Perceptions of School Climate and Connectedness: The Impact of a Cross Age Peer Mentoring Program

Kathleen Staude-Sites

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PERCEPTIONS OF SCHOOL CLIMATE AND CONNECTEDNESS:
THE IMPACT OF A CROSS AGE PEER MENTORING PROGRAM

A Dissertation
Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Education

By
Kathleen Ann Staude-Sites

August 2012
DUQUESNE UNIVERSITY
SCHOOL OF EDUCATION
INTERDISCIPLINARY DOCTORAL PROGRAM FOR
EDUCATIONAL LEADERS

Dissertation

Submitted in Partial Fulfillment of the Requirements
For the Degree of Doctor of Education (Ed.D.)

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PERCEPTIONS OF SCHOOL CLIMATE AND CONNECTEDNESS:
THE IMPACT OF A CROSS AGE PEER MENTORING PROGRAM

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ABSTRACT

PERCEPTIONS OF SCHOOL CLIMATE AND CONNECTEDNESS:
THE IMPACT OF A CROSS AGE PEER MENTORING PROGRAM

By
Kathleen Ann Staude-Sites
August 2012

Dissertation supervised by James Henderson, Ed.D.

The intent of this research was to determine the impact of a peer mentoring/tutoring program on parent perceptions of school climate and connectedness and standardized test scores, report card grades and attendance of at risk elementary students. Peer mentoring has been found to be effective in addressing some of the concerns regarding at risk student performance in the school environment and eventual school outcomes. This study uses quantitative methods to determine the effect of this intervention on this population. A school climate/connectedness survey completed by parents of the students participants in a Cross Age Peer Mentoring Program (CAPM Program) and standardized test scores, report card grades and attendance patterns were examined prior to and following student participation in the program. Subjects included 32 elementary students with n=10 for first grade, n=6 for second, n=8 for fourth and n=8
for fifth. The students were cross age paired, primary with intermediate to participate in a mentoring program. Parents of participating students were asked to complete the Comprehensive School Climate Inventory prior to and following their child’s participation in the program to determine if perceptions of school climate and connectedness changed as a result of their child’s participation in the program. Analysis of the survey results, pre and post participation was accomplished using dependent sample $t$-tests to discern differences in the mean scores for the survey factors, including Safety, Teaching and Learning, Relationships and Institutional Environment and the Unified Scale. Teaching and Learning items were combined to obtain a Climate score and Interpersonal Relationships and Institutional Environment provided a Connectedness measure. The null hypothesis was rejected, with results of the dependent $t$-tests showing significant differences in all but the Safety and Institutional Environment factors.

Attendance variables were found to be significant for all participants, mentees and a group identified as at risk for attendance. Academic variables for mentors included standardized test results and grade percentages, pre and post for both. Analysis of these scores and grade outcomes provided mixed results, with significant differences noted in standardized test scores, but no difference in the means of grade percentages.
DEDICATION

There are a multitude of people who have provided guidance, encouragement and support, in any number of ways, during my journey to the completion of this research. Without the unending patience, assistance and support of Dr. James Henderson, the Chairperson of my committee, I would never have reached this goal. He never gave up on me, and for that I am most grateful. I also thank Dr. Carol Parke, whose expertise and guidance contributed to my understanding of “the how” of research, as well as an increased interest and motivation to “explore” more. I thank her also, for the time she took from family to assist me with this dissertation.

To my friend, mentor, colleague and committee member, Dr. Christine Assetta, I offer my unending gratitude and love. She stayed by me, continually pushing and encouraging me to accomplish, what at many times, I thought an impossible task. Your friendship means much to me.

A special thanks to the staff at Wilson Elementary. They are the most professional and caring staff to be found anywhere. I am proud to call them colleagues. To those who were directly involved with the implementation of this research, as I always say “You are the best!”

To husband Ron, who throughout this process has offered only love, patience and understanding, I offer my unending love, devotion and gratitude. He handled with ease the times I became discouraged, frustrated and was ready to quit, just by saying “You can do it.”

Finally, I dedicate this dissertation to the memory of my parents, Charles and Kathleen Staude. They instilled in me a love of learning, encouraged my goals and
sacrificed much to provide the many opportunities and experiences that have made me
the person I am today. Their love and sacrifices will never be forgotten.
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Chapter One: Introduction

Introduction

Students at risk of failure at both the elementary and secondary level have long been of concern to educators. A plethora of research is available regarding the “who” and “why” of the dropout problem schools in the United States continue to face. These studies have investigated the many variables associated with at risk students who eventually drop out of school. Variables such as socioeconomic status and family structure are obviously not under the control of school systems and are therefore difficult, if not impossible, to change or affect in any substantial manner. Conversely, alterable variables such as attendance, engagement in the educational process, school climate and attitudes toward school can be positively influenced by parents, educators and the students themselves (Lehr, Johnson, Bremer, Cosio & Thompson, 2004). None of these factors, however, are reliable in predicting whether a particular student will succumb to the drop out process.

