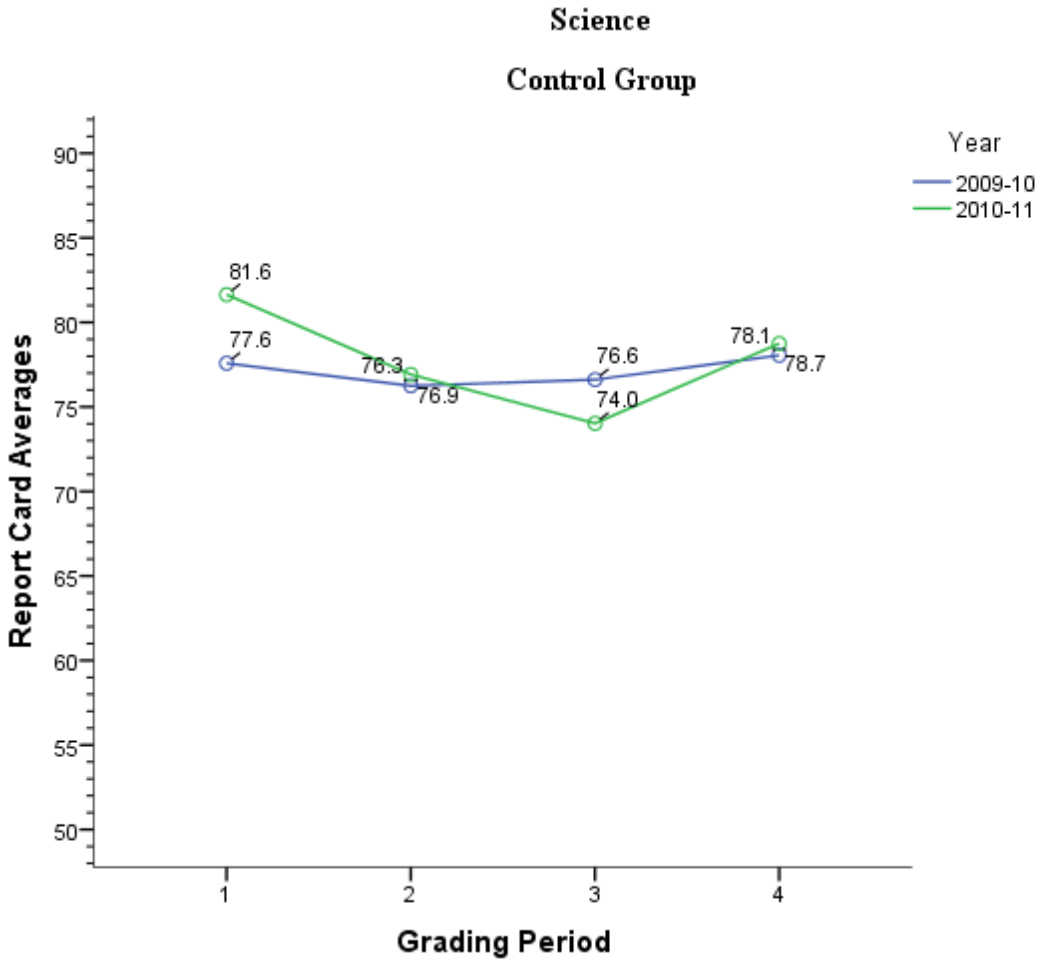

Figure 9. Science Control Group Report Card Grade Averages

Regarding the Social Studies report card grade averages, the multivariate tests revealed no significant interaction between the groups over time, Wilks' $\lambda = .958$, F (7, 64) = .405, $p = .896$, $\eta^2 = .042$. An illustration of the non-interaction is displayed in Figure 10. In addition, there were no significant main effects on the groups or time using both the between-subjects and within-subjects testing. The means and standard deviations for report card grade averages for Social Studies are reported in Table 6. The

means for report card grades for the four grading periods for the treatment group in Year 1 and Year 2 can be seen in Figure 11. Conversely, the means in Year 1 and Year 2 for the four report card grade averages for the control group are illustrated in Figure 12. Although the mean averages for the treatment group remained higher throughout the two years, both groups followed similar patterns. Both groups' averages increased and decreased at almost identical levels for six out of the eight grading periods.

Table 6

Means and Standard Deviations for Social Studies Report Card Averages for Participants

Time	Grading Period	Group	*M*	*SD*	*N*
Year 1	1	Treatment	81.56	16.21	36
		Control	79.53	15.71	36
	2	Treatment	79.83	16.13	36
		Control	78.17	15.43	36
	3	Treatment	81.89	8.35	36
		Control	78.92	15.59	36
	4	Treatment	82.39	9.17	36
		Control	80.75	7.16	36
Year 2	1	Treatment	81.94	15.92	36
		Control	80.78	8.48	36
	2	Treatment	79.39	15.20	36
		Control	77.19	8.25	36
	3	Treatment	83.17	9.03	36
		Control	78.11	8.49	36
	4	Treatment	82.75	6.90	36
		Control	78.39	8.03	36

