

TEACHER MENTORING AS AN INTERVENTION WITH AT-RISK HIGH
SCHOOL STUDENTS

A Thesis

by

MAE COFFMAN

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

MASTER OF SCIENCE

August 2009

Major Subject: Educational Psychology

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Approved by:

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ABSTRACT

Teacher Mentoring as an Intervention with At-Risk High School Students.

(August 2009)

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Chair of Advisory Committee: Dr. Mack Burke

As a result of recent social and political pressure and an increase in academic standards, there is a call to address academic and behavioral needs of at-risk students at the secondary level. Currently, many secondary schools are struggling to provide research-based interventions for these students. The purpose of this study was to examine the effects of a school-based mentoring program utilizing existing school staff and functioning within the constraints of a typical high school schedule, on at-risk students. The study aimed to add to the body of research on interventions in secondary settings and extend research on mentoring. Five at-risk high school students participated in the study which took place during the 2008-09 school year. All of the students received basic mentoring procedures, and three were identified for more advanced mentoring procedures half-way through the school year. Data was collected on academic and social outcomes and the viability of the intervention in the secondary setting.

Overall, results of the study were mixed but indicated that the intervention was mildly effective for almost all students in at least one of the areas studied. Limitations of the study and implications for future research and practice are identified and discussed.

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CHAPTER I

INTRODUCTION

Problem Statement

A shift in educational standards and practices in the United States has occurred over the past decade. The federal No Child Left Behind Act, 2001 (NCLB) and enhanced state graduation requirements in the core subject areas are requiring that schools impose rigorous curriculum standards for all students (Hardman & Dawson, 2008). In addition, the reauthorization of the Individuals with Disabilities Education Act, 2004 (IDEA) has prompted schools to reconsider their methods for addressing student failure with a focus on prevention. IDEA 2004 calls on educators to implement a proactive “Response to Intervention” (RtI) model when students experience difficulty and begin to struggle in schools (Wright, 2007).

There is a growing focus to address the academic and behavioral needs for students at the secondary level within the context of RtI (Burns, 2008; Canter, Klotz, & Cowan, 2008). Early detection and intervention is recommended, but inevitably, some students will enter high school at-risk of dropout and in need of targeted interventions to reconnect them to the educational environment (Kennelly & Monrad, 2007). Research shows that students who display difficulty with behavioral or academic performance at the secondary level are more at-risk for dropping out of school (Croninger & Lee, 2001; Thompson & Kelly-Vance, 2001). These students often have a history of poor academic

This thesis follows the style of *Exceptional Children*.

performance, absenteeism, and disciplinary problems (Thompson & Kelly-Vance, 2001) and studies indicate that dropping out is a disengagement process that occurs over many years as a result of repeated difficulties in school (Anderson, Christenson, Sinclair, & Lehr, 2004). Using the RtI model as a framework, secondary schools can effectively identify students at risk for dropout and provide those students with support through targeted and intensive level interventions.

Many secondary schools are struggling to identify and provide research-based interventions for students at risk of dropping out. Research on the implementation of RtI and effective targeted group interventions in secondary settings is scarce (Bohanon-Edmondson, Flannery, Eber & Sugai, 2004; Windram, Scierka, & Silberglitt, 2007). Research suggests that academic achievement and school success is the result of many factors, from viable core curriculum content to best practice instructional and behavior management strategies. However, a sense of belonging and connectedness helps create a strong foundation to facilitate student engagement in academic activities (Payne, 1996; McNeely, Nonnemaker & Blum, 2002; Catalano, Haggerty, Oesterle, Fleming & Hawkins, 2004). 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.

The Search Institute recognizes “other adult relationships” and “adult role models” as two of the 40 Developmental Assets. They contend that the more Developmental Assets that a young person possesses, the lower their at-risk status (Probst, 2006). Perhaps the most commonly known practice in building relationships

between adults and youth is that of mentoring. Beginning in the early 1980's and continuing to modern day, formal mentoring programs have been created in response to the need for positive adult influences in the lives of at-risk youth (Sipe, 2002). The roots of mentoring can be traced back to the early Greek civilization and the epic poem, *The Odyssey*. In *The Odyssey*, the hero Ulysses embarks on a great quest, but before leaving home, he asks his friend, Mentor, to watch over and guide his son during his absence (Nefstead & Nefstead, 2005). The American Heritage Dictionary defines the term "mentor" as "To serve as a trusted counselor or teacher to [another person]". Many businesses utilize a mentorship model to acclimate new employees into the workforce. Similarly, social institutions such as fraternities and sororities, church youth groups and athletic organizations use relationships between older and younger members to teach social norms and build relationships within the institution. The International Center for Leadership in Education identifies positive relationships among students and school staff members as a key element of success in American high schools (2006). However, current research in the area of mentoring as an intervention for at risk high school students remains scarce.

Knowledge Base on Effective Interventions

Research has found that positive relationships with teachers are important suppliers of "social capital" for students (Croninger & Lee, 2001). Students who drop out of school before graduation often lack this social capital and feel disconnected from the school environment. Additionally, students who drop out cite a lack of support and interest from school personnel as one of the reasons for leaving school (Croninger &

Lee, 2001). When a student encounters social or academic difficulty in school the presence of a supportive school figure can play a critical role in determining their success or failure (Alter, 2007). In fact, a recent publication from the U.S. Department of Education recommends that schools assign an adult advocate as an intervention for students at risk of dropout (Dynarski, Clarke, Cobb, Finn, Rumberger, & Smink, 2008).

Some school systems are beginning to utilize interventions that rely on the power of positive teacher–student relationships. The Georgia Department of Education sponsors advisory programs to ensure there is a “Caring Adult in the Building” for each student on campus. Students meet in small groups with an advisory teacher to focus on building successful study and organizational skills for high school. The Good Friend program in Illinois is designed to increase positive relationships among teachers and students (DuFour, DuFour, Eaker & Karhenek, 2004). Each staff member commits to pay special attention throughout the year to a student who is identified as at-risk for drop-out or failure. The Check in/Check out (CICO) program (Filter et al., 2007) is a behavioral intervention designed to increase the frequency of adult feedback and attention to positively impact student behavior. Students in the CICO program meet with a school staff member at the beginning and end of every day to monitor the status of their behavioral goals. While all of these programs recognize strengthened adult-student relationships as a vehicle to improved school performance, none of them have the same structure as a more formal mentoring program.

In order to carry out a literature review of research in the area of mentoring, a search using the PsychINFO database was conducted. An initial advanced search in the

education field, using the key words, “youth mentoring” and “intervention” yielded 70 records. Additional searches were conducted utilizing the key words, “at-risk youth”, “adult mentoring”, and “school-based mentoring”. Further references were identified through mention in other articles and were then searched for individually by author or title. The literature search yielded several meta-analyses and individual studies in the area of mentoring. The studies vary not only in their results of effectiveness but also in terms of their target populations and dependent measures.

A research summary of six mentoring programs by Sipe (2002) found there were overall positive outcomes, both socially and academically, for youth involved in various forms of mentorship opportunities. Overall the research summary reports that participation in mentoring programs has a positive effect on youth academic outcomes (Jucovy, 2000; Rhodes, Grossman & Roffman, 2002), self-esteem and coping skills (DuBois, Neville, Parra & Pugh-Lilly, 2002), relationships with others (Jucovy, 2000; Sword & Hill, 2002), and substance abuse and behavioral outcomes (Walker, 2007). Participants in the studies represented a range of ages; three studies were conducted at middle school, two at high school, and one in both the elementary and secondary settings. The two studies at the high school level provided one-on-one mentoring as only one component among several services for at-risk students; therefore, results cannot be attributed to the mentoring intervention alone.

A meta-analysis of 55 mentorship evaluations conducted by DuBois, Holloway, Valentine and Cooper (2002) demonstrated consistent positive, though modest, effects of mentoring programs. Mentoring studies included in the meta-analysis took place in

either school or community settings. The study participants ranged from late elementary through high school ages. Under closer examination, the authors found that programs who utilized “best practices” such as expectations for frequency of contact, structured activities, ongoing training, and monitoring of program components yielded more significant effects. This research indicates that merely enrolling youth in mentorship opportunities is insufficient. In order to increase the probability of favorable outcomes, the quality of the relationship between youth and mentors, and the program’s alignment with “best practices” should be addressed. An interesting finding from DuBois et al’s work was that lower effect sizes were attributed to programs based in schools, yet higher effect sizes were noted when mentors had a background in a helping profession (such as a teacher or social worker).

Randolph and Johnson conducted a review of eight research studies specific to school-based mentoring programs (2008). They found that youth involved in these programs primarily benefited by increased connectedness to school and other related pro-social outcomes. In regards to academic achievement for youth, the results appeared to be mixed. It is important to note that Randolph and Johnson’s research was not limited to a specific age group, so several of the studies in their review were implemented solely at the elementary level.

Perhaps the most well know mentoring program in the United States is the Big Brothers Big Sisters (BBBS) program. This program provides both community based and school-based mentoring opportunities for at risk students in early elementary through high school grades. An individual study by Thompson and Kelly-Vance (2001)

examined the impact of BBBS, on the academic outcomes of at-risk youth ages 9-15. The study found that youth paired with a mentor showed significantly improved performance in academic achievement in comparison to youth in the control group.

In contrast to the BBBS study, a study of at-risk Latino youth, ages 8-11 receiving a mentoring intervention found no significant effects to youth on their self-concept and school performance (Barron-McKeagney, Woody & D'Souza, 2003). No differences were noted in self-concept between mentored and non-mentored participants. In terms of academic progress, only grades in the elective area (art/music/PE) showed an effect in pre and post intervention comparison. In their discussion, the authors reflect that a broad number of factors contribute to a student's academic progress, suggesting that mentoring programs alone may not make an impact on academic measures unless it specifically includes teaching study skills or content tutoring.

When focusing on school-based mentoring interventions, the Check & Connect program (Anderson, Christenson, Sinclair & Lee, 2004) is one of a few programs for which there is a substantive amount of research. The Check & Connect program pairs at-risk students with a school-based "monitor" who meets with them weekly to build relationships, problem solve, and provide a communication link between school and home. In a study of Check & Connect, Anderson et al. (2004) found that students who had high quality relationships with their monitors showed improved engagement in school, as measured by attendance.

In a mentoring study conducted with tenth grade students, Slicker and Palmer (1993) limited their mentor pool exclusively to school personnel. The results of the study

approached significant. They found that students who were effectively mentored showed improvement in dropout rate and academic achievement as compared with students who were ineffectively mentored or received no mentoring intervention.

A recent study at the middle school level by Converse and Lignugaris/Kraft (2009) also utilized school staff members as mentors for at-risk students. Students who participated in the mentoring program showed both statistically significant reductions in office referrals and statistically significant improvements in school attitude. Similarly, a 2008 study by Holt, Bry, and Johnson found improved outcomes in school related cognitions and behaviors for ninth grade urban youth participating in a mentoring program with school personnel.

Information Needed by the Profession from New Research

Despite a substantive amount of research on the positive impact of teacher-student relationships (Alter, 2007; Croninger & Lee, 2001) and the positive outcomes of formal mentoring programs (Dubois, Valentine, Holloway, & Cooper, 2002; Rhodes, Grossman, & Roffman, 2002), there are only a handful of studies on mentoring programs utilizing school staff in the role of mentors at the high school level.

There are several reasons why school personnel are ideal for mentorship opportunities. One reason is that school staff members regularly interact and relate with students in a natural setting, as opposed to forced mentor relationships between youth and an adult stranger. Staff and students share common experiences in the school setting, leading to easier discussion of topics such as academic subjects, school sports, and peer relationships. A second reason is that staff members have easy access to records such as

attendance, grades, behavioral reports and home contact info, which are helpful in guiding their students. In contrast, mentors from the outside community must expend more effort to obtain school information and can find accessing school records difficult. A final factor that supports school-staffed mentor programs is a strengthened link between school and home. The size of contemporary secondary schools can cause confusion for parents over who to contact with concerns or questions. Establishing a school staff mentor as the point of contact would help to simplify and facilitate the communication link between home and school.