Much research has been conducted regarding the reasons students drop out of school. Jordan, McPartland and Lara (1999) characterize the reasons identified by students as having either a push effect or pull effect. Experiences or situations encountered by students within the school environment are considered push effects. Push factors most often cited by those students who choose to drop out include: difficulties getting along with teachers, low grades, disliking school, lack of positive peer relations and dissatisfactions with the learning experience. These factors may then impact feelings of alienation and failure and increase the desire to drop out.

Our traditional education system places strong emphasis on linguistic and mathematical/logical thinking skills. This emphasis may cause the unique skills and
abilities of many students, especially those at risk for failure, to be overlooked. The potential of these students to make significant and long lasting contributions to society is too often minimized. It would appear that the passage of the *No Child Left Behind* legislation (NCLB[2002]) and the need for increased emphasis on math and reading skills to ensure compliance with this law and avoid the sanctions that are connected with it have increased the likelihood of this occurring. School culture and climate, as well as instructional techniques, must be adjusted to promote the likelihood that all students, regardless of background, risk factors and/or difficulties faced in the school setting, are provided with opportunities to succeed. This success is dependent upon the school’s ability and willingness to provide experiences that will increase feelings of competence, belonging, usefulness and optimism, among others, for all students (Sagor, 1997).

Now, more than ever, educators must be concerned with development of the whole child. If the goal of educators is to ensure the academic success of all children, we need to recognize the unique talents and abilities of each student. Student affiliation and connection with the school environment, teachers and peers are vital if we are to personalize learning to ensure this eventual outcome. Academic engagement and positive school outcomes for the at-risk learner is dependent upon this personalization. Christenson, Sinclair, Lehr and Godber (2001) define engagement as multi-dimensional, with four specific types of engagement including academic, behavioral, cognitive and affective. The affective dimension addresses the importance of connections with both teachers and peers.

The impact of a student’s decision to drop out of school has been found to have long range consequences for both the student and society in general. High risk personal
behaviors such as substance abuse, indiscriminate sexual activity and involvement in illegal activities have all been found at higher rates in the drop out population than in high school graduate groups.

Lehr, et al. (2004) suggest a multitude of strategies to ensure school success for the at risk learner. Included in these strategies are modifying the instructional environment, provision of supplemental services, intensive attention to individual student needs and learning styles, school wide restructuring and establishing effective school membership, to name a few. Mentoring strategies, including peer mentoring, have been found to be one way to increase student affiliation with the school environment and facilitate positive outcomes. Frieman and Frieman (2001) found that using high school mentors for elementary students improved the younger student’s ability to deal with bullying and increased their self-concept and communication skills. Jackson (2002) found that a mentoring program for children at risk for delinquent behavior resulted in significant reductions in discipline reports, as well as increased feeling of being treated with respect. Research by King, Vidourek, Davis and McClellan (2002) evaluated the Healthy Kids Mentoring Program, targeting fourth grade students, and found that the program significantly affected students’ sense of school and peer connections. This was accomplished through the inclusion of components addressing communication skills and establishing friendships within the school setting. In a study examining the effects of a mentoring program on 10-17 year old, Keating, Tomishima, Foster and Alessandri (2002) found significant changes in four of seven measures studied, including internalizing problems, externalizing behaviors and hopelessness. Converse and Kraft (2009) investigated a school based mentoring program for at risk youth in the middle school
grades. The effects measured included office disciplinary referrals, attendance and school connectedness as measured by the School Connectedness Survey. Analyzed results demonstrated a statistically significant reduction in office disciplinary referrals and significant improvements in school attitude/connectedness.

Statement of the Problem

Never before has education been under fire as it is currently. More is expected of schools in the 21st century than has ever been expected in the past. Additionally, these increased expectations come at a time of diminishing, rather than increased resources (Greenberg, Weissberg, O’Brian, Zins, Fredericks, Resnik & Elias, 2003). Accountability in the form of high stakes testing, school choice and the requirements of NCLB, along with competition from charter and cyber schools are a few of the factors that contribute to increased scrutiny of public school student performance and achievement. Increased incidents of disruptions and violence in the school setting compound the difficulties faced by educators. (National Dropout Prevention Center/Network, 2008). The need to provide for the achievement of all students, including those at risk for failure, is placing an increasing amount of accountability on educators nationwide. The problems of how to ensure the successful performance of students at risk is