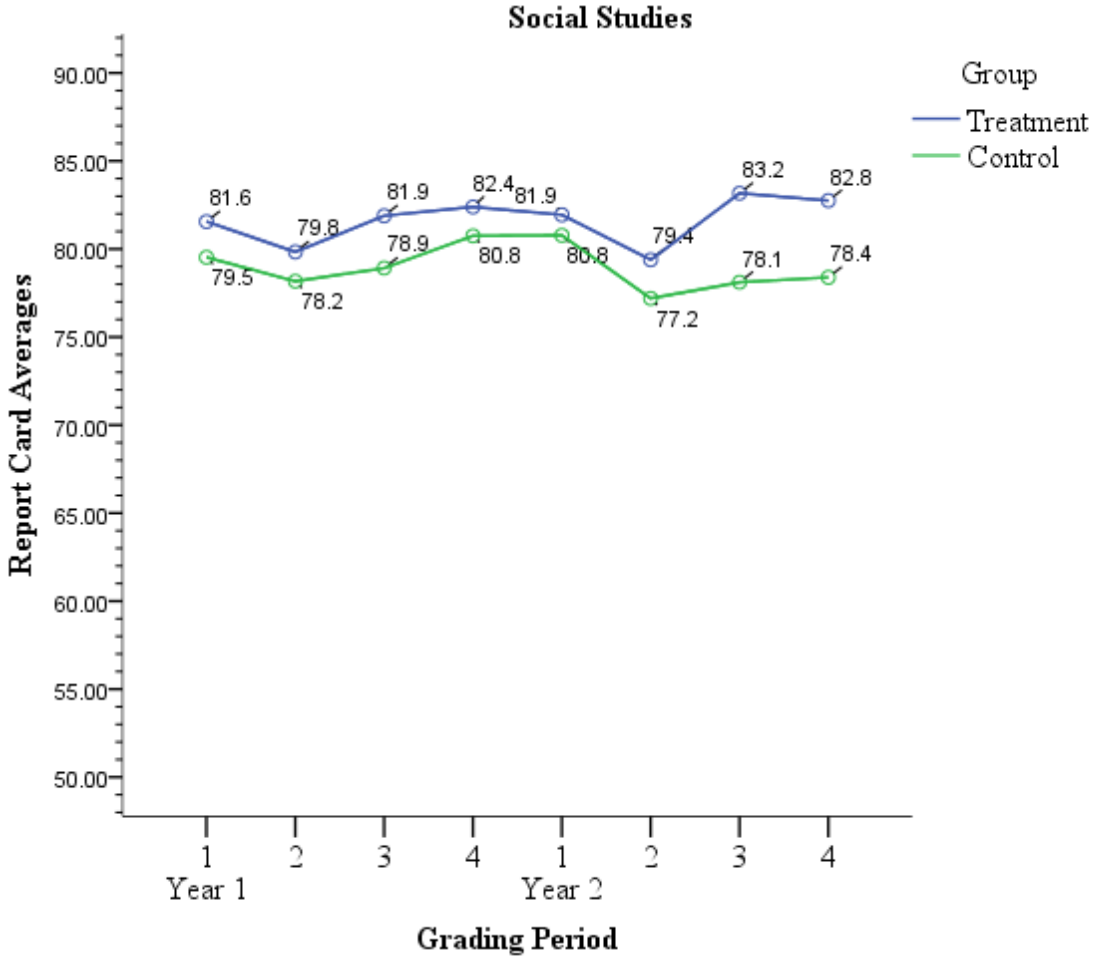

Figure 10. Social Studies Report Card Grade Averages

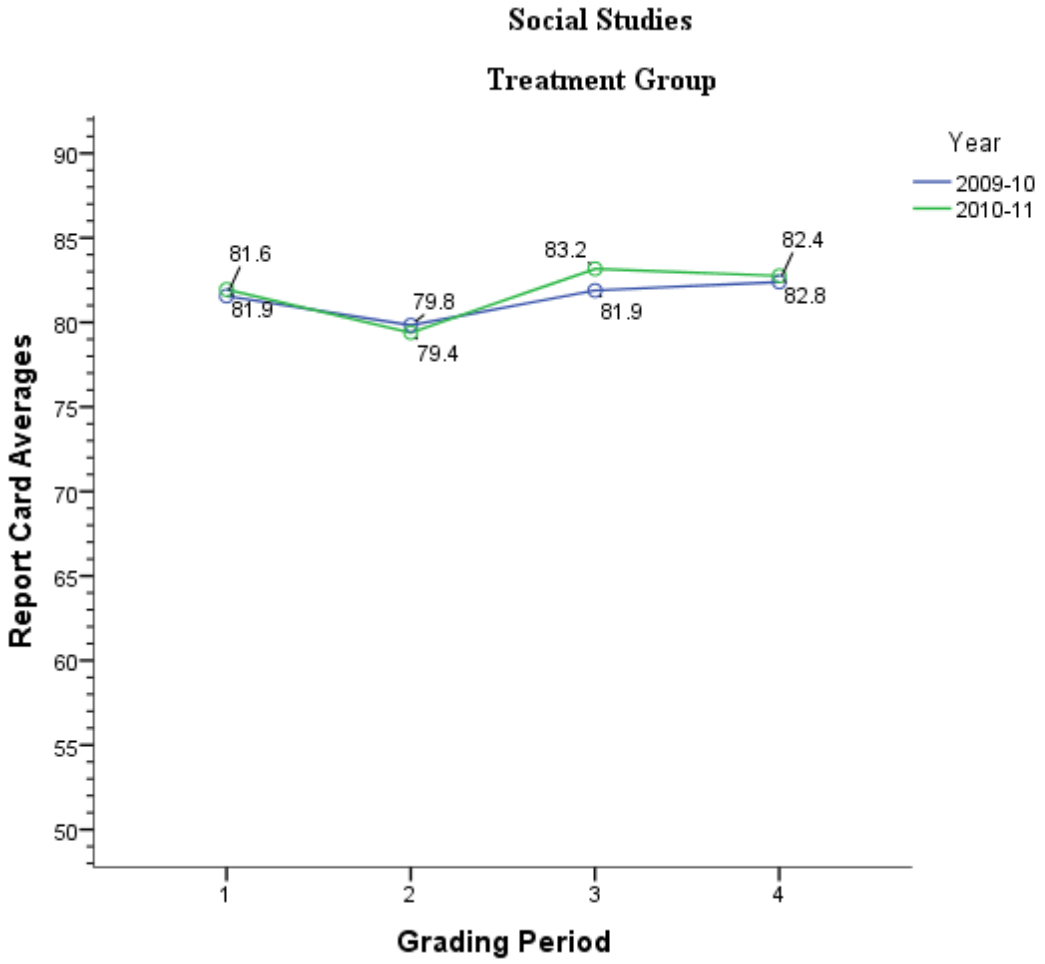

Figure 11. Social Studies Treatment Group Report Card Grade Averages

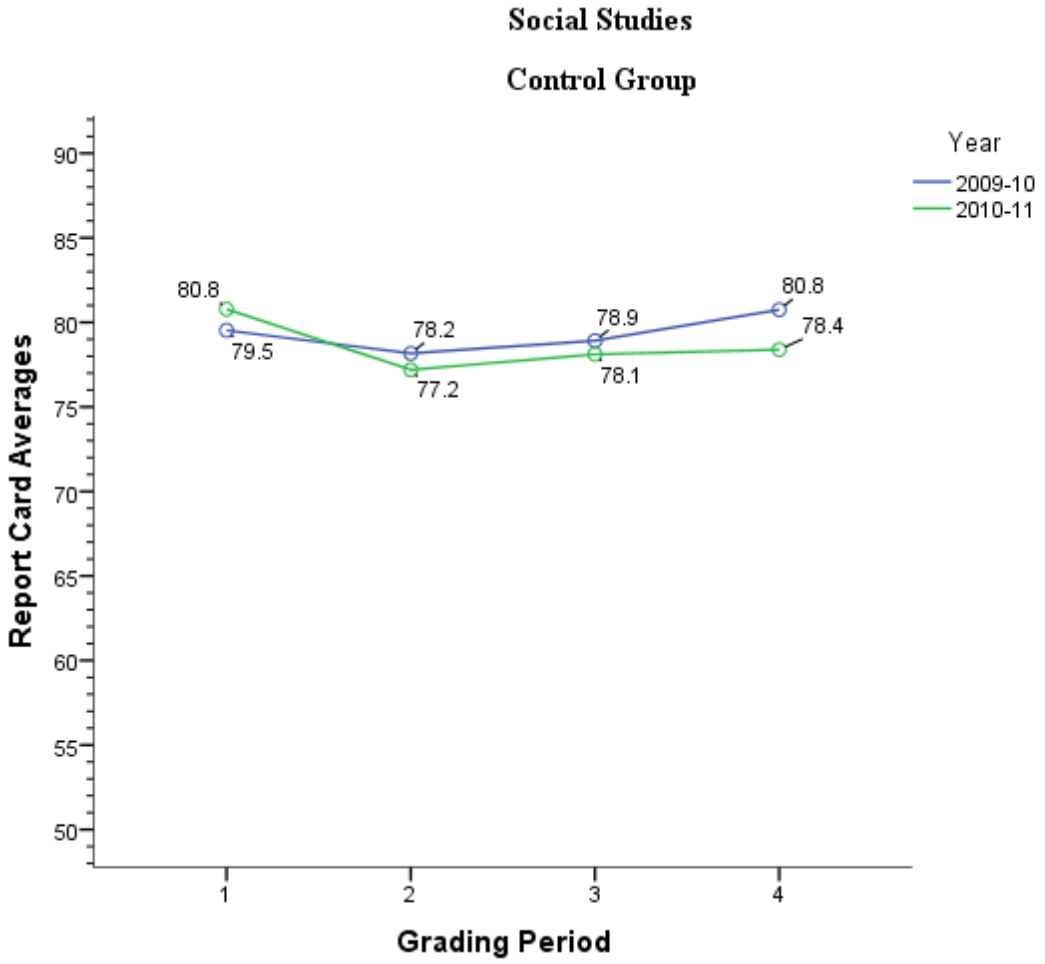

Figure 12. Social Studies Control Group Report Card Grade Averages

Research Question #2

What is the difference in attendance between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

A two-way repeated measures ANOVA was used to examine the impact of mentoring on school attendance. Furthermore, the attendance of students in the

treatment group was compared with that of students in the control group over a consecutive two school-year period.

There was no statistically significant interaction between group means, Wilks' $\lambda = .999$, $F\ (1, 69) = .07$, $p = .80$, $\eta^2 = .001$. An illustration of the non-interaction is displayed in Figure 13. When analyzing the between-subjects effects, it was found that a significant group effect exists, $F\ (1, 69) = 4.03$, $p = .049$, $\eta^2 = .055$. The means and standard deviation for attendance data are reported in Table 7. Although not statistically significant, the number of absences slightly decreased across time for the students in the treatment group, while slightly increasing for those in the control group. Interestingly, over both periods of time, absenteeism was lower for the treatment group. Illustrated in Figure 13, students who were included in the treatment group had a lower mean for absenteeism for 2010-2011 than students in the control group over the same period of time, respectively.

Table 7

Means and Standard Deviations for Participants' Absences

Time	**Group**	***M***	***SD***	***N***
Year 1	Treatment	4.60	2.79	36
	Control	6.06	4.95	36
Year 2	Treatment	4.54	3.82	36
	Control	6.31	4.86	36