The first year of high school is an important transition time for youth (Kennelly & Monrad, 2007). Upon entering high school, students must adjust not only to a new school environment, but also an increased rigor in coursework. For the first time in their school career, student grades are directly tied to credits. Without the necessary credits, a student is ineligible for promotion to the next grade and ultimately for graduation. Students who do poorly during their freshman year often have difficulty getting back on track and improving their performance in the future (Kennelly & Monrad, 2007). Based on the knowledge that adult role models play a vital role in youth development, and that the early high school years are a critical turning point, it is recommended that a mentoring intervention focus on at risk students in their first year of high school, or those in their second year who were initially unsuccessful during the first year.

Additionally, further research is needed to more clearly determine the effects of mentoring on the academic achievement of at-risk students. The majority of the previous studies focused on social/behavioral measures such as attendance, self-concept

and office referrals. Very few studies took into account academic performance as an indicator of effectiveness. Of the studies that examined an academic link, pre-post achievement tests, report card grades and yearly grade point average were used as measures. These measures may be too infrequent and therefore insensitive to growth. More frequent measures such as assignment completion or weekly test scores should be gathered and analyzed to ascertain the impact of mentoring on academic performance.

Last, targeted and intensive interventions often carry a heavy financial burden of additional staff and resources, and implementation of interventions in the secondary setting can be a logistical nightmare to arrange. Therefore, research is needed in the area of effective and efficient interventions that can be provided without purchase of high-cost materials and intrusive scheduling. By tapping into already existing resources, such as staff members who serve as “informal mentors” to struggling students, and utilizing flexible time during the school day such as lunchtime or schedule breaks, a mentoring intervention could be provided for students at minimal cost and with relative ease of implementation.

Statement of Purpose

The purpose of this study is to examine the effects of a school-based mentoring program utilizing existing school staff and functioning within the constraints of the traditional high school schedule, on at-risk high school students. The study aims to add to the body of research on interventions for secondary school settings and extend the research on mentoring with a focus on utilizing school staff members to carry out the mentor role.

Research Questions

The study aims to address several research questions in regards to the mentoring intervention:

(1) Will participation in a school-based mentoring program for at-risk high school students result in increased academic outcomes as indicated by course grades, assignment completion rates, teacher reports, and TAKS scores?

(2) Does a mentor relationship with a school staff member improve social outcomes for students as indicated by tardy reports, and a student self-concept assessment?

(3) Is a school-based mentoring program a viable intervention at the secondary school level as indicated by measures of intervention fidelity and social validity surveys of participants?

CHAPTER II

METHOD

Context

The study took place at a 4A high school in suburban Austin, TX. The school has an enrollment of approximately 1800 students and an ethnic breakdown of; 46 % Caucasian, 28 % Hispanic, 21 % African American, 5 % Asian, and 1 % Native American. The school has an economically disadvantaged student population of 28 %. Five students were included in the research study. Gender, ethnicity, and economically disadvantaged status were not taken into account upon selection of participants.

The school began a teacher/staff mentoring program during the 2008-09 school year. In order to qualify for inclusion in the mentoring program, students had to meet one of the following criteria: (1) Students in their 2nd year of high school, but still classified in the 9th grade due to class failures the previous year (students who earned 2.0-4.5 credits during their first year), or (2) Students in their 1st year of high school and “placed” in the 9th grade (due to class failures and/or state assessment failures during the 8th grade). 47 students met the criteria for inclusion in the mentoring program. Of these students, 16 consented to participate in the mentoring opportunity, 4 declined participation, 3 stated they were no longer attending the target school, 3 did not return messages after multiple attempts, and 19 were unable to be contacted due to wrong numbers, disconnected phone lines, or no answer. Of the 16 students participating in the mentoring program, 5 of them consented to inclusion in the research study.

Subjects

Clients

Of the five clients included in the research study, 2 were male and 3 were female. All five clients were classified as “freshman” according to their credit status. One of the female clients was in her second year of high school, repeating her freshman year, while the other 4 clients were in their first years of high school. Table 1 below gives more specific information about each of the clients, including; ethnicity, economically disadvantaged status, core subjects they “passed” (average of 70 or above) in the 07-08 school year, their performance (pass-Y or fail-N) on the state assessment in 07-08, and their history of absences. In order to maintain confidentiality of the clients participating in the study, alias names are used throughout this report.

TABLE 1
Student Demographics

Client	Year in HS	Gender	Ethnicity	Eco Dis	Core Subjects passed 07-08	State Assessment passed 07-08 Rdg/Math	Absences 07-08
Betty	2 nd	F	Hispanic	Yes	SS	Y/N	3
Ernie	1 st	M	Hispanic	Yes	E, SS	Y/N	9
Sally	1 st	F	Hispanic	No	E, SS, Sc	Y/N	10
Henry	1 st	M	Hispanic	Yes	SS, Sc	Y/N	27
Mary	1 st	F	Hispanic	Yes	E, SS, Sc	Y/N	10

Mentors

School-based mentors were identified in one of two ways, 1) through student nomination, or 2) based upon a current role where they directly support struggling

students. Students at the target high school were asked to fill out an anonymous survey during the last 2 weeks of the 2007-08 school year. Teachers who received four or more nominations through the survey were considered candidates to be mentors. 196 students responded to the survey. From the survey, 42 staff members were identified as potential mentor candidates and 11 agreed to serve as a mentor during the 2008-09 school year. Additionally, a school social worker and a district level special education specialist were selected to serve as mentors. Mentors for the clients participating in the research study consisted of 3 females. Betty, Ernie and Henry were mentored by a school staff member, while Sally and Mary were mentored by a school district staff member.

Intervention

The overall goal of the mentor program was to increase student engagement and performance in school through the on-going support of an assigned teacher/staff-mentor on campus. The mentor program aimed to increase student performance through three objectives; improved organizational skills, ability to complete and turn in work, and regular attendance at school.

Basic Mentoring Procedures

During the first week of school, mentors made contact with their students and held their initial meeting, signaling the beginning of the first intervention phase (B). During the first meeting, mentors helped their students to set personal goals for the school year. After the first meeting, the expectation was that mentors meet with their student at least one time each week for a minimum of 20 minutes. Meetings could be

held before school, during lunch, or after school. Specific meeting times were determined by each mentor/student pair individually.

During each meeting session, mentors and students followed an agenda; (1) begin by sharing “good things” and celebrations of positive events that have happened during the week, (2) check on student grades, (3) discuss any concerns affecting student performance, (4) problem-solve issues with teachers and/or peers, (5) review the student’s personal goals and update or revise them as necessary, (6) fill out an action plan for the upcoming week, and (7) organize assignments and notebooks as needed. Mentors documented the sessions using the Mentor Student Meeting Agenda (see Appendix 1) provided to them during mentor training. Mentors were encouraged to show support for their students through presence at extracurricular events and acknowledgements in the hallway during passing periods when possible.

In addition to the commitment to meet regularly with their students, mentors were asked to make contact with their student’s home at least one time during each six week period. During the home contact, mentors (1) share positive things happening for the student at school, (2) update the parents on student grades and upcoming major tests or projects, (3) let parents know about upcoming school events, (4) ask parents if they have any questions or concerns that the mentor can help to address. Mentors documented contact through a home phone/contact log.

Advanced Mentoring Procedures

At the start of the fourth marking period (beginning of the 2nd semester), more specific and intense mentoring procedures were implemented for students who did not

show sufficient academic progress or response to the mentoring intervention, signaling the start of the second intervention phase (C). During this phase, mentors and students continued to meet at least one time each week, but meeting times increased to a 30 minute minimum. Meetings continued to follow the seven agenda steps from phase B, but the steps became more detailed and focused students on the mentor program objectives of; improved organizational skills, increased ability to complete and turn in work, and on-time behavior/attendance at school (see Appendix 2). Mentors used the enhanced agenda form to document their weekly meetings. Additionally during this phase, students completed a weekly self-rating of the three mentor program objectives (see Appendix 3).

Fidelity Procedures

Mentor Student Meeting Agendas were used to evaluate the fidelity of the mentor intervention. Agendas were collected from all mentors periodically throughout the study. Fidelity was calculated for the activities specific to the mentoring intervention using a fidelity checklist (see Appendix 4). During the B phase, agendas were looked over to determine if the 7 topics specified were covered during each meeting. On the checklist, topics were rated either a 1 or a 0 indicating they were or were not addressed during the meeting. During the C phase, agendas were looked over to determine if the 7 topics specified were covered (using the same coding as described in phase B), and additionally, if the student completed a self-monitoring of progress on mentor program goals (coded a 1 or 0). Fidelity of a mentoring session was determined by calculating

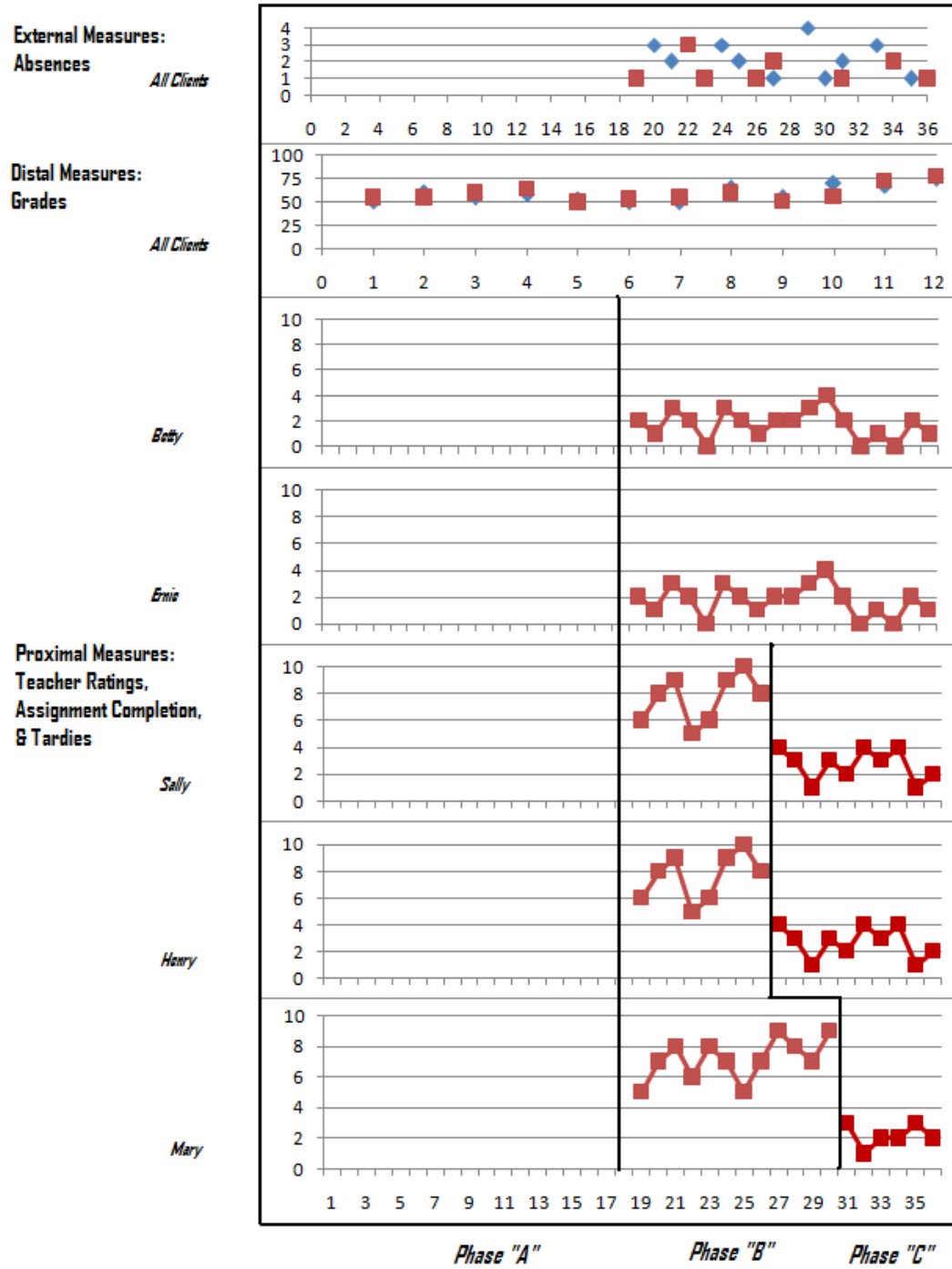
the number of addressed topics for that session by the total topics possible (7 in phase B and 8 in phase C).