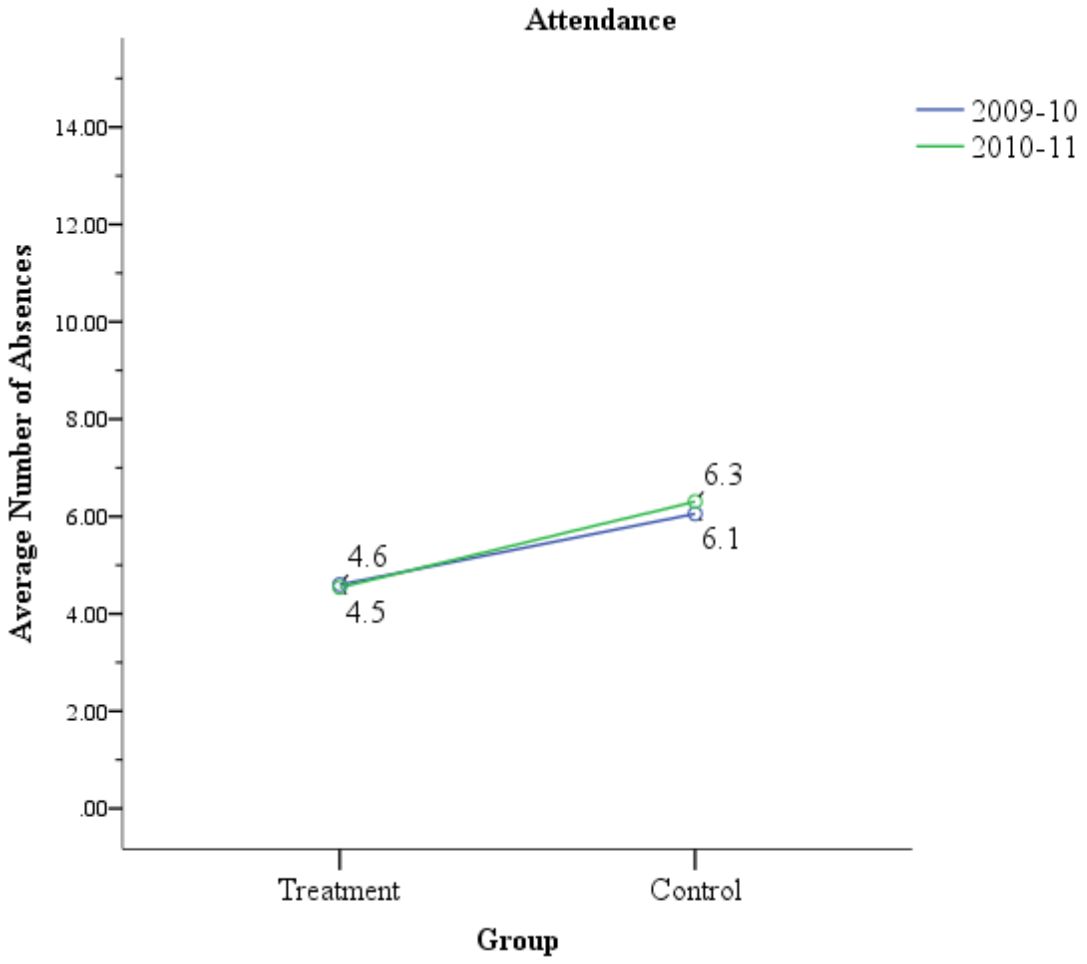

Figure 13. Average Number of Absences

Research Question #3

What is the difference in discipline referrals between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

A two-way repeated measures ANOVA was used to examine the impact of mentoring on the number of school discipline referrals. Moreover, the number of

discipline referrals for mentored students was compared with that of non-mentored students over a consecutive two school-year period.

A statistically significant interaction effect exists between the treatment group and control group over time, Wilks' $\lambda = .935$, $F\ (1, 70) = 4.89$, $p = .03$, $\eta^2 = .065$. An illustration of the interaction is displayed in Figure 14. The means and standard deviation for the discipline referral data are reported in Table 8. As one can see, the means between both groups beginning in Year 1 were relatively similar. After Year 2, the impact of the mentoring was evident as the mean number of discipline referrals for the control group increased significantly, while the mean for the treatment group remained almost unchanged.

Table 8

Means and Standard Deviations for Participants' Discipline Referrals

Time	**Group**	***M***	***SD***	***N***
Year 1	Treatment	2.86	7.06	36
	Control	2.03	4.26	36
Year 2	Treatment	2.64	10.05	36
	Control	4.89	7.95	36

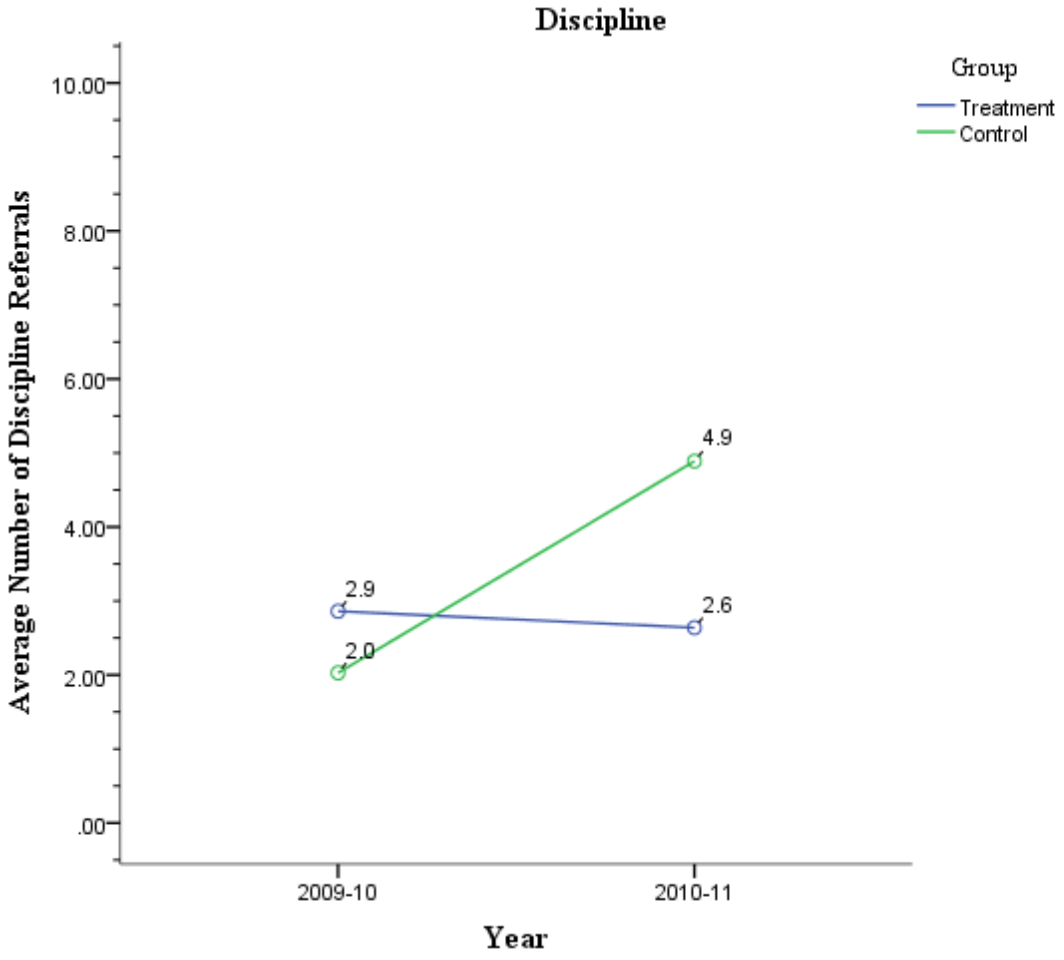

Figure 14. Average Number of Discipline Referrals

Research Question #4

What is the difference in the TAKS (Texas Assessment of Knowledge and Skills) Mathematics scale scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

A two-way repeated measures ANOVA was used to examine the impact of mentoring on TAKS Mathematics scale scores. The researcher was interested to see if participating in a mentor program caused a significant difference in the post-test TAKS scores for the mentees when compared to their TAKS Math scale scores administered the year before, prior to the mentoring occurring. Additionally, the researcher aimed to determine if there was significant growth from the pre-test and post-test periods for both the treatment and control groups.

A statistically significant interaction effect exists between the treatment and control groups, Wilks' $\lambda = .941$, $F\ (1, 70) = 4.37$, $p = .04$, $\eta^2 = .059$. An illustration of the interaction is displayed in Figure 15. The means and standard deviation for the TAKS Math scale scores are reported in Table 9. At Year 1, the means for the treatment and control groups were basically the same. At Year 2, there was a significant increase in the TAKS Math scores for the treatment group, while the scores for the control group remained almost unchanged. The means and standard deviations for both groups can be found in Table 9.

Table 9

Means and Standard Deviations for TAKS Math Participants

Time	**Group**	***M***	***SD***	***N***
Year 1	Treatment	650.78	19.31	36
	Control	656.22	22.24	36
Year 2	Treatment	711.36	51.88	36
	Control	672.11	123.43	36