Social Validity Procedures

A 7 question satisfaction survey was administered to mentors, students and parents at the conclusion of the school year to evaluate the validity of the intervention (see Appendix 5). Responses were recorded on a 5 point scale from “strongly agree” to “strongly disagree”. The first three questions addressed perceived achievement of the three main mentor program goals. The next two questions addressed general attitude towards the mentor program (was it overall beneficial, did they enjoy participating). One question addressed the ease of participation in the mentor program, and the last question addressed the respondents’ willingness to participate in a mentoring program in the future.

Design

FIGURE 1
Proximal, Distal & External Measures



The study used both single case and pre-post designs. As seen in Figure I, a single case design with A-B-C phases and embedded multiple baseline across subjects design during phase C was utilized. Phase A is the baseline phase and lasted from August 2007-June of 2008. Phase B consisted of the basic mentoring intervention which began for all clients in the end of August 2008. Phase C consisted of the advanced mentoring intervention which was implemented for 3 of the clients at varied on-set times (January 2009 for Henry and Sally, and in March 2009 for Mary). Only students who did not respond to the initial phase B mentoring required the advanced mentoring intervention in phase C. Therefore Betty and Ernie were used as comparison students to the three students receiving phase C intervention. All interventions were completed by the first week of June 2008. External measures of absences were recorded to note any cross correlation with the proximal and distal measures.

Additional pre-post measures were collected for all clients. These measures were analyzed in comparison to one another and noted as information for further discussion.

Internal Validity

Several features enhance the internal validity of the study design. One feature is the strong reliability of most of the proximal and distal measures. Assignment completion, tardies, and report card grades are all objective measures. Therefore, results calculated from these measures are trustworthy with no variation in scores due to human interpretation. A second feature that enhances internal validity is the use of a control group for proximal measures. Two students received the basic mentoring procedures (phase B) for the entire school year and therefore served as a comparison group for the 3

other students who received advanced mentoring procedures (phase C) in the second semester. The final feature that adds to internal validity is the use of a lag design with two phase changes for the distal measure. While all study participants have baseline data collection (phase A) and began basic mentoring procedures (phase B) at the same onset time, the onset of advanced mentoring procedures (phase C) was lagged. At the beginning of the second semester, two participants stayed in phase B for the remainder of the year, two began advanced mentoring procedures (phase C), and the last participant began advanced mentoring procedures 6 weeks later.

There are also several aspects of the design that limit the study's internal validity. For the proximal measures of assignment completion, tardies, and teacher ratings, there is only a single phase change for Sally, Henry and Mary, and no phase change for Betty and Ernie. A lack of baseline data for these measures makes it impossible to assess student responses to the initial mentoring intervention. Therefore, only student data that included the advanced mentoring procedures was available for analysis of proximal measures. In terms of the distal measure of student grades, the length of the grading periods allowed for very few data points in each phase. While there are six data points in baseline (phase A) for all participants, there are only 3 points in phase B and 2 points in phase C for Sally and Henry. There are 4 points and 1 point respectively for Mary.

External Validity

The results of this study may reasonably be generalized to similar settings and populations. The broad target population was in-coming and repeat 9th grade students at-risk for school failure. Students in this population can be found in almost every high

school across the nation. However, since the study included students only from a single high school, the results may only be generalized to high schools with similar demographics. Similarly, only five students agreed to participation in the research study. Due to this small sample size, results may only be generalized to students with similar characteristics.

Several characteristics of the study will allow participants to transfer new skills into other environments and future situations. One of these characteristics is the length of the intervention. By intervening for an entire school year, clients were given the opportunity to not only learn, but begin to internalize the focus skills of the mentoring program. These skills include, organizing materials, being prompt to class, and turning in assignments on-time. It is anticipated that participants will be able to continue demonstrating improved capacity in these skills during the next school year, even when they are not participating in a mentoring program. A second characteristic is the long lasting effects of the mentor relationships. During the intervention period, students and mentors formed close bonds after spending time together at least once each week. In subsequent school years, participants may not be part of an official mentoring program. However, the relationship and bond that have formed will not disappear just because the requirements of mentoring are no longer attached. Providing that students and mentors still attend the school in following years, students will always have a caring adult they can seek out when they experience difficulties.

Measurement

Several sources of data, proximal, distal and external, were used to determine the effects of the mentoring intervention. The proximal measures included; teacher rating of student progress, records of assignment completion, and tardy reports. A distal measure of student course grades was examined, and absence reports were collected as an external measure. Additional data including, TAKS scores and a student self-concept rating were also collected.

Proximal Measures

Teacher Rating. Frequent feedback in the form of a teacher rating scale was used every 3 weeks during the study to gather data on student progress towards the objectives of the mentor program (see Appendix 6). This rating was conducted through Survey Monkey in an on-line format. Surveys were completed by the four core content area teachers for each student. Teachers ranked student progress towards 3 goals on a 1-5 scale, 1 being “almost never” and 5 being “almost always”. Due to the time period between each teacher rating, obtaining a measure of inter-rater reliability was not feasible. Therefore, teacher ratings in the four core subject areas were averaged together to obtain an accurate picture of student performance during each period.

Records of Assignment Completion. Grade progress reports from the Texas Gradebook system were used to tally and record the number of missing assignments for each student in their four core content area classes in 2 week increments. Since tallying the number of missing assignments is not a subjective activity, inter-rater reliability was not necessary for this measure.

Tardy Reports. Information on the number of tardies for each student was tallied and recorded from attendance reports every two weeks. There is a school-wide tardy policy in place. Students arriving to class after the final bell for the class period rings are considered to be tardy. Since tallying the number of tardies on an attendance report is not a subjective activity, inter-rater reliability was not necessary for this measure.

Distal Measures

Student Course Grade Reports. Ninth grade students take seven classes during the school year. All ninth graders are responsible for taking a class in each of the four core content areas, English, math, science, and social studies. For this study, grades were collected in the 4 core content area classes for each student at the end of each grading period. There are six grading periods, each lasting six weeks, so grades were collected six times during the school year. Grades are reported as numerical numbers. Scores falling below 70% are considered failing grades. Grades are documented and reported through an on-line system, Texas Gradebook. Grades are determined by individual teachers, but common grading guidelines are used campus-wide. In all classes students receive summative (major grades such as; unit tests, projects, papers, presentations) and formative (minor grades such as; quizzes, homework, daily assignments) grades. Both groups of grades may be weighted between 40% and 60% and no single grade may count for more than 25% of the total grade during the grading period.

External Measures

Absence Reports. Record of absences was collected every 6 weeks. There is a district wide attendance policy in place. In order to be awarded class credit, students must attend on 90% of the class days. If students attend 75-90% of the time, they may still be eligible to receive credit upon completion of a principal-approved plan. If a student attends less than 75% of the time, they will be referred to the attendance review committee. This committee then determines if extenuating circumstances should be considered and credit awarded.

Pre-Post Measures

Texas Assessment of Knowledge and Skills. Scores for the Texas Assessment of Knowledge and Skills (TAKS) were collected for the 2007-08 and 2008-09 school years. The TAKS is a standardized test that measures student mastery of the statewide curriculum in reading, writing, math, social studies and science. For students in the mentor program, TAKS scores for the reading and math assessments will be collected. Scores are reported as a scale scores ranging from approximately 1000 to 3200. To meet the basic passing standard, a student must score at least a 2100 and meeting the commended performance standard requires a score of 2400 or above.

Student Self-Concept Scale. The Student Self-Concept Scale (SSCS) (Gresham, Elliot, & Evans-Fernandez, 1993) was administered to participants at the beginning of the school year, and again at the end of the school year. The scale is a self-report, norm-referenced measure which yields information on the self-perception of children and adolescents in three areas; self-image, academic, and social. Scores in each of the three

domains can be obtained, as well as an overall composite score. Scores can be reported as standard scores, percentile ranks, and descriptive behavior levels.

Analysis

The analysis plan for basic and advanced mentoring interventions included both visual and statistical analyses. Data were visually analyzed to determine if an intercept gap or a mean or trend shift existed between phases. For statistical analysis, simple mean shift (SMS) regression and NAP overlap analysis were chosen to determine effect sizes of the intervention. In specific cases when visual analysis revealed a significant change in trend, then mean and trend shift (MTS) techniques were used.

For the first research question, “Will participation in a school based mentoring program for at-risk high school students result in increased academic outcomes”, a B•C contrast was conducted for assignment completion and teacher rating scores for Sally, Henry and Mary. To analyze student grades, an A•B contrast was calculated for Betty and Ernie, and an AB•C contrast was conducted for Sally, Henry, and Mary. Lastly, pre/post comparison of reading and math TAKS scores were completed for all five participants.

For the second research question, “Does a mentor relationship with a school staff member improve social outcomes for students”, a B•C contrast was conducted for tardy scores for Sally, Henry and Mary, and a pre/post comparison was completed for scores of student self-concept for all five participants.

The last research question, “Is a school-based mentoring program a viable intervention at the secondary school level”, was analyzed by examining the fidelity of

implementation of the intervention and the results of the social validity survey. Fidelity was assessed through a checklist and reported in terms of percent. Survey data were summarized by subgroup and reported in terms of percent.

Procedure

Mentor Selection

Selection of school-based mentors began through nomination by students at the end of the 2007-08 school year. Students at the target high school filled out a four question anonymous on-line survey through www.surveymonkey.com (see Appendix 7) during the last 2 weeks of the 2007-08 school year. Survey questions were designed to identify staff members who currently serve as role models and natural support personnel for students on campus. 196 students completed the survey. Staff members who received four or more nominations through the survey were invited to a 45 minute informational session regarding the mentoring program. At the conclusion of the session, the staff indicated whether or not they wanted to participate as a mentor on a response form.

Student Selection and Permission

Potential student participants for the mentoring program were identified in July of 2008 through grade reports and retention lists from the previous school year (incoming 9th graders and repeat 9th graders). Candidates were put into a pool. Students were randomly selected from the pool and contacted during the first week of August 2008. When contacted, students and their parents were given the opportunity to accept or decline participation. Contact stopped after the number of student participants was equal to the number of mentors who had committed to the program.

Verbal permission from parents for students to participate in the mentoring intervention was obtained via phone upon initial contact in August 2008. Written permission forms for participation in the research study were distributed to mentor program participants in the fall of 2008 (beginning in September and sending reminder copies throughout October and November). Consent forms from all five participants were obtained by the end of November 2008.

Intervention Development

The mentor program intervention was initially developed in June 2008 and refined throughout the summer by researching best practices and mentoring interventions used in previous studies. Several sources of material were used in designing the intervention, including; The Search Institute's *Mentoring for Meaningful Results* (Probst, 2006), National Mentoring Center's *The ABC's of School-Based Mentoring* (Jucovy, 2000), and *Handbook of Youth Mentoring* (DuBois & Karcher, 2005). Binders with training information and intervention materials were created for each mentor participating in the interventions.

Determining Measures

Data collection measures were determined in June 2008, after careful review of measures used in previous studies on mentoring interventions. Previous mentor studies relied primarily on pre-post comparison data rather than on frequent measures for progress monitoring. It was determined that in addition to some pre-post measures, several more sensitive measures would be utilized in this study, including; records of assignment completion, tardy reports, and teacher ratings.

Baseline Phase

Based on information from previous mentoring interventions, it was decided that a lengthy intervention phase of a full school year would yield the most positive results. Therefore, the baseline phase was determined to be the previous school year. As a result, only data that was stored historically and able to be retrieved during the summer was available for baseline measures. Previous school year course grades were collected for baseline data in July 2008. Unfortunately the frequent measures of assignment completion, tardy reports and teacher ratings were unavailable for baseline phase. Therefore the initial intervention phase “B” would not have baseline comparison for these measures. State assessment scores of mentor students were also collected as measures for pre-post comparison. Additionally, student participants completed the Student Self-Concept Scale (SSCS) during the first week of the 2008-09 school year for pre-post comparison.

Intervention Training and Initiation

During the professional development time prior to the beginning of the 2008-09 school year (mid-August), mentors participated in 1 ½ hours of training in preparation for the program. During this training, mentors were trained in; 1) understanding the stages of the mentor relationship, 2) how to begin the mentor relationship, 3) how to ask open-ended questions, 4) how to help students set and monitor goals, and 5) the specific requirements and guidelines of the school mentor program. During the school year, mentors were supported by the researcher through one hour optional training/mentor support meetings each six week period, beginning in the 2nd six weeks. These sessions

were held before or after school. At the sessions, mentors received reminders about best practices and were given the opportunity to share their celebrations and frustrations regarding the program. The researcher also contact mentors through email twice a month to offer reminders and provide support as needed.

During the initial training session, mentors were each paired with a student. In order to avoid conflicts of interest, mentors were not assigned to students for whom they would provide grades during the 2008-09 year. Mentors were given the opportunity to look at the list of students and choose a student with whom they may share a common lunch period, which would allow for more opportunities during the school day to meet.

Mentors initiated intervention by contacting their assigned student and holding the first mentor-student meeting by the end of the second week of the 2008-09 school year (end of August 2008). During the initial meeting, each student/mentor pair established a regular meeting day and time based on their preferences and schedules.

Advanced mentoring procedures were initiated for students not responding to the basic mentoring procedures in January 2009 (two students) and March 2009 (one student). The basic mentoring procedures continued to be provided for students who showed a positive response (2 students).

Data Collection

During intervention phases B and C, data collection of assignment completion and tardy reports took place every 2 weeks and course grades and attendance reports were collected every 6 weeks (at the end of a marking period). Teacher ratings were collected every 3 weeks, beginning at the end of the first 6 weeks. TAKS scores were

collected at the conclusion of the 2008-09 school year. During the final week of the school year, student participants were administered the Student Self-Concept Scale (SSCS) for the second time.

Data Summary and Analysis

Data were regularly reviewed throughout the intervention phases. In December 2008, data from phase “B” was reviewed and analyzed to identify students who were unresponsive to the initial basic mentoring intervention. Data was analyzed again in March 2009 to determine if the advanced mentoring procedure was effective for the students who started it in January and if it was necessary for another student to begin at that time. Overall analyses to determine the effectiveness of the basic and advanced mentoring procedures were conducted at the conclusion of the mentoring intervention, in June 2009.

CHAPTER III

RESULTS

This study focused on mentoring as an intervention for at-risk high school students. A multiple baseline design across multiple subjects was used to determine if mentoring results in improved academic and social outcomes for at-risk students. Due to the start of basic mentoring procedures (phase B) at the beginning of the school year, baseline data was available for only one of the repeated measures used in the study - student grades. As a result, for the majority of the measures, Sally, Henry and Mary's data can be compared across phases (B and C), while Betty and Ernie's data can be used for control comparison of students who received only phase B intervention.

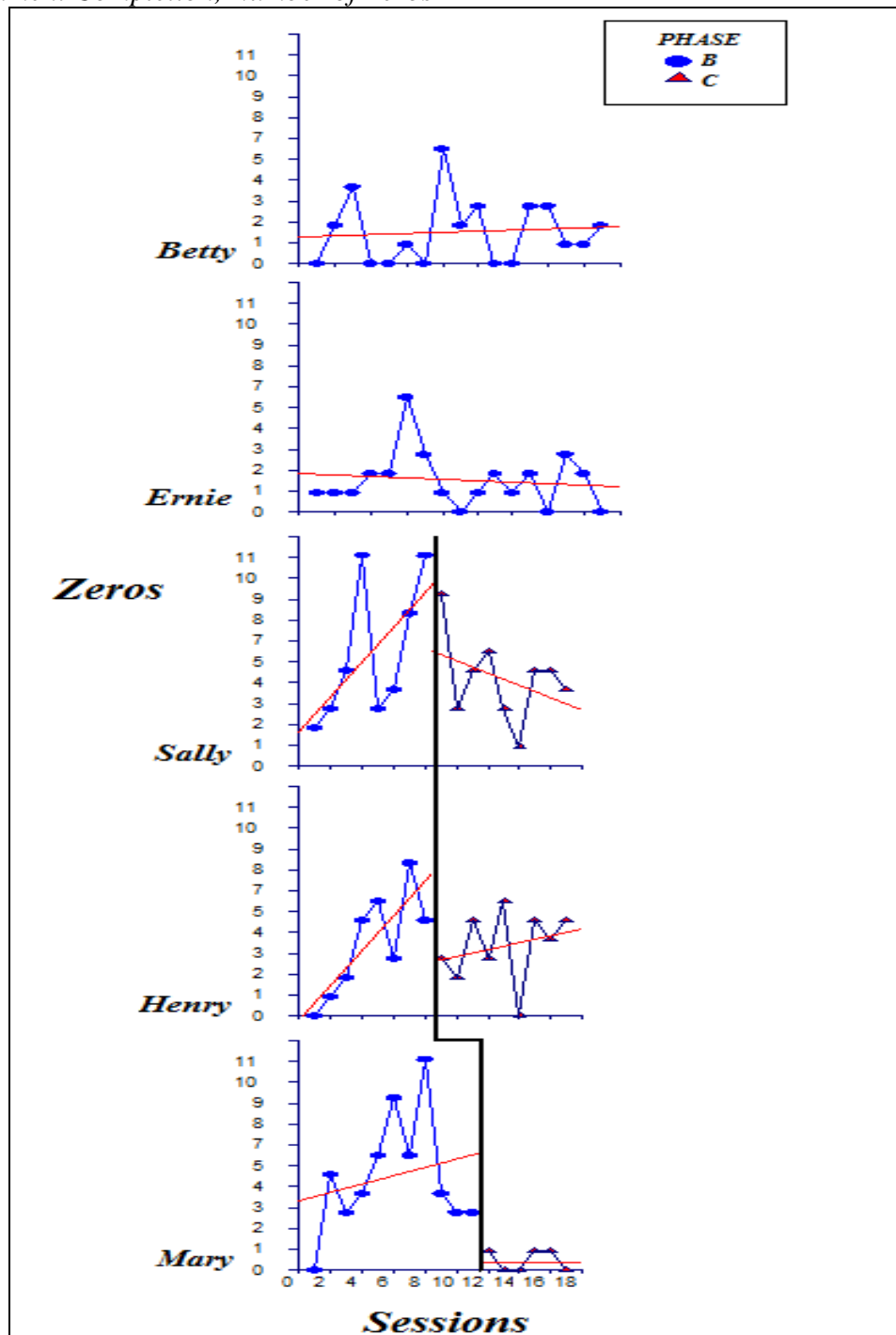
Visual and statistical analyses of data were applied to address each of the three research questions. Elements of visual analysis included; changes in slope and/or mean level, evidence of data overlap, and indication of an intercept gap between phases. Statistical analysis was conducted using NCSS statistical software. These analyses included: 1) multiple regression analysis to summarize and quantify the differences between phases, 2) non-overlapping of all pairs (NAP) analysis to measure the percent of non-overlapping data between phases and, 3) calculation of mean levels (average of the scores) for each phase. Multiple regression analyses were reported in terms of R^2 effect sizes (ranging from 0-1) and P-values reflecting the probability of obtaining similar results by chance alone. NAP analysis data was reported in terms of percent and p-values, while mean levels were reported as an average of scores.

Research Question 1

The first research question posed in the study was, “Will participation in a school based mentoring program for at-risk high school students result in increased academic outcomes?”. In order to answer the question, four sources of data were analyzed: 1) assignment completion, 2) teacher ratings, 3) grade reports, and 4) TAKS scores.

Assignment Completion

The first analysis was conducted on assignment completion data. This data was recorded as the number of zeros a student received in their core subject area classes during a two week period. Scores in the low range (0-2) were most desirable for this measure. As seen in Figure 2, the data for all subjects was highly variable. All five students received the basic mentoring intervention in phase B, and three of the students experienced advanced mentoring procedures in phase C. According to the graph, Sally, Henry and Mary all demonstrate a shift in trend line between phase B and phase C. Sally’s trend line appears to change dramatically from a negative increasing slope in phase B to a positive decreasing slope in phase C. Henry’s slope change is less dramatic. The trend is in a negative, increasing direction in both phases, but in phase C the slope is less steep. Mary’s graph indicates a change from a negative, increasing trend to a lower and flat trend line in phase C. Both Sally and Henry show quite a bit of data overlap between phases, while Mary shows only slight evidence of overlap. All three students demonstrate an intercept gap between phases with Mary’s appearing to be the most pronounced. In comparison, Betty and Ernie’s graphs both demonstrate bounce in data, but both graphs maintain relatively low and flat trend lines.

FIGURE 2*Assignment Completion, Number of Zeros*

To determine statistical significance of the assignment completion data, multiple regression analyses with two phase, B•C contrasts were conducted for Sally, Henry and Mary to obtain R^2 effect sizes. A mean and trend shift (MTS) analysis technique was used for Sally since the data in phase C showed a significant positive decreasing trend. If that trend were not modeled, the effect size would be substantially reduced. The point of using the MTS model is to give effect size credit for both a jump in level between phases, and for the improvement in trend line slope (Parker & Brossart, 2003). The analysis was performed within the regression module of NCSS statistical package. Scores were designated the dependent variable (Y), and the two independent variables were Phase (input with letter codes) and Time. The MTS analysis fits trend lines to the two phases independently of one another.

Simple mean shift (SMS) analysis were utilized for Henry and Mary's data because data lacked an improvement trend in phase B and showed no significant positive trend in phase C. A SMS analysis summarizes the mean difference or shift between baseline and intervention phases, while considering the data spread or variation within each phase (Allison & Gorman, 1993). The analysis was performed within the regression module of NCSS statistical package. Scores were designated the dependent variable (Y), and dummy-codes for phase were the independent (X) variable.

Next, a distribution-free overlap analysis (NAP) was conducted (on B versus C phase) for all three students to measure percent of non-overlapping data between phases. This non-overlap index (IRD or NAP) is a marked improvement over the older PND index (Scruggs, 1987). In this case, data overlap is defined as a phase B score which is

higher (in an improvement direction) than a phase C score. When all phase C data are higher than all phase B data, the results have 100% non-overlap. Chance level improvement from phase A to B is 50%, so non-overlap results tend to be high.

Finally, mean levels for each phase were calculated for all five participants.

Results are reflected in Table 2 below.