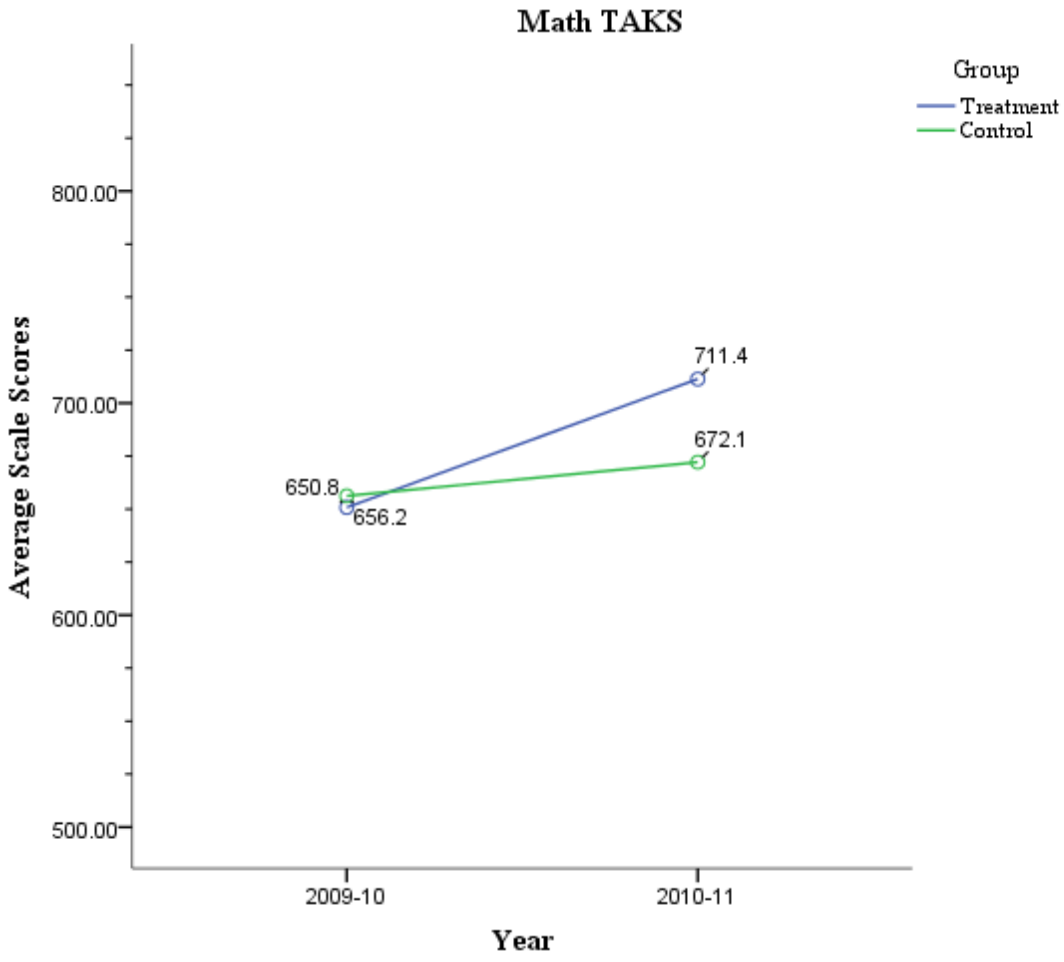

Figure 15. Math TAKS Average Scale Scores

Research Question #5

What is the difference in the TAKS Reading scale scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

A two-way repeated measures ANOVA was used to examine the impact of mentoring on TAKS Reading scale scores. The researcher was interested to see if participating in a mentor program caused a significant difference in the post-test TAKS scores for the mentees when compared to their TAKS Reading scale scores administered the year before, prior to the mentoring occurring. Additionally, the researcher aimed to determine if there was significant growth from the pre-test and post-test periods for both the treatment and control groups.

After analysis, it was determined that no statistically significant interaction effect exists between the group means of the treatment and control groups, Wilks' $\lambda = .980$, $F(1, 68) = 1.39$, $p = .24$, $\eta^2 = .02$. An illustration of the non-interaction is displayed in Figure 16. Although no interaction exists, the within-subjects test revealed a significant change in reading levels for both groups, $F(1, 68) = 13.30$, $p = .001$. The means and standard deviation for the TAKS Reading scale scores are reported in Table 10. At Year 1, the means for the treatment and control groups were approximately 45 points apart. At the conclusion of Year 2, the gap was closed considerably, as the means for both groups were only separated by approximately 16 points.

Table 10

Means and Standard Deviations for Reading TAKS Participants

Time	**Group**	***M***	***SD***	***N***
Year 1	Treatment	700.44	59.49	34
	Control	745.28	280.40	36
Year 2	Treatment	758.21	77.01	34
	Control	774.81	277.80	36

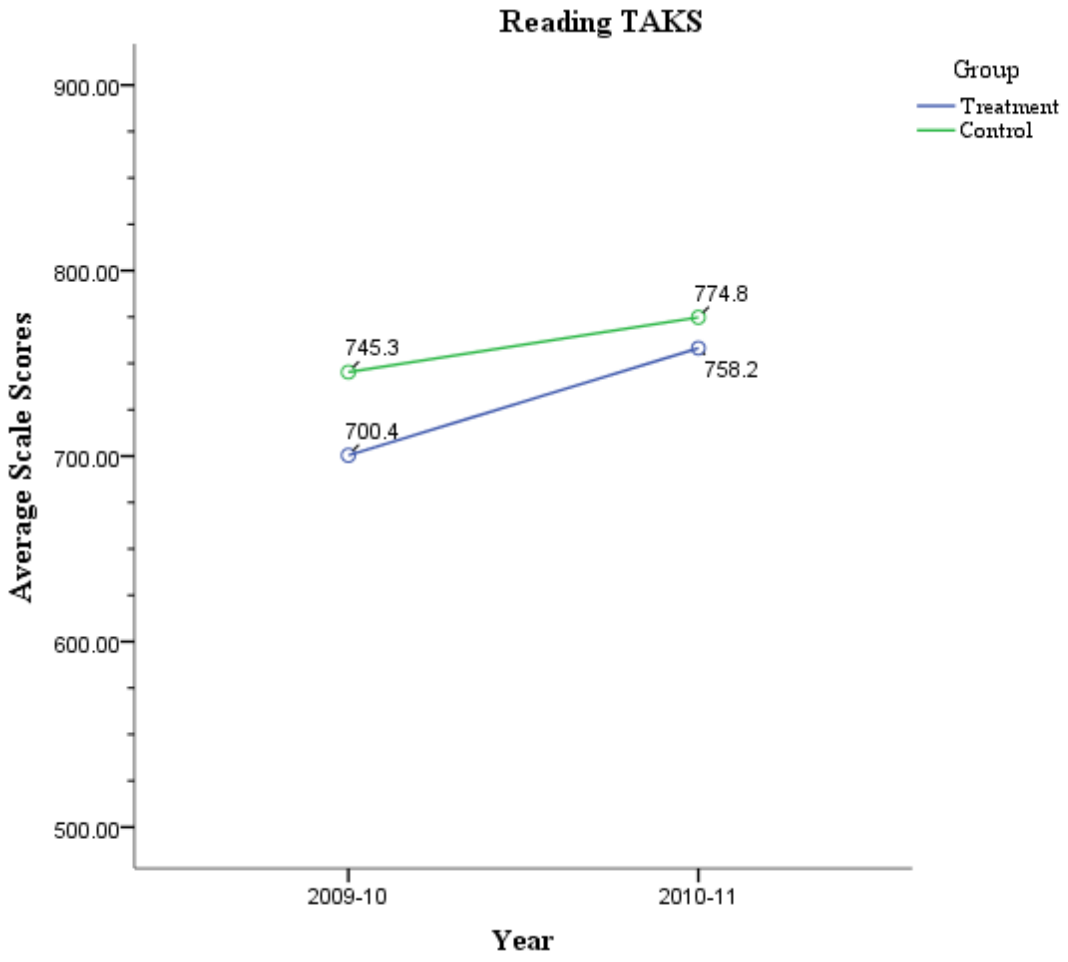

Figure 16. Reading TAKS Average Scale Scores

Summary

The findings of the study indicated that the ISAGE program showed significant effects in the number of student's discipline referrals along with the TAKS Math scale scores. No significant differences were observed for mentees' report card grade averages in core classes, attendance, or TAKS Reading scale scores. Chapter V will explore the findings in further detail, offering explanations as to why the mentoring

program failed to statistically impact certain variables. In addition, implications and limitations along with future recommendations for future studies will be discussed.

CHAPTER V

CONCLUSIONS

The ISAGE study examined the impact of a comprehensive school-based mentoring program on the following variables: core academic report card grade averages, attendance, discipline referrals, and TAKS scale scores in Math and Reading. This study used quantitative research instruments, in which the primary source of data was derived from instruments created locally to record information pertaining to the dependent variables. In addition, standardized test scores were retrieved from computerized student records. Mentors were required to record the quantitative data throughout the duration of the mentoring relationship. This study covered a consecutive two year span, which included the 2009-2010 and 2010-2011 school years. The following research questions guided this study:

1. What is the difference in report card grade averages in core classes (i.e., English/Language Arts, Math, Science, and Social Studies) between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?
2. What is the difference in attendance between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

3. What is the difference in discipline referrals between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

4. What is the difference in the TAKS (Texas Assessment of Knowledge and Skills) Mathematics scale scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

5. What is the difference in the TAKS Reading scale scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

This chapter will include a description of major findings for each research question, as well as how these findings compare to past research and previous studies regarding mentoring "at-risk" youth. This will be followed by the implications and limitations of this study and will conclude with recommendations and suggestions for further studies.

Research Question #1

What is the difference in report card grade averages in core classes (i.e., English/Language Arts, Math, Science, and Social Studies) between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

The first research question focused on whether there was significant difference in academic performance as measured by report card grade averages in the four core areas (English/Language Arts, Math, Science, and Social Studies) between mentored and non-mentored students. The data utilized were the participant's averages from each grading period throughout Year 1 and Year 2 for all four subjects, which consisted of 4 grading periods per year.