TABLE 2
Assignment Completion, Number of Zeros

	<i>R² Effect Size</i>	<i>P Value</i>	<i>NAP</i>	<i>P Value</i>	<i>Mean Levels</i>
<i>Betty</i>	NA	NA	NA	NA	B= 1.67
<i>Ernie</i>	NA	NA	NA	NA	B= 1.73
<i>Sally</i>	0.35	0.13	17%	0.70	B= 5.88 C= 4.56
<i>Henry</i>	0.00	0.94	1%	0.96	B= 3.75 C= 3.67
<i>Mary</i>	0.44	0.00	86%	0.00	B= 4.91 C= 0.5

Table 2 reveals a variance in effect sizes between the three students. Effect sizes less than 0.5 are considered small and not likely to be statistically significant. Mary's data, while small, is approaching the moderate range for effect size, Sally's data reflects a small effect size, while Henry's data yielded a negligible effect size. P-values are interpreted as the likelihood of obtaining the same results by chance in 100 attempts. P-values lower than .10 are deemed the most trustworthy and least likely to be influenced by chance. The students' p-values of .13, .94, and .00 are interpreted respectively as a probability of 13, 94, and 0 out of 100, that results could be obtained by chance alone.

When examining effect size and p-value, optimal results are those which yield a high effect size and low p-value. In this case, Mary's data yields the highest effect size and lowest p-value and conversely, Henry's data yields the lowest effect size and highest p-value.

The NAP results appear weak for both Sally and Henry, indicating there is a great amount of data overlap between phases. In addition, their p-values indicate results are chance level. However, Mary's NAP results are strong showing very little overlap between phases, and her p-value of .00 indicates the results are trustworthy.

A calculation of mean levels reflects improvement between phases for each Sally, Henry and Mary. Mary's change in mean levels is greatest, changing from an average of 4.91 in phase B to an average of 0.5 in phase C. By comparison, both Betty and Ernie show relatively low median levels for phase B when compared with phase B of the other three students.

A cross correlation of assignment completion data with external measure of student absence data was calculated. The cross correlation showed no apparent relationship between the two measures.

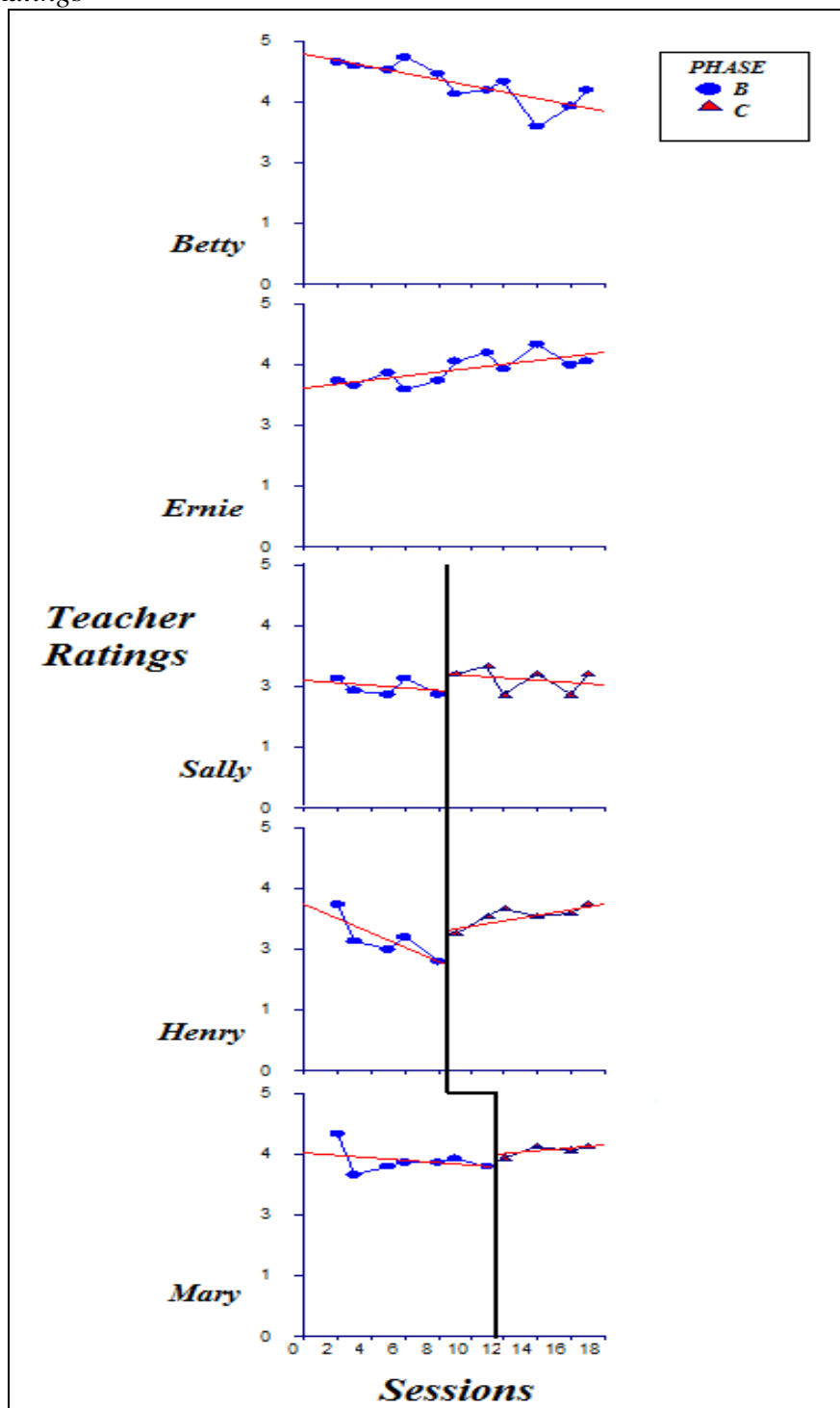
Teacher Rating

The second analysis was conducted on teacher rating data. The data is reflected as an average of the students' four core subject teachers' rating of student performance on a 1-5 scale. Students were rated in three week increments, according to the three mentor program goals: 1) organized and prepared for class, 2) turning in assignments on time, 3) on time and present in class. In contrast to the previous data set, high scores (4-

5) are the most desirable scores for the teacher rating measure. In terms of the average reported scores, a score higher than a 3 indicates the student is generally meeting the mentor program goals more than 50% of the time.

Figure 3 reveals less variability in scores for all students when compared to the previous data for assignment completion. According to the graph, Henry and Mary both demonstrate a slight shift in trend line between phase B and phase C, while Sally shows very little change. Henry shows the most pronounced change in trend line slope from a negative decreasing slope in phase B to a positive increasing slope in phase C. Sally's trend line appears to have a slight negative decreasing slope in both phases. Sally, Henry and Mary all show quite a bit of data overlap between phases. Henry and Sally's graphs show a small intercept gap between phases while Mary's graph shows almost no gap between phases. In comparison, both Betty and Ernie maintain high levels of teacher ratings. Ernie maintains an improvement trend while Betty's trend shows decline.

FIGURE 3
Teacher Ratings



To conduct statistical analysis, multiple regression analysis to obtain an R^2 effect size was conducted for the teacher rating data. Since none of the data showed clear, stable improvement trend in phase B, and the trend lines in all phases contained very little slope a simple mean shift (SMS) technique was utilized. A two phase, B•C contrast was conducted for Sally, Henry and Mary. An overlap analysis (NAP) was conducted for each of the phase contrasts in order to measure percent of non-overlapping data between phases and mean levels for each phase were calculated for all five participants.

TABLE 3
Teacher Ratings

	<i>R² Effect Size</i>	<i>P Value</i>	<i>NAP</i>	<i>P Value</i>	<i>Mean Levels</i>
<i>Betty</i>	NA	NA	NA	NA	B= 4.2
<i>Ernie</i>	NA	NA	NA	NA	B= 3.63
<i>Sally</i>	0.13	0.27	47%	0.19	B= 2.48 C= 2.64
<i>Henry</i>	0.39	0.04	63%	0.08	B= 2.72 C= 3.20
<i>Mary</i>	0.20	0.16	68%	0.07	B= 3.62 C= 3.84

Table 3 reveals little variation in effect sizes of the students. Sally, Henry and Mary's effect sizes of .13, .39, and .20 respectively, are small and do not appear to be statistically significant. Examination of p-values allows for further dissection of the results. While Sally and Mary's p-values lead one to believe their results are untrustworthy and likely due to chance, Henry's p-value of .04 indicates his results are

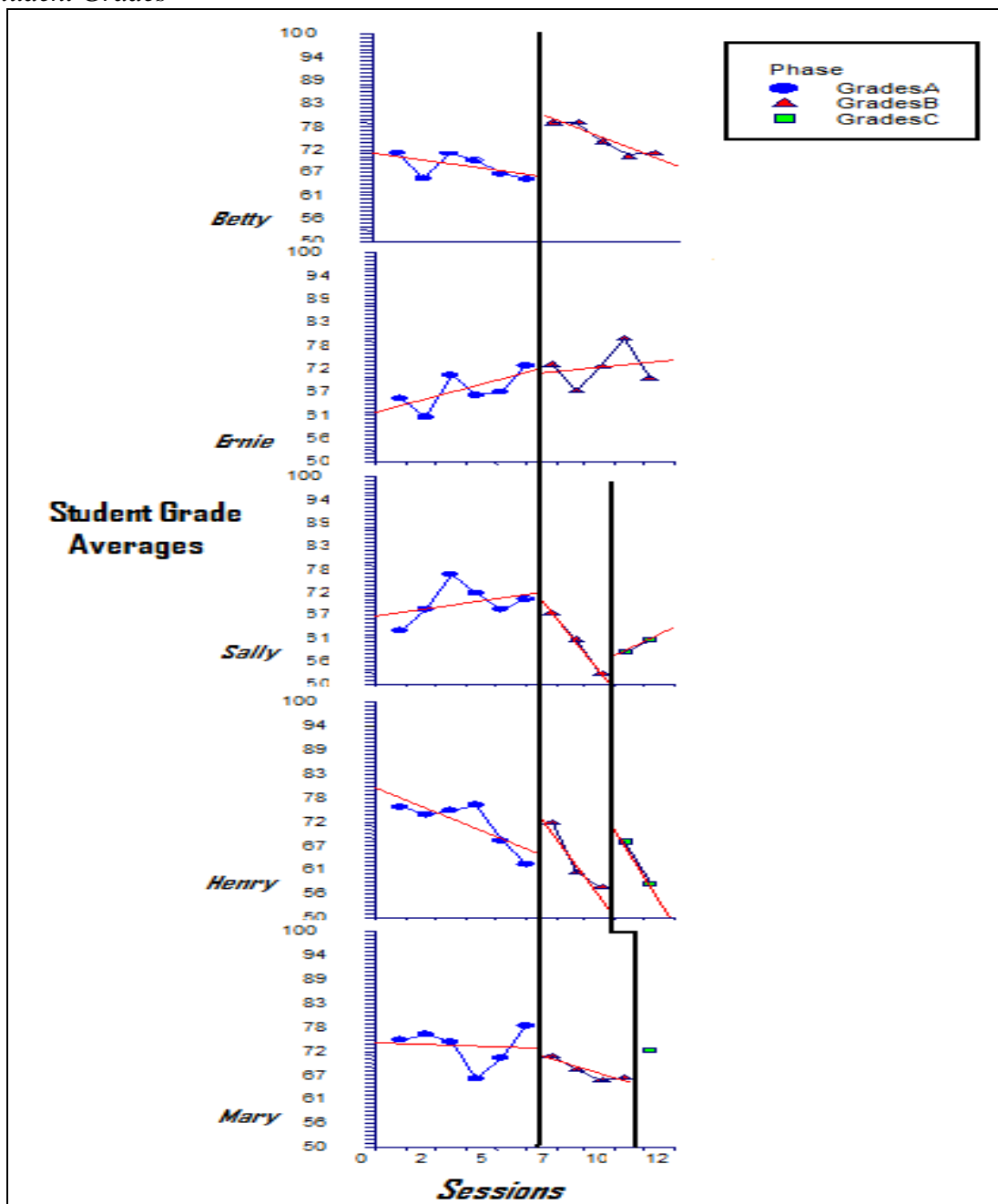
trustworthy and not likely chance level. When comparing non-overlap data, Henry and Mary's results yield the highest percent of non-overlapping data and their p-values indicate that results are likely not due to chance. In terms of mean level, all three students demonstrated improved mean levels in phase C, with Henry demonstrating the most dramatic improvement. In comparison, both Betty and Ernie maintained mean levels higher than 3.5 during their single phases.

A cross correlation of teacher rating data with the external measure of student absence data was calculated. Similar to the results found with assignment completion, the cross correlation showed no apparent relationship between the two measures.

Student Grade Reports

The third analysis was conducted on student grade reports. The data was recorded as an average of the students' four core subject area grades during a 6 week report period. Grades above 70% are considered "passing". Grade reports were obtained from the previous school year, allowing for a baseline (phase A) comparison for all five participants. Due to the small number of data points in phase C however, some of the comparison and analysis were limited.

FIGURE 4
Student Grades



As seen in Figure 4, the graphs for the five students vary quite a bit. Almost all the students show a change in trend line slope between phases A and B. Betty, Sally, Henry, and Mary all show negative decreasing trends in phase B, which is the opposite of what is desirable and expected. In Phase C, Sally and Mary appear to make improvements (though analysis for Mary is extremely limited due to a single data point), but Henry's trend line in phase C is almost identical to the decreasing trend in phase B. Only Ernie's data shows an improvement trend in both A and B phases. The slope of the data is less steep in phase B, but improvement is still apparent. Intercept gaps between phases appear significant for Betty between phases A and B and for Henry between phases B and C. However, in both cases, after an initial jump, the data appears to deteriorate back to levels similar to the previous phase.

For statistical analysis of student grades, SMS analysis was conducted with an A•B contrast for Betty and Ernie, and a multi-phase AB•C contrast for Sally, Henry, and Mary. A multi-phase contrast is a partial correlation method which compares performance between phases clustered together. Again, mean levels were calculated. Results are reflected in Table 4.

TABLE 4
Student Grades

	<i>R² Effect Size</i>	<i>P Value</i>	<i>Mean Levels</i>
<i>Betty</i>	0.54	0.01	A= 68.1 B=74.85
<i>Ernie</i>	0.31	0.08	A= 67.08 B= 72.5
<i>Sally</i>	.17	.00	A= 69.75 B= 60.08 C= 59.25
<i>Henry</i>	.07	.03	A= 71.92 B= 63.25 C= 62.86
<i>Mary</i>	.01	.12	A= 73.5 B= 66.58 C= 72.5 *

* *Single score, not an average*

Results from Table 4 above indicate outcomes contradictory to the anticipated results. In terms of R^2 effect sizes, Sally, Henry and Mary's results are very small and not statistically significant. Both Betty and Ernie demonstrate higher effect sizes. Betty's effect size of .54 is in the moderate range for statistical significance, but Ernie's effect size of .31 is considered to be small. Betty and Ernie's p-values of .01 and .08 are positive, indicating their results are not chance level. In terms of mean levels, again only Betty and Ernie show improvement between phases. Sally and Henry show deterioration in grades at each phase. Mary shows some improvement in phase C, but the phase C data is untrustworthy since it comes from a single score.

TAKS Scores

The final analyses to address the first research question were comparison of pre and post TAKS scores for all five students. TAKS scores were examined for both reading and mathematics tests. Scores are reported on a scale ranging from approximately 1000-3200. The passing standard for both the reading and math TAKS is 2100.

TABLE 5
TAKS Pre/Post

	Pre-Reading		Post-Reading		Gain/Loss	
	Scale	Percent	Scale	Percent	Scale	Percent
Betty	2204	73%	2209	79%	5	6%
Ernie	2125	73%	2133	71%	8	-2%
Sally	2283	88%	2111	69%	-172	-19%
Henry	2125	73%	1957	48%	-168	-25%
Mary	2100	69%	2100	67%	0	-2%
Averages	2167.4	75.2%	2102	66.8%	-65.4	-8.4%

	Pre-Math		Post-Math		Gain/Loss	
	Scale	Percent	Scale	Percent	Scale	Percent
Betty	2025	52%	2142	65%	117	13%
Ernie	1927	36%	1968	44%	41	8%
Sally	2016	50%	1795	25%	-221	-25%
Henry	1941	38%	1815	27%	-126	-11%
Mary	1984	44%	2253	77%	269	33%
Averages	1978.6	44%	1994.6	47.6%	16	3.6%

As seen in Table 5, comparison of TAKS scores by average gain/loss for the five participants yields small results in both the reading and math tests. In the area of reading, the average reflects a decrease in scores of 65.4 points and 8.4% after intervention. However, in math, the average reflects an increase in scores by 16 points and 3.6%.

Individual comparison of each student's pre/post scores reveals further information. Out of the five participants, only Betty's scores showed an increase in the areas of both reading and math (6% and 13% respectively). Mary and Ernie's results are also generally positive. While their reading scores stayed virtually the same, both students increased their math scores, with Mary's increasing by the greatest amount out of all students (269 points and 33%). Sally and Henry's results fell into the negative range. Both students showed a decrease in both their reading and math scores.

Research Question 2

The second research question was, "Does a mentor relationship with a school staff member improve social outcomes for students?". In order to answer the question, visual and statistical analyses were applied to the data collection results for tardy reports and student self-concept scores.

Tardy Reports

The first analysis was conducted on the data regarding student tardies. Students are considered tardy if they enter class after the bell rings to signal the start of the class period. Data was recorded as the number of tardies a student received in their four core content area classes in a two week period. Scores in the low range (0-2) are considered ideal.

Figure 5 reveals very different profiles for each student. In terms of trend line slope, in phase B Mary shows a positive decreasing slope, Sally shows a rather steep negative increasing slope, and Henry demonstrates a relatively low and flat trend line. In phase C, both Sally and Henry demonstrate positive decreasing slope while Mary's trend line becomes relatively flat and maintains a low level. All three students appear to have a great deal of overlap between their phases, but only Sally's graph indicates a noticeable intercept gap between phases. In comparison with the students for whom only one phase was initiated, Betty shows a flat and low trend line during phase B and Ernie demonstrates a positive decreasing slope. Ernie's data shows more variability than Betty's, but both students maintain low scores.

For statistical analysis, a multiple regression analysis with a B•C contrast was applied to tardy scores for Sally, Henry and Mary. However, due to the difference in their phase B data trends, different techniques were used to determine the effect size for each. For both Sally and Henry, an MTS analysis was used because there appears to be pronounced positive trend in phase C. For Mary, an Allison SMS technique was used because of the apparent positive improvement trend in phase B. Positive trend in this first phase will tend to cause over-estimation of treatment effects, both in visual and statistical analysis. The correction method is originally by Allison & Gorman (1993), and improved by Parker, Cryer and Burns (2006). This "Allison" method, which can be carried out as "simple mean shift" or a "mean and trend shift", semi-partials positive baseline trend out of both baseline and intervention phases.

In addition to the multiple regression analyses, the quantity of non-overlapping data (NAP) was calculated and means levels were obtained for the phases of all five participants.

TABLE 6
Student Tardies

	Effect Size	P Value	NAP	P Value	Mean Levels
<i>Betty</i>	NA	NA	NA	NA	B= 0.33
<i>Ernie</i>	NA	NA	NA	NA	B= 1.4
<i>Sally</i>	0.45	0.05	7%	.81	B= 2.5 C= 2.4
<i>Henry</i>	0.23	0.31	42%	.12	B= 1.13 C= 0.56
<i>Mary</i>	0.25	0.04	32%	.21	B= 1.18 C= 0.17

Results from Table 6 indicate a near-moderate effect size for Sally and small effect sizes for Henry and Mary. Neither Henry nor Mary's effect sizes are considered statistically significant. In considering p-values, Henry's data indicates that the results are not trustworthy. Sally's data yields the largest result and the p-value indicates that her results are not chance level and are therefore trustworthy.

Measures of non-overlapping data are low for all three students. Results indicate there is a large amount of overlap between phases, confirming conclusions obtained from visual analysis. In addition, all p-values for NAP scores indicate that the results may be due to chance.

Lastly, the mean levels for both Henry and Mary decreased between phase B and C, demonstrating improvement, while for Sally the levels stayed virtually the same. In comparison, Betty maintained a low mean level throughout phase B and Ernie's mean level fell within a similar range as Henry and Mary's phase B scores.

A cross correlation of tardy data with the external measure of student absence data was calculated. The cross correlation demonstrated no apparent relationship between the two measures.

Student Self-Concept Scores

Next, pre and post scores from the Student Self-Concept Scale were compared for each student. Both, self-confidence composite and outcome composite scores are reported as standard scores, with mean scores falling between 85-115, and a standard deviation of 15. Self-confidence composite scores assess a student's perceptions of their ability to perform certain behaviors or possess certain valued attributes. Outcome composite scores rate the strength of a student's belief that performing a particular behavior or possessing a particular attribute will lead to desired outcomes (Gresham, Elliott, & Evans-Fernandez, 1993).

TABLE 7
Scores of Student Self-Concept

	Self Confidence Composite			Outcome Composite		
	<i>Pre-test</i>	<i>Post-test</i>	<i>Gain/Loss</i>	<i>Pre-test</i>	<i>Post-test</i>	<i>Gain/Loss</i>
<i>Betty</i>	93	107	14	83	100	17
<i>Ernie</i>	93	111	18	125	125	0
<i>Sally</i>	71	70	-1	83	87	4
<i>Henry</i>	86	108	22	103	118	15
<i>Mary</i>	92	94	2	103	103	0
<i>Average</i>	87	98	9	99.4	106.6	7.2

As seen in Table 7, average scores for the student group show a positive gain in both self-confidence and outcome composites. Individual examination allows for further dissection of results. Betty and Henry appeared to have made the greatest improvement overall as their gains fell in the double digits for both composite scores. Ernie showed positive gains in the self-confidence composite only, while both Sally and Mary showed minimal to no gains in both of their composite scores.

Research Question 3

The last research question, “Is a school-based mentoring program a viable intervention at the secondary school level?”, was analyzed by examining the fidelity of implementation of the intervention and the results of a social validity survey of mentors, students, and parents.

Intervention Fidelity

Data regarding the fidelity of the intervention was collected from 20% of the mentor logs used during the study. This came out to 7 logs from each mentor/student pair. Logs were pulled at random from a stack of each pairs’ logs. The logs were scored according to a 7 point (phase B) or 8 point (phase C) fidelity checklist. Each set of student/mentor logs were analyzed separately in order to determine if the program was implemented with higher fidelity for some students than others. Ideally intervention fidelity should be at 80% or higher. Results are reported in Table 8 below.

TABLE 8
Fidelity of Intervention

<i>Fidelity of Intervention Implementation</i>		
	<i>Phase B</i>	<i>Phase C</i>
Betty	73%	--
Ernie	76%	--
Sally	71%	94%
Henry	86%	88%
Mary	84%	97%

Table 8 indicates a fairly low level of intervention fidelity in phase B for Betty, Ernie, and Sally. All of their fidelity scores fell below the desired level of 80%. Henry and Mary's scores were both within an acceptable range, indicating that the basic mentoring intervention was implemented as it was intended. All three students who participated in phase C, showed an improvement in the fidelity of intervention during this phase. All scores in phase C fell within the acceptable range, indicating that the advanced mentoring procedures were implemented with fidelity.

Student, Mentor and Parent Survey

The social validity of the intervention was assessed through a survey of mentors, students, and parents (see Appendix 5). Surveys were completed by all 5 student participants and 4 mentors. Parents of 2 students returned a survey. The survey consists of seven statements pertaining to the mentor program. Responses were recorded on a scale ranging from "strongly agree" to "strongly disagree". Each question was analyzed by group and results are reported in terms of percentages, displayed in Table 9.