The results for all four core report card averages revealed there were no significant differences between the treatment and control groups across the two year period. In addition, the outcomes indicated no significant differences within each group across time as well. Overall, this study revealed that students did not see any significant change based on their participation in the ISAGE mentor program. Despite fluctuations in the report card averages throughout the two year period, there were no substantial improvements in any subject for either group from start to finish.

For English/Language Arts and Math, both groups began Year 1 with similar means, with a difference of only 1.42 points in English/Language Arts and a difference of 1.81 points in Math, respectively. Both groups exhibited similar trends throughout the grading periods, with the English/Language Arts averages decreasing from grading periods 1-3 in Year 1, while the Math report card averages for both groups decreased from periods 1-2 in Year 1 and 5-6 in Year 2. For the most part, the treatment and control groups for each subject showed a steady increase throughout the remainder of the grading periods to finish 2.64 points apart at the last grading period for English/Language Arts and 4.36 points apart in Math. Despite small in nature, both

groups showed overall improvement in English/Language Arts and Math report card averages from the start of Year 1 until the end of Year 2.

Even though no significant interaction existed with the Science report card averages, the results indicated the most opposite trends for the treatment and control groups than in any other content area. For Year 1, the groups exhibited an inverse relationship in means until having only a .08 points difference at the final grading period. During Year 2, both groups increased and decreased in means during the first and second grading periods, while showing opposite results for the third grading period. Last, both groups increased for the final grading period of Year 2, with the treatment group finishing only .22 points higher than the control group.

For Social Studies, the trends in the means for report card averages for the treatment and control groups were almost identical for the two year period. Both groups increased and declined in their means throughout all of the same periods except for one. Coinciding with Math, the treatment group finished 4.36 points higher than the control group after the final grading period in Year 2.

Similar to the findings conducted by Cantu (2013), these results differ from other research results concerning mentor programs and improved academic outcomes, particularly related to report card grades or GPAs. The findings for King et al. (2002) and Karcher (2008) found mentor programs showed significant and positive change when related to report card grades. On the contrary, Slicker and Palmer (1993) assessed the effectiveness of a school-based mentoring program in a large, suburban school district in Texas. The authors evaluated 86 tenth grade "at-risk" students with initial

results showing that there were no differences in student achievement between the treatment group and the control group. However, after post hoc tests were conducted, the findings illustrated variations in the quality of mentoring. This possibility is explored in the limitations section of this chapter.

Although no statistical significance exists in this study between the report card averages for core subjects and mentoring, the means for the treatment group for all subject areas improved over time. The highest increases were illustrated in the areas of English/Language Arts and Math, with overall gains of 2.14 points for Math and 3.11 points in English/Language Arts, from the beginning of Year 1 to the end of Year 2.

Despite no appreciable differences being apparent in the core averages, another point of interest would be the reduction in variability during the third and fourth nine weeks of the second year of the study, 2010-11. It could be argued that the teachers were much more comfortable with the mentoring of their students during this time. One would expect that the treatment for Year 2 would take effect at the latter part of the year, so this could be an illustration of the program in action.

These outcomes are similar to the results of the research cited earlier by King et al. (2002), Karcher (2008), and Thompson and Kelly-Vance (2001). Furthermore, Jekielek et al. (2002) found modest gains in the participants' grade point averages over time when examining the Big Brothers Big Sisters program. Also, Bergin and Bergin (2009), Blue (2004), and Herrera, Grossman, Kauh, and McMaken (2011) posited that grades improve for students when they have a positive adult relationship within the school environment (Cantu, 2013).

As the principal of one of the junior high schools involved in this study, I have to admit that I was somewhat disappointed when I realized that the ISAGE mentoring program had no statistical effect on the participants' core report card grade averages. I have reflected on the possible reasons for this insignificance. One of the possible reasons that continued to come to the forefront revolved around the overall condition of the schools. For the most part, these two junior high schools involved in the study were considered healthy and successful schools. Both schools have been deemed "Recognized" schools under the state's accountability system. Both schools have adequate support systems in place for the different learners that attend. Therefore, I do not believe that the major achievement gaps that may exist in some schools across the nation are present in the schools involved in this study, thus creating a more narrow range for improvement when pertaining to grade averages for students. Collectively speaking, the overall core report card grade averages for all participants involved could be considered average or above average before and after the study.

Research Question #2

What is the difference in attendance between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

Research Question #2 concentrated on whether mentoring had a statistically significant impact on the attendance rates of the student participants. Attendance was measured by the number of days each student was absent from school and the number of times tardy to school. Pre and post attendance data were retrieved for the 2009-2010 and

2010-2011 school years from computerized student records. Although absenteeism improved for the treatment group over the two year period, the results showed that no significant interaction exists over the two year period. There was, however, a main effect for the treatment and control groups.

In general, the average mean for the treatment group is less than that of the control group. The mean number of absences for the treatment group was 4.60 at the start of Year 1, while decreasing to 4.54 absences at the end of Year 2. On the contrary, the mean absences for the control group were 6.06 absences for the beginning of Year 1, while increasing to 6.31 absences at the conclusion of Year 2.

The frequency breakdown of absences for the treatment and control groups in Year 2 is worth noting. 35 of the 36 students in the treatment group had 10 or fewer absences for the 2010-11 school year, while 28 out of the 36 students in the control group had 10 or fewer absences during that same time. The remaining 8 students in the control group fell in the range of 11-20 absences.

The findings from this study seem to contradict results from previous research. Previous research of mentoring programs has shown significant improvements on attendance. For example, the study conducted by Tierney (1995) on the effectiveness of the Big Brothers Big Sisters program, which consisted of 959 "at-risk" participants, 487 youths in the treatment group and 472 in the control group, ranging from 10-16 years of age, showed that the mentoring program was successful in improving the absenteeism rates. In addition, King et al. (2002) and Converse and Lignugaris/Kraft (2009), indicated a decrease in absenteeism for youth involved in a mentoring program, as

students have more of a purpose to attend school if they are connected to a caring adult. Similar with this current study, however, in their comparative analysis of three studies involving Big Brothers Big Sisters of America, Communities in Schools of San Antonio, and grantees of the U.S. Department of Education's Student Mentoring Program, Wheeler, Keller and Dubois (2010) found that school-based mentoring can be modestly effective for improving selected outcomes such as absenteeism.

When analyzing the attendance data for both junior high schools, it is important to note a few key points. The attendance rate for Utopia ISD for both school years included in this study, which also included the attendance rates for both schools, is even with the state attendance rate average. Therefore, student attendance was not a glaring issue at either junior high school. In addition, the overall attendance rates improved at both junior high schools between the 2009-10 and 2010-11 school years. Junior high school "A" experienced a 0.5% improvement in overall attendance rate over this time, while junior high school "B" realized a 0.3% improvement.

Research Question #3

What is the difference in discipline referrals between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

Research Question #3 placed emphasis on the impact that mentoring might have on student discipline. In this study, discipline was calculated by the number of times a student was assigned out-of-school suspension, in-school suspension, and detention. Pre and post discipline data were also retrieved for the 2009-2010 and 2010-2011 school

years from computerized student records. After statistical analysis, it was found that mentoring did, indeed, have a significant impact on student discipline. The mean number of discipline referrals for the treatment group decreased over the two year period from 2.86 in Year 1 to 2.64 in Year 2. The results for the control group were quite staggering. The mean number of discipline referrals for Year 1 was 2.64, which was very comparable to the treatment group in Year 1. Year 2 showed a significant increase of discipline referrals for the control group, as the mean number jumped to 4.89, more than double than the initial mark.

In addition, further tests were conducted when an outlier was removed from the treatment group for the 2010-11 school year. This student had received 60 discipline referrals over the course of Year 2. An independent *t*-test was conducted, which determined that a significant difference exists between the treatment and control groups during Year 2, further illustrating the impact that mentoring had on the variable of discipline referrals.

Results from this study support the findings from previous research regarding the effects of mentoring on student discipline and behavior. White-Hood (1993), Tierney et al. (2000), and Jekielek et al. (2002) also found significant improvements in student behavior for those participating in a mentoring program, realizing that youth who participated in mentoring programs experienced fewer incidents of physical violence against others and reduced drug and alcohol use. Likewise, King et al. (2002) determined that effective school-based mentoring programs correlate with improved school behavior.

The statistical significance found in this study for the discipline variable was encouraging in a number of ways. First, I know that all mentors involved from both of the junior high schools made it a top priority to develop and maintain positive relationships with their mentees throughout the year. I believe this focus helped drive the continued efforts of mentors ~~working~~ to encourage and help students make the right choices regarding their behavior. Second, it is evident to me that a large majority of the students felt a connection with their mentor. As a result, they did not want to behave in a way that would disappoint their mentor. Last, I believe that this significant impact offers positive validation for future mentoring programs, which if designed properly, should also see favorable results when pertaining to the exhibited behaviors of the students involved.

Research Question #4

What is the difference in the TAKS (Texas Assessment of Knowledge and Skills) Mathematics scale scores between students who participated in the school-based mentoring program and students who were in the control group during the 2010-2011 school year from that of the 2009-2010 school year?