TABLE 9
Social Validity Survey Results

Students					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1) Improved organization & preparation	60%	20%	20%	0%	0%
2) Improved ability to turn in work	20%	60%	20%	0%	0%
3) Improved attendance	20%	20%	60%	0%	0%
4) Benefited student	80%	0%	20%	0%	0%
5) Enjoyed participation in program	40%	40%	20%	0%	0%
6) Easy to fulfill commitment	40%	40%	20%	0%	0%
7) Would participate in the future	60%	40%	0%	0%	0%
Mentors					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1) Improved organization & preparation	25%	50%	25%	0%	0%
2) Improved ability to turn in work	25%	75%	0%	0%	0%
3) Improved attendance	0%	25%	75%	0%	0%
4) Benefited student	50%	50%	0%	0%	0%
5) Enjoyed participation in program	25%	50%	25%	0%	0%
6) Easy to fulfill commitment	0%	25%	50%	25%	0%
7) Would participate in the future	0%	50%	25%	25%	0%
Parents					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1) Improved organization & preparation	0%	50%	50%	0%	0%
2) Improved ability to turn in work	0%	50%	50%	0%	0%
3) Improved attendance	0%	0%	100%	0%	0%
4) Benefited student	50%	50%	0%	0%	0%
5) Enjoyed participation in program	0%	100%	0%	0%	0%
6) Easy to fulfill commitment	0%	100%	0%	0%	0%
7) Would participate in the future	50%	50%	0%	0%	0%

Table 9 shows the majority of responses to statements regarding the mentor program fell into the “strongly agree”, “agree”, or “neutral” categories. When comparing sub groups of survey responders, students demonstrated the strongest agreement on statements regarding: improved organization and preparation for classes, overall personal benefit of the mentor program, and participation in future mentor program opportunities. The weakest results from students are evident in responses to the statement regarding improved attendance (present and on-time) in classes.

Mentor responses were strongest for the statements regarding: students’ improved ability to turn in work, and overall benefit of the mentor program to the student. Mentors were the only subgroup to submit some negative responses to survey statements. The statements regarding the ease of fulfilling the mentor program commitment and the desire to participate in future mentor program opportunities were both met with a 25% “disagree” response.

Parent responses to the mentor survey show some parallels with the student responses. The most positive responses from the parent subgroup were in response to statements on overall benefit of the mentor program to the student, and desire to participate in future mentor program opportunities. The weakest results were in response to the statement on improved student attendance (present and on time) to classes.

CHAPTER IV

SUMMARY

The purpose of this study was to evaluate the effectiveness of a mentoring intervention on the academic and social outcomes of at-risk high school students. The effectiveness of the intervention was measured by improvement in assignment completion, teacher ratings, tardy reports, grade reports, TAKS scores, and scores of student self-concept.

Research Question 1

In response to the first research question, “Will participation in a school based mentoring program for at-risk high school students’ result in increased academic outcomes?”, results were mixed. In the area of assignment completion, one of the three students, Mary, showed significant results as demonstrated by the percent of non-overlapping data at 86% and a p-value indicating results were not due to chance. In addition, Mary also showed a significant change in mean level. Examination of Sally’s data also shows encouraging results. While her effect sizes and non-overlapping data do not show statistical significance, the obvious change in slope direction from the negative increasing slope to a positive decreasing slope are important to note. It indicates that while the advanced mentoring intervention in phase C may not have improved assignment completion to rates better than phase B, it does appear to have slowed down and reversed the negative trend. It is possible that given more time, the intervention would ultimately show more significant statistical results for Sally. Overall, it appears

that the advanced mentoring intervention was effective in improving assignment completion for some of the students involved in the study.

Teacher rating data showed a similar result. Of the three students, only one, Henry, showed evidence of intervention effect on academic behaviors, as noted by the effect size and trustworthy p-value. Henry's effect size of .39, though still considered small, was the largest result of all the students. This result indicates that Henry's academic behaviors of: arriving to class on time, being prepared with materials, and turning in assignments on time improved during phase C of the intervention. In addition, his teacher rating data demonstrates the largest shift in mean level, further validating the intervention effectiveness. While Henry did not show impressive results in terms of his assignment completion, the positive improvement in teacher rating indicates that his academic behaviors have begun to shift. It is hopeful that if teacher perceptions are accurate, then given more time, Henry would also show improvement in his assignment completion.

The results for student grades were perhaps the most disheartening. Since this measure was the only one that allowed for comparison with baseline phase "A" data, effect sizes and conclusions could be drawn for all five students in the study. Of the five students, only Betty showed a statistically significant effect size of .54, falling in the moderate range. Coupled with the small p-value of .01 and a positive change in mean levels between phases A & B, it can be concluded that the basic mentoring intervention was successful in improving academic outcomes. However, this conclusion is weakened by the lack of similar results seen in the other 4 students. In contrast to Betty's results,

the three students who experienced basic and advanced mentoring (phase B and C) showed deterioration in grades when comparing phase A to phases B & C. These results are directly contrary to the expected outcome of the intervention.

The negative effects in student grades may be explained by examining the differences between phases A and B. Phase A data was gathered from grade reports from the previous school year. Four of the five students; Ernie, Sally, Henry and Mary, were in 8th grade during phase A and 9th grade during phase B & C. While the core subject areas remained the same between phases, the curriculum expectations, the teachers assigning grades, and the school the students attended were different for phase A and phases B & C. Therefore, comparing phases B and C only may offer more accurate comparison for these students because the phases took place during the same school year. Only Betty was in the 9th grade for phase A, and then repeated the same grade & courses (due to lack of credits) during phase B. Therefore, her results are likely the most valid for consideration.

Similar to the previous findings, TAKS scores also revealed little consistency between students. While Betty, Ernie and Mary demonstrated positive increases in their TAKS performance (particularly in the area of math), Sally and Henry's performances decreased in both subjects. Similar to student grades, TAKS scores are a distal measure of the mentoring intervention. Due to only having a single pre and post score for comparison, it could be said that the relationship between the mentoring intervention and TAKS scores is the weakest of all the academic measures in this study. Therefore,

conclusions regarding the effect of the mentoring intervention on TAKS performance cannot be determined at this time.

It is interesting to note that the students showing the most improvement in assignment completion, teacher rating, student grades, and TAKS scores did not necessarily overlap with one another. Academic outcomes can be measured in a variety of ways. While the ultimate reflection of academic success in school is student grade reports, these measures are complex and can result from many factors. Some of these factors were measured during the study, for example, assignment completion and academic behaviors (as measured by teacher rating). However, there are additional factors that were beyond the control or measurement in this study, including; individual course expectations, difficulty level of major tests/exams, and teacher/student relationships, to name just a few. Due to the multifaceted nature of academic success, it is therefore possible for students to show improvement in one area but not in others.

Research Question 2

Examination of results to answer the second research question, “Does a mentor relationship with a school staff member improve social outcomes for students?” reveals mixed results. When considering the effect sizes for tardy data, only one student, Sally, shows statistically significant results of .45, falling close to the moderate range. Sally’s graph also shows the most drastic change in mean level. Similar to Sally’s assignment completion data, her tardies show a negative increasing trend before the phase change and a decreasing, more positive trend after implementation of advanced mentoring procedures. None of the students shows significant improvement when examining non-

overlapping data, but both Henry and Mary demonstrate considerable changes in mean level between phases B and C. While both these students showed improvement, it is important to note that neither student demonstrated significant problems with tardies to begin with during phase B. Additionally, Mary's data shows an improvement trend beginning in phase B, so it is difficult to attribute her success in phase C directly to the change in phases.

Scores of Student Self-Concept were perhaps the most positive results out of all the measures collected. For this measure all five students showed at least some growth in self-confidence or outcome composite scores and in particular, Betty and Henry both posted growth of approximately one standard deviation in each of the composite scores. However, similar to the limitations of TAKS scores, the measures of Student Self-Concept are distal and cannot be linked closely to the mentoring intervention. A high school student's self confidence is greatly affected by their peer relationships, which were not a focus or component of this mentoring intervention. While the results from this measure are positive and it is hopeful that the presence of a supportive adult at school increased students' self-concept, a direct and causal relationship cannot be determined at this time.

Students chosen for the mentoring intervention in this study were identified due to academic struggles rather than social outcome data, such as self concept and attendance/tardies. While it can be expected that some students who struggle academically will also show difficulty in social behaviors, that parallel cannot be drawn for all academically struggling students. Therefore, it is possible that in order to truly

ascertain the effects of mentoring on social outcomes, the pool of students considered for intervention should be determined by social outcome data, rather than by academic grades and credits. Keeping this in mind, a look back at the data reveals that only two students, Sally and Ernie, demonstrate a concern when looking at tardy data. These students showed a regular pattern of 2 tardies or more in a two week period, while all other students' levels typically remained lower than this. When looking at scores of Student Self-Concept, only Sally's scores fell below the average range in her pre-test measure, indicating that self-concept was not a large area of concern for the other four students. Therefore, research question 2 may not be fully and accurately answered by the data collected in this study.

Research Question 3

Finally, in order to answer the third research question, "Is a school-based mentoring program a viable intervention at the secondary school level?" results of fidelity of implementation and a survey of social validity are both considered. When considering the fidelity of intervention, a score of 80% or higher is most desirable. Three of the five students' fidelity scores from phase B fall below this expectation. This indicates that the mentoring procedures were not followed as intended during all mentoring sessions. It is possible that the mentoring procedures were followed, but not documented clearly on the mentor log, or that the time allotted to meet during this phase was not sufficient to cover all the agenda material. It is also possible that while the mentoring intervention was meant to be conducive to a normal high school schedule, the expectation for the mentor/student meetings to take place during flexible times during

the school day (before school, after school, lunch) was not sufficient to ensure the meetings occurred with fidelity.

It is interesting to note that all three students who received advanced mentoring in phase C, showed an increase in fidelity scores. This increase can likely be attributed to the more specific and guided mentoring agenda provided during this phase. The question stems provided allowed mentors to better probe their students in each topic area to enhance conversation. In addition, phase C stipulated that the mentor/student meeting would take place over a longer period of time, better ensuring the entire agenda could be covered in one meeting.

Closer examination of individual mentor/student fidelity leads to further discovery. Sally's assignment completion, teacher rating, grade reports, and tardy data all showed negative trends during phase B. Interestingly, Sally's phase B is also the phase showing the poorest fidelity out of all the students. Sally then showed significant reversal and improvements in trend for assignment completion and tardy scores, and likewise showed the largest increase in fidelity of intervention from phase B to phase C. This causes one to wonder if the fidelity of intervention for Sally in phase B had been higher, would her data would have been so grim?

Another discovery worth mention is that the two students who required only phase B intervention, Betty and Ernie, demonstrated less than desirable fidelity of intervention scores. Neither student was chosen for advanced mentoring, due to their positive response to basic mentoring procedures. Therefore, it is possible that for some

students, following such specific mentoring procedures was not necessary and just meeting regularly with a caring adult was enough to impact their performance.

Examination of student, mentor, and parent survey results also provides insight into the viability of the mentor program as an intervention. Overall, results from the survey were positive. Responses indicate that the large majority of respondents felt that the mentoring intervention was successful in improving academic behaviors (such as being prepared for class and turning in work on time), while those responses regarding social behaviors (being on time and present) were more moderate. This finding indicates that our particular mentor program model may be most appropriately used as an academic intervention.

Another discovery from the survey results with strong implications on the viability of the intervention, were the responses of the mentor group to the questions on the ease of fulfilling the mentor commitment and their desire to participate in the future. While not all mentors responded negatively, these were the only responses out of all subgroups and statements to elicit a negative response. This is a concern, because as is the case in most school based interventions, the main burden of responsibility for implementation falls on the shoulders of teachers (or, the mentors for this program).

Further anecdotal data collected throughout the study adds commentary to answer research question 3. Several mentors commented that it was often difficult to track down their student for a meeting. Many would attempt to meet with their students during a common lunch period. However, during this time, mentors had to compete with the social pressure for student to hang out with their friends and peers. Some mentors

found that they could meet with their students during their conference time. This required that the student be pulled out of another class for 20-30 minutes, but in all cases, mentors reported that the other teachers were flexible and felt that the mentoring opportunity was worth the 30 minutes of class time missed once each week.

Additionally, mentor and student comments reveal a difference in the strength of the bonds between mentor-student pairs. One student reported that their mentor “really understands me and cares about what is happening in my life” while another student reported that their mentor “wants me to do good in math”. While both comments may be positive, the first comment infers a deeper connection than the second one. Likewise, mentor comments show varied levels of connection. One mentor reported that they attended afterschool activities/events to show support for their mentor student. Another mentor said they regularly talked to their student in between class periods, outside of the more official meeting times. Finally, one mentor brought work to the student’s home after several days of absences, and then spent time helping the student with the work. These anecdotes indicate that even when specific mentoring procedures are followed uniformly, not all mentor-student relationships can be considered equal.

Limitations

There are several limitations to consider in this study. One limitation is the possibility of maturation. Due to the gap of time between baseline phase A and initial intervention phase B (June-August 2008), and the change in teachers assigning grades during these two phases, the study cannot conclusively determine if changes in core subject grades were due to the mentoring intervention or to normal student maturation or

the subjectivity of teacher grading. Additionally, schools are complex settings and the study was unable to control for all extraneous variables. There are many variables that contribute to student performance. It will be difficult to ascertain with absolute certainty whether the mentoring program or another intervention, program, or influence can be exclusively credited with the results.

A second limitation is that the results maybe be threatened by the possible influence of the Placebo effect. Participants may have performed better merely due to the awareness of the study and the knowledge that the mentoring program was designed to help them in school. All students involved in the study had not only consented to participate in mentoring, but were also aware that research was being conducted to study the effects of mentoring, with an expectation that these effects would be positive.

A final limitation is the lack of control or measurement of the quality of the student-mentor relationships. While mentor logs were collected and scored for fidelity, and surveys sought to gather opinions on the mentor program in general, there was no data collection that rated mentor quality or ascertained an intensity of the bond between mentor and student. This information would allow for comparison of one student's results to another student's of similar mentor program quality.

Implications for Research

There are several recommendations for future research from this study. First, there is a need for further study utilizing single case design in the area of mentoring research. Most previous studies of mentoring involved group research with pre-post measures only. Pre-post measures may not accurately capture changes that take place as

a result of the intervention. Data that allows for more frequent collection such as, assignment completion rates, regular teacher ratings, and tardy reports, are more sensitive to growth and can therefore illustrate subtle changes that aren't reflected in pre-post measures. Additionally, as observed in this research study, the effects of mentoring manifest themselves differently in each student. While the participants had similar qualifications for admittance to the program, their results varied greatly for each measure. Therefore, group mentoring studies may not be able to accurately capture the significant improvements of individual students, as their results are negated when combined with other students.

The second implication is for further research into the differences between students who respond to basic mentoring procedures as opposed to those who require more structured and advanced mentoring procedures. If students could be classified by intensity of need, it may be possible to structure a two-pronged program where some students get less intense mentoring support (such as mentoring through a small group, or just connecting with an adult once each week for a "check-in") and other students get a more intense program right from the beginning of the year. This would enable schools to not only support more students with the same amount of staff, but also to provide the intense intervention right away, rather than waiting for students to do poorly.

A third implication is a need for similar research on mentoring interventions provided by existing school staff at the elementary and middle school levels. It would be interesting to note if connections with school staff were of higher impact and showed more significant effects at the younger grade levels, when peer pressure is not quite as

dominant as it is at the high school level. Several mentor studies have been done at elementary and middle school level, but none that mimics the use of existing school staff to serve the mentor role.

The final implication is a need for further research and data collection regarding the quality of the mentor-student relationship. In order to accomplish this, calculating the fidelity of intervention should include some direct observations of student-mentor meetings. This may be difficult to accomplish and still maintain the integrity of the mentor relationship because it may be uncomfortable for the student to have a stranger listening to their private conversation. However, it is important to discern the quality of the student mentor relationship, in order to determine if intervention results are valid. The cornerstone of the mentoring philosophy is that quality relationships with adults make an impact in student lives. Therefore it stands to reason that mentoring interventions with true fidelity will be those that follow not only the established procedures, but also establish a positive and strong bond between mentor and student. If mentoring procedures and factors of a quality relationship are fully researched, then it will be possible to replicate effective school-based mentoring programs in the future.

Implications for Practice

Implementation of a mentoring intervention at the high school level also revealed several implications for practice. The first of these implications is to revise some of the structures and systems of the mentor program to make it more conducive to mentors. One of the primary complaints from the mentors in this study was the difficulty of finding time to meet. Some possible revisions to address this concern could include:

assigning mentors to students with whom they already have a natural daily interaction (for instance, a student in one of their classroom or homeroom), or providing mentors with an additional planning period during the school day in which to meet with mentor students (in which case they may have the time to mentor several students).

Another implication for practice that future practitioners should consider is the selection criteria for students in the mentor program. This study targeted students who were unsuccessful academically during the previous school year. However, there is great variation among students in regards to reasons for their failure (absences, difficulty with the material, lack of organization, apathy towards school, etc). Further dissection into the reasons behind school failure would help delineate students into subgroups. Some subgroups may be most appropriate for mentoring, such as students who struggle with organization or lack a supportive adult figure at home. Other subgroups, such as students who lack foundational academic skills, may need a more focused academic intervention.

A final implication for practice is to devote personnel to oversee the mentor program, monitor the intervention, and make adjustments as needed. While the mentoring intervention does not generally require resources from outside the school district for support, it requires someone to ensure the program is functioning as was intended. Duties for these personnel would include: selecting students and mentors, providing training for the mentors, checking on mentors and students throughout the year, collecting data to analyze effectiveness, and periodically evaluating the program fidelity. Without personnel devoted to these duties, a well-intentioned mentor program may become a worthless intervention.

Conclusions

In conclusion, this study sought to discover if a school-based mentoring intervention could make a positive impact on the academic and social outcomes for at-risk high school students. The mentoring intervention was implemented during the regular school day and utilized school staff members in the role of mentors. Results indicated that the intervention was mildly effective for almost all students in at least one of the outcome areas studied. These findings are consistent with previous mentoring data. While no strong and absolute conclusions can be drawn, there are overall positive implications for mentoring as an intervention with at-risk students.

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APPENDIX A

MENTOR-STUDENT MEETING AGENDA, PHASE B

<u>Mentor-Student Meeting Agenda</u>	
Date: _____	
Time: _____	
Activity	Notes
“Good Things” & Celebrations	
Grade check	
Discuss concerns about student performance (grades, attendance, discipline, etc.)	
Problem-solving (issues with teachers, peers, etc.)	
Review, update & revise student goals	
Fill out action plan	
Organize notebooks &/or backpack	
Other	
Date & Time of next meeting: _____	

APPENDIX B

MENTOR-STUDENT MEETING AGENDA, PHASE C

<u>Mentor-Student Meeting Agenda</u>	
Date: _____	
Time: _____	
Activity	Notes
“Good Things” & Celebrations <ul style="list-style-type: none"> - At school, electives, etc? - In extra-curriculars? 	
Grade check <ul style="list-style-type: none"> - What grades look good? - What grades need improvement? - What are the causes of the grades (both good and bad grades) 	
Discuss concerns about student performance (grades, attendance, discipline, etc.)	
Problem-solving (issues with teachers, peers, etc.) <ul style="list-style-type: none"> - What interpersonal issues might be interfering with school performance? - What are some possible solutions? - What is one solution they are willing to try? 	
- Review, update & revise student personal goals. - Ask student to self-assess their progress on the 3 mentor program goals. (See back)	
Fill out action plan <ul style="list-style-type: none"> - What needs to be done this week to improve grades? - What needs to be done to be better prepared for classes? - What are the upcoming tests or big projects? - What steps need to be taken to resolve an issue with a teacher/peer? 	
Organize notebooks &/or backpack <ul style="list-style-type: none"> - File returned work (or throw away) - Turn in overdue or complete assignments - Organize notes/loose papers 	
Other	
Date & Time of next meeting: _____	

APPENDIX C

STUDENT SELF-ASSESSMENT

Student Self-Assessment					
Almost Never= Less than 20% of the time					
Rarely= 20-40% of the time					
Sometimes= 40-60% of the time					
Frequently = 60-80% of the time					
Almost Always= 80-100% of the time					
<i>During the past week I have been...</i>					
1. Organized and prepared for class--					
	English	Math	Science	Social St	Ave.
Almost Never (1)					
Rarely (2)					
Sometimes (3)					
Frequently (4)					
Almost Always (5)					
2. Turned in my assignments on time (classwork, homework, etc)--					
	English	Math	Science	Social St	Ave.
Almost Never (1)					
Rarely (2)					
Sometimes (3)					
Frequently (4)					
Almost Always (5)					
3. Was present and on-time to class--					
	English	Math	Science	Social St	Ave.
Almost Never (1)					
Rarely (2)					
Sometimes (3)					
Frequently (4)					
Almost Always (5)					
Comments--					

APPENDIX D

FIDELITY CHECKLIST

<u>Student-Mentor Program Fidelity Checklist</u>	
Mentor: _____	Student: _____
<i>Directions: Place a "1" on the blank if the component is evident from the Mentor-Student Agenda; place a "0" if the component is not evident.</i>	
<u>For Phases B & C:</u>	
_____	1. Shared "good things"/celebrations of positive events from the day/week
_____	2. Checked student grades
_____	3. Discussed concerns affecting student performance
_____	4. Problem-solved regarding student issues with teachers and/or peers
_____	5. Reviewed, updated, or revised the student's personal goals
_____	6. Filled out an action plan for the upcoming week
_____	7. Organized assignments, notebook or backpack
<u>Only for Phase C:</u>	
_____	8. Student filled out a self-assessment during the session.
<u>Session Fidelity:</u>	
_____ / _____	= _____ %

APPENDIX E

STUDENT MENTOR PROGRAM EVALUATION

Student Mentor Program 2008-09 School Year					
Circle the correct description of your role in the mentor program:					
Student	Mentor	Parent	Administrator		
1. I believe the mentor program improved student organization and preparation for classes.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
2. I believe the mentor program improved student ability to turn in work on time.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
3. I believe the mentor program improved student attendance in classes (present & on time).	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
4. I believe the mentor program benefited me/my student.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5. I enjoyed participating (or having my child participate) in the mentor program.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
6. I found it easy to fulfill my commitment to the mentor program.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
7. Given the opportunity, I would participate in the mentor program in the future.	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

APPENDIX F

TEACHER RATING

1. I am this student's _____ teacher:

<input type="radio"/> English	<input type="radio"/> Science
<input type="radio"/> Math	<input type="radio"/> Social Studies

2. During the past 3 weeks, this student...

	Almost Never	Rarely	Sometimes	Frequently	Almost Always
Was organized and prepared for class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turned in assignments on time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Was present and on time to class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX G

MENTOR SELECTION SURVEY

1. Teacher Role Models

The purpose of this survey is to identify teachers and staff members who are role models for high school students. In each box below, please identify one or more of your high school staff members who fit the description. In addition, you may list the same person (or people) in multiple boxes.

Thank you for your time!

1. Please name a teacher or staff member who you feel comfortable going to if you have a problem or concern.

2. Please name a teacher or staff member who makes you feel welcome at school.

3. Please name a teacher or staff member with whom you share a feeling of mutual respect.

4. Please name a teacher or staff member who supports you in school and cares about your future success.

VITA

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