Research Question #4 evaluated whether a significant difference existed in the TAKS Math scale scores between mentored and non-mentored students. The TAKS Math scale scores were available through computerized student records. Pre and post standardized testing data for the 2009-2010 and 2010-2011 school years were retrieved for all students involved in this study. This study found that mentoring had a significant effect on the TAKS Math scale scores. The mean scale score for the pre-test data for the

treatment group was 650.78. After mentoring had occurred for those students, their mean scale scores increased to 711.36, an overall gain of 60.58 points. On the contrary, the mean pre-test scale score for the control group was 656.22, while the post-test mean scale score was 672.11, an increase of 15.89 points.

Results from this study pertaining to standardized testing in math support previous research which finds that the academic outcomes often improve, if only slightly, when associated with a student mentoring program. Case in point, Hansen (2007) and the U.S. Department of Education (2009) cited improved academic outcomes as a direct result of a student mentoring program as determined by standardized academic achievement tests (Cantu, 2013).

As the principal of one of the schools involved in this study, it is not completely clear as to why the mentoring program had a significant effect on the Math TAKS scores, which leads me to a few thoughts for speculation. This result could be strictly coincidental. Given the mentor selection process, the significance might be due to a stronger math background for the mentors overall, thus allowing them to possibly offer more academic interventions in math related coursework. In addition, the learning gaps in math might have been easier to close for the mentees. Last, the mentees might have had more experienced teachers for their math classes when comparing them to other disciplines such as English/Language Arts.

Research Question #5

What is the difference in the TAKS Reading scale scores between students who participated in the school-based mentoring program and students who were in the

control group during the 2010-2011 school year from that of the 2009-2010 school year?

Research Question #5 attempted to determine if mentoring had a significant effect on the TAKS Reading scale scores between mentored and non-mentored students. The TAKS Reading scale scores were available through computerized student records. Pre and post standardized testing data for the 2009-2010 and 2010-2011 school years were retrieved for all students involved in this study. This study found that mentoring had no statistically significant effect on the TAKS Reading scale scores for the participants in the mentoring program.

Although no significant interaction exists, the findings might still prove beneficial. The pre-test mean scale score for the treatment group was 700.44, while the mean post-test scale score was 758.21, an improvement of 57.77 points. Despite the control group also showing improvement over the two year period, the improvement was only a 29.53 point increase, from 745.28 in Year 1 to 774.81 in Year 2.

These findings challenge the previous studies which support the claims that mentoring has positive academic outcomes on student participants. As mentioned earlier, Hansen (2007) and the U.S. Department of Education (2009) found that mentoring had a positive, significant impact on standardized test scores.

As mentioned earlier in the discussion for Research Question #4, the reasons for the lack of significance regarding the Reading TAKS scores are unknown. Again, this finding could be due to pedagogical reasons. It may also be due to the mentee's inability to solve their reading deficiencies because of a higher level of difficulty on the cognitive

side for students. In the end, it may also be just a mere coincidence that the mentoring program failed to impact the Reading TAKS scores.

Implications

The results from the ISAGE school-based mentoring study indicate that there was not a statistically significant relationship between school-based mentoring and report card grade averages of core classes, attendance, and TAKS Reading scale scores. The study did illustrate, however, that there was statistically significant relationship between school-based mentoring and student discipline, along with TAKS Math scale scores. In addition, the results from this study also showed positive trends with several of the variables despite no significant relationship. This study adds to the existing limited research on school-based mentoring programs and suggests that programs must be designed in ways that aligns to previous research.

Previous research has shown that the duration of the mentoring relationship is a critical component of the mentoring process. According to Grossman and Rhodes (2002), youth involved in mentoring relationships which exceeded a year reported positive results in academic, psychosocial, and behavioral outcomes; whereas those students whose mentoring relationships failed to last a year obtained fewer positive effects. The ISAGE study lasted for approximately 28 weeks, with the mentors and mentees meeting for a minimum of one hour per week. The ISAGE study might have realized more significant findings had the duration of the mentoring relationship lasted longer than a 7 month period. It might also be beneficial to require the mentors and mentees to meet more than just one hour per week. Despite the school year lasting only

9 months, it is extremely important to design a mentoring program that maximizes the entire time to promote the best opportunities for a successful mentoring relationship.

As discovered in the Coffman (2009) study, a primary focus must remain on the quality of the mentor-mentee relationship in a school-based mentoring program. As with the Dupuis (2012) study, the outcomes of this study might have been strengthened by regularly evaluating the quality of the mentoring relationship. It would be helpful for the mentors to have a protocol for structured, or detailed, activities to complete during the mentoring meetings, along with instruments to record the progress or data pertained to the meetings. This would allow the meetings to be more purposeful and might add more positive results to the relationship. This protocol could be created through direct observations of meetings between mentors and mentees, offering useful data to create interventions with fidelity. By obtaining this research on sound, effective mentoring procedures, it will be possible to replicate effective school-based mentoring programs in the future (Coffman, 2009).

The training process of mentors is another key element to ensure a successful school-based mentoring program. According to Blue (2004) and Rhodes and Dubois (2008), mentors must receive ongoing, continuous training throughout the mentoring process to ensure success of the program. In the case of the ISAGE program, mentors were only required to attend a one-time best practices training at the beginning before the mentoring relationship had begun. There was no additional training involved at any point thereafter. It is also imperative to have the necessary resources available to assist and help the mentors when needed throughout the duration of the mentoring relationship.

For example, it may be necessary to have specialists available who might offer assistance to mentors to promote a healthier mentoring relationship when issues arise.

Further implications can also be found for future mentoring research regarding the sample size in this research study. According to previous mentoring research outcomes, the ISAGE study might have experienced more statistically significant results had this study utilized a larger random sample. The treatment and control groups for the ISAGE study consisted of 36 students per group. Similar with the Dupuis (2012) study, it is assumed that a lack of a random sample in this study may have resulted in a sample of higher risk students in the study group. Therefore, the ISAGE study sample size may have prevented more favorable results when compared to previous experimental studies with more successful outcomes (Tierney, Baldwin-Grossman and Resch, 1995; Herrera et al., 2007). Therefore, in alignment with previous research with more favorable findings, future school-based mentoring researchers might find more significantly positive results by using an experimental research design with a larger sample size (Dupuis, 2012).

Limitations

The amount of contact time during which students have been matched with their mentor will vary. Therefore, one limitation that exists within this study is that the results gathered will be different depending on the amount of time students have been engaged in a mentoring relationship with their respective mentee. Although mentors were required to conduct at least one contact hour per week with their mentee, the contact time was not consistent amongst mentors. This limitation has the possibility of

hindering the researcher from drawing further conclusions based on the statistical data recorded by the mentee.

A second limitation that exists is the fact that each mentor/mentee relationship will vary, which could lead to the mentees having extremely diverse experiences in the program and will naturally be reflected in participants' statistical data recorded. For consistency purposes, it might be beneficial for the mentoring relationship if students were assigned the same mentor for both years. Additionally, the possibility exists that the match between mentor and mentee may be unfavorable for the mentee. This almost guarantees that the pair will not have a productive relationship from the start. Finally, because the data will be collected by the mentors using various instruments, the mentors may be dishonest in their methods of recording the necessary information to give the perception that the mentoring relationship has been advantageous to the mentee.

Next, teacher grading procedures have proven to be a limitation in this study. In the results pertaining to the core academic report card averages, high variability exists at the beginning of each school year. This could be explained due to a lack of uniformity in grading procedures on the campus level, as teachers may exercise their subjectivity when assessing their students. This subjectivity in grading could create skewed results which might decrease the validity of the study.

Last, selection bias during the assignments between the mentors and mentees is also a limitation in this study. Some teachers were able to choose their mentees, while others may have been forced to accept a student as their mentee. When dealing with humans and relationships, selection bias may be the reality. Typically, schools may

implement a new intervention program, such as a mentoring program, and students with various issues may be "forced" upon teachers. This unwanted assignment may deter an effective teacher-student relationship, causing potential damage to the social, emotional, and academic needs for the students.

Recommendations for Future Research

As school-based mentoring serves as the fastest aspect of mentoring programs, it is crucial to continue further research to ensure maximum optimization of such future programs. Despite positive results for school-based mentoring, it is imperative that we continue to explore the favorable outcomes that school-based mentoring provides with increased accuracy (Dubois et al., 2002; Portwood et al., 2005). Furthermore, recommendations for further research resulted from this study.

First, the recommendation is needed for further research to be conducted for school-based mentoring programs for junior high or middle school students. According to Dupuis (2012), the only previous study completed in mentoring research history on the impact of school-based mentoring for middle school students was conducted by Aiello (1988). The junior high school years are crucial for "at-risk" students, as referenced by the National Education Longitudinal Study of 1988, which examined the characteristics of 25,000 eighth grade students from approximately 1,000 schools who were "at-risk" of school failure. The results of the study disclosed that the factors relating to students were more likely to have insufficient academic skills in the eighth-grade and to have dropped out of school between their eighth to tenth grade years. As

evidenced, these junior high school years can be the "make or break" years for "at-risk" youth.

Second, the extended duration of the mentoring relationship could result in more significant findings because previous mentoring research shows that more positive effects are found the longer the mentoring relationship exists (Tierney, Baldwin-Grossman & Resch, 1995; Baldwin-Grossman & Rhodes, 2002; Herrera et al., 2007). Despite the constraints of the school year calendar being an issue, it could be beneficial for the student to continue and maintain the mentoring relationship from the previous year, with the same mentor, upon return to school the following year.

Also, the recommendation is needed for further research on the mentor-mentee matching processes by which mentor programs match students to mentors. In this study, teachers, for the most part, were allowed to select their mentees by popular choice. For those students that were included in the treatment group that were not selected, they were assigned to a mentor. This assignment might have been against the mentor's and mentee's liking. The process for matching in this study might have contributed to unfavorable results. Students who have favorable perceptions of their teachers and their educational environment will be more likely to have positive results in student achievement (Wehlage & Smith, 1992; Murray & Greenberg, 2000). It seemed in this study that mentors selecting mentees did not produce the most favorable outcomes for attendance and academics. Therefore, further research on the matching procedures of mentors and mentees might provide educators with sustainable options when developing and implementing their programs.

Similar to a recommendation proposed in the Dupuis (2012) study, a recommendation is needed for further research to assess the impact of school-based mentoring from the perspective of the mentors and junior high school students participating in the mentoring program. In studies completed on school-based mentoring thus far, Herrera et al. (2007) obtained this information from mentors and students receiving mentoring in the Big Brothers Big Sisters program. In addition, as reported by Dupuis (2012), there has never been a study where mentors and mentees have evaluated their experiences in school-based mentoring programs not affiliated with Big Brothers Big Sisters. Furthermore, there has never been a study that examined this area, specifically in junior high school school-based mentoring programs. The information received from this type of study would be critical in development and implementation of successful school-based mentoring programs for junior high school students.

Another point of interest regarding future research would be the follow up process with the students involved in the treatment group of this study. These students are currently high school seniors and juniors. I believe it would be beneficial for future research to gain their perspectives on the mentoring experience 3-4 years prior, almost longitudinal in nature. In addition, one could gain some valuable information regarding the design of the program when discussing the positives and negatives of the ISAGE program. As a practitioner, I would like to see their academic progresses over the last several years to determine if the mentoring might have had any sustaining effects in certain areas.

Last, it would be beneficial to conduct case studies on the effects of school-based mentoring programs in comparison to non-school-based mentoring programs when pertaining to student achievement for secondary students. This empirical evidence could prove the overwhelming advantages of the implementation of school-based mentoring programs in relation to other mentoring programs. I believe that these case studies might also offer valuable evidence supporting the impact of a positive teacher-student relationship in a school setting.

Summary

The purpose of this study was to analyze the effectiveness of the ISAGE school-based mentoring program on student achievement for junior high school students. The results showed that mentoring did not have a significant effect on student's report card grade averages for core classes, attendance, and TAKS Reading scale scores. The mentoring did, however, have a significant effect on student discipline and TAKS Math scale scores. Despite not showing a significant effect on all variables, the results proved somewhat favorable in most areas, offering optimism for further studies to be conducted on school-based mentoring programs.

Even though favorable results were achieved in certain areas, the outcomes did not fully support previous research findings pertaining to the effects of mentoring programs on student achievement. As future research is conducted in the area of school-based mentoring, practitioners will have the opportunity to learn new, valuable information regarding quality mentoring programs. Thus, they will be able to make the

necessary adjustments and modifications to increase effectiveness on future school-based mentoring programs to maximize student achievement.

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APPENDIX A

MENTOR APPLICATION

ISAGE Mentor Application

Incentives for Students Achieving Great Expectations

Please type or print.

Name _____

Campus _____

Current Teaching Assignment _____

Please list your experiences and qualifications for mentoring:

Please describe what you hope to gain from mentoring:

Interests and Hobbies:

I would like to mentor a student who is:

- ☐ On my campus
- ☐ On another campus
- ☐ Where I'm needed

I'd prefer to mentor a student in:

☐ Elementary	☐ Jr. High	☐ High School	☐ Any grade
☐ 4th	☐ 6th	☐ 9th	
☐ 5th	☐ 7th	☐ 10th	
	☐ 8th	☐ 11th	
		☐ 12th	

If there is a specific student you'd like to mentor please fill in the information below.

Student Name _____

Reason for Request:

Revised 8/16/2010

APPENDIX B

MENTOR RELEASE STATEMENT

I, the undersigned, hereby state that if accepted as a mentor, I agree to abide by the rules and regulations of the ISAGE Mentoring Program. I understand that the program involves spending a minimum of one hour/week with the mentee and completing the required paperwork and documentation. Further, I understand that I will attend a training session, keep in regular contact with my mentee, and communicate with the campus principal during this period. I am willing to commit to one year in the program. I understand that failure to meet the stated requirements of the program can result in termination from the program and any incentive money will be forfeited.

I understand that any incentive money I earn from the ISAGE Mentoring Program is subject to taxes and other deductions.

I agree to the above conditions.

Signature of Applicant _____ Date _____

Revised 8/16/2010

APPENDIX C

STUDENT INTEREST SURVEY

ISAGE Student Interest Survey

Please answer these questions to the best of your ability. You may skip answers you find to be uncomfortable.

1. What is your favorite book from childhood?

2. What is the farthest point you've traveled away from home?

3. What is a recent movie you enjoyed, and what did you like about it?

4. What is your favorite place to be and why?

5. What is your favorite food?

6. What is your favorite kind of music?

7. What is your favorite sport?

8. To what organizations / teams / clubs do you belong?

9. Name someone you admire and tell why.

Revised 7/28/2010

10. What are two common activities you do after getting home from school.

11. What is a responsibility you have?

12. What wish do you have for someone else?

13. What do you want to do for a career?

14. What is something about which you daydream?

15. What is something about which you are curious?

16. What would the title of a book about your life be?

17. If you could go back two years ago, what advice would you give yourself?

18. Describe yourself as a friend.

19. Describe your best friend.

Revised 7/28/2010

ISAGE Student Interest Survey

1. The three things that I do best in school are:
   1. _____
   2. _____
   3. _____

2. Some of the things that I would like to work on this year are
   _____
   _____
   _____

3. I would like to learn more about _____
   _____

4. Outside of school, my favorite activity is _____
   _____

5. My hobbies are _____
   _____

6. The clubs, organizations or private lessons that I participate in are
   _____
   _____

7. My favorite sport is _____

8. The sports that I play in and out of school are _____
   _____

Revised 7/28/2010

9. My three favorite books are
   1. _____
   2. _____
   3. _____

10. One of my favorite authors is _____
    because _____

11. If I could choose between watching television, playing video games or using the computer, I would pick _____ because _____

12. I enjoy these types of reading: (circle those that apply)

Story Books	Craft/Games/Puzzles
Fiction	Fairy Tales
Non-Fiction	Geography
Comics	Sports

13. The person that I consider to be a hero is _____
    because _____

14. I have traveled to _____
    If I could pick a place to travel to, I would choose _____

15. Some of the chores and responsibilities that I have at home are _____

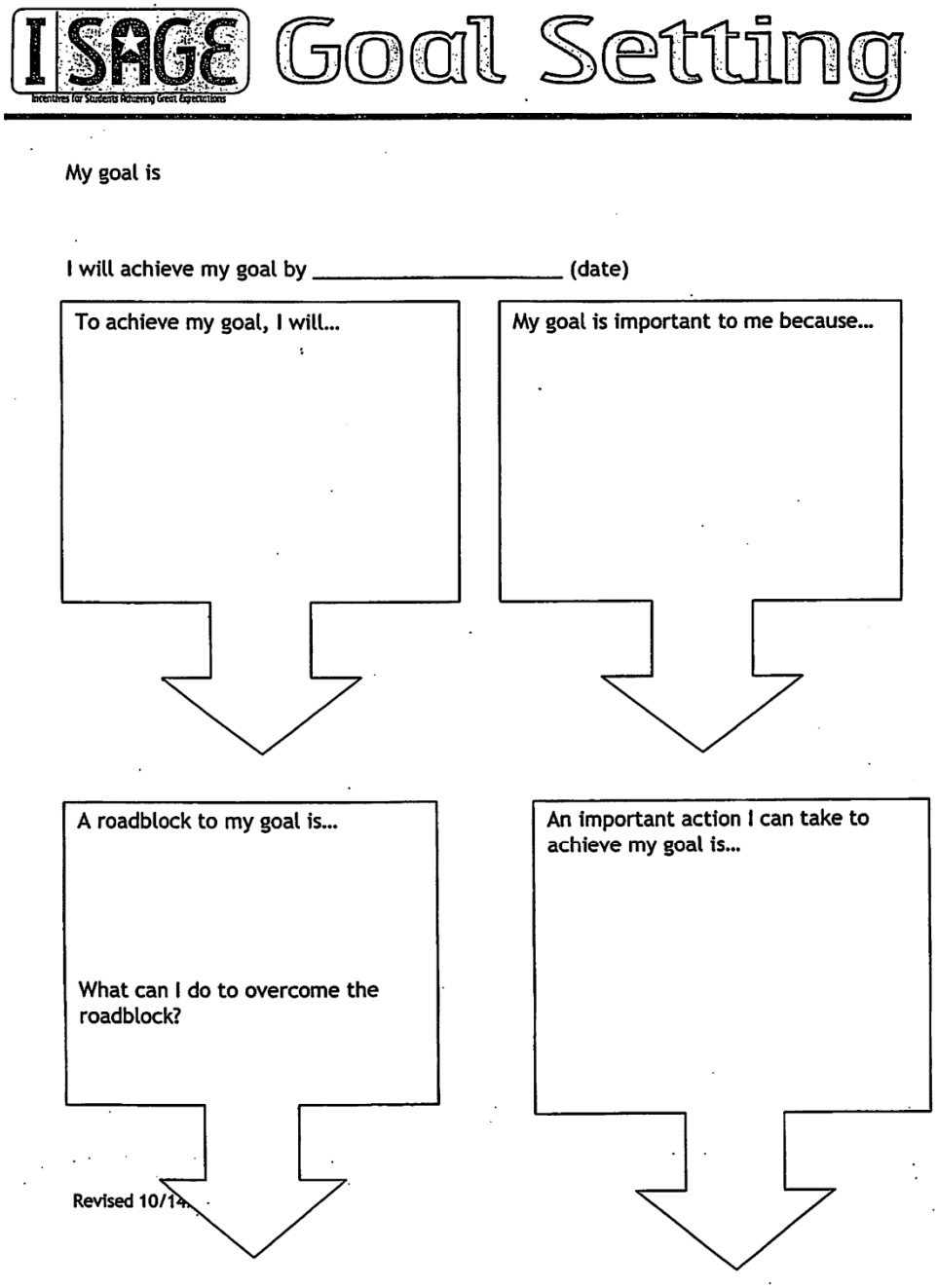
16. Three of my friends are: _____
    When I am with my friends we like to _____

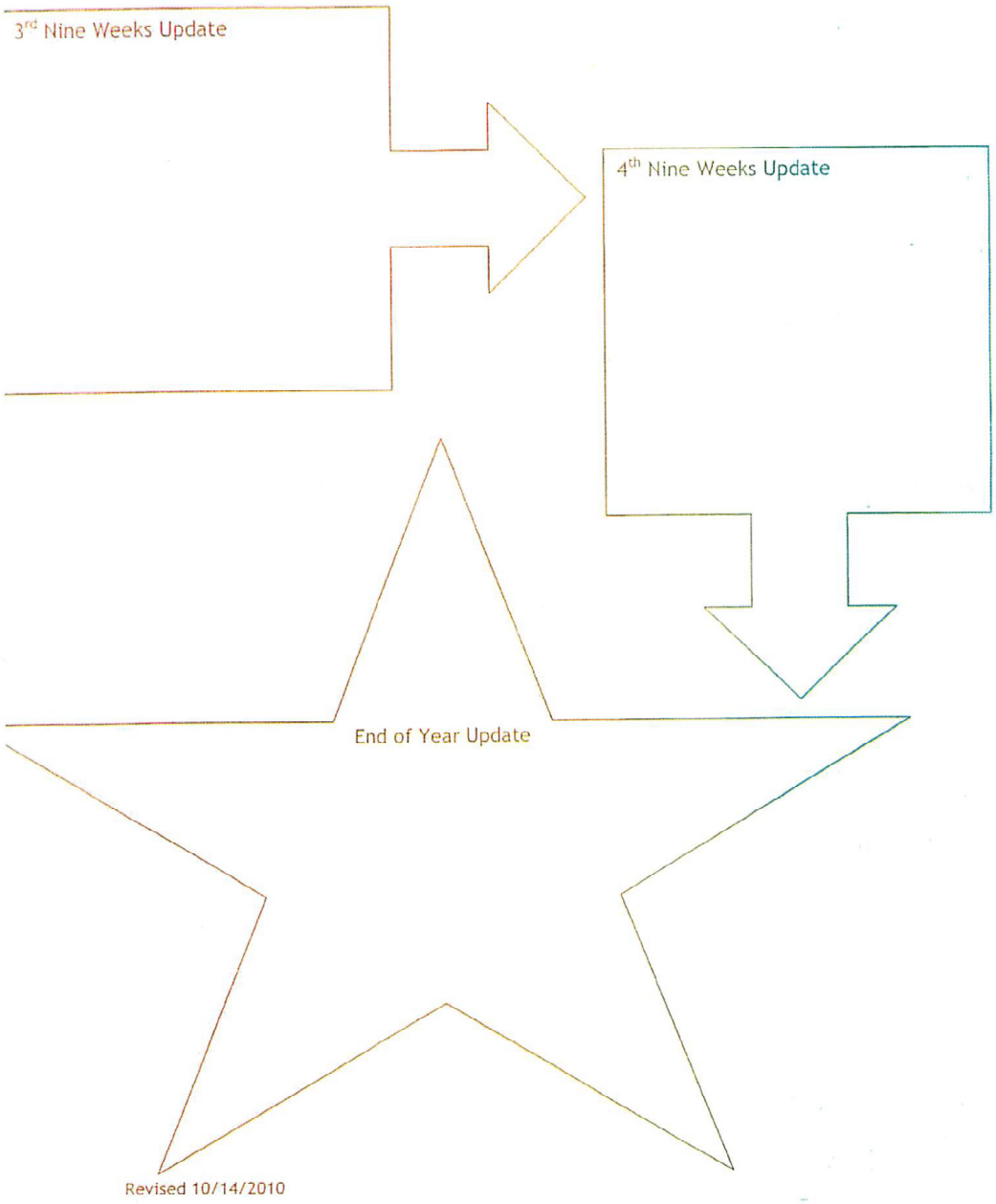
17. Something about me that I'd like to share with you is _____

Revised 7/28/2010

APPENDIX D

GOAL SETTING




3rd Nine Weeks Update
4th Nine Weeks Update
End of Year Update
Revised 10/14/2010

APPENDIX E

FIRST NINE WEEKS MEETING LOG

ISAGE Incentives for Students Achieving Great Expectations

1st Nine Weeks Meeting Log

Student Interest Survey Completed On:

Student Goal Sheet Completed On:

Date	Length of Meeting	Mentor Signature	Mentee Signature

Revised 7/28/2010

APPENDIX F

SECOND NINE WEEKS MEETING LOG

Date	Length of Meeting	Mentor Signature	Mentee Signature

Revised 10/14/2010

APPENDIX G

THIRD NINE WEEKS MEETING LOG

Student Goal Sheet Revised On:

Date	Length of Meeting	Mentor Signature	Mentee Signature

Revised 10/14/2010

APPENDIX H

FOURTH NINE WEEKS MEETING LOG

ISAGE Incentives for Students Achieving Great Expectations

4th Nine Weeks Meeting Log

Student Goal Sheet Revised On:

Date	Length of Meeting	Mentor Signature	Mentee Signature

Revised 10/14/2010

APPENDIX I

FIRST NINE WEEKS DOCUMENTATION LOG

	1st Nine Weeks Data
ELA Grade	
Math Grade	
Science Grade	
Social Studies Grade	
Elective Grades	
Number of Discipline Referrals	
Number of Absences	
Number of Tardies or Early Dismissals	

Revised 10/15/2010

APPENDIX J

SECOND NINE WEEKS DOCUMENTATION LOG

	Week of:	Week of:	Week of:	Week of:
ELA Grade				
Math Grade				
Science Grade				
Social Studies Grade				
Number of Absences				
Number of Discipline Referrals				
Contact with Core Class Teachers				

Date of Key Adult Contact:

Revised 10/14/2010

APPENDIX K

THIRD NINE WEEKS DOCUMENTATION LOG

ISAGE Incentives for Students Achieving Great Expectations

3rd Nine Weeks Documentation Log

	Week of:	Week of:	Week of:	Week of:
ELA Grade				
Math Grade				
Science Grade				
Social Studies Grade				
Number of Absences				
Number of Discipline Referrals				
Contact with Core Class Teachers				

Date of Key Adult Contact:

Revised 10/14/2010

APPENDIX L

FOURTH NINE WEEKS DOCUMENTATION LOG

ISAGE Incentives for Students Achieving Great Expectations

4th Nine Weeks Documentation Log

	Week of:	Week of:	Week of:	Week of:
ELA Grade				
Math Grade				
Science Grade				
Social Studies Grade				
Number of Absences				
Number of Discipline Referrals				
Contact with Core Class Teachers				

Date of Key Adult Contact:

Revised 10/14/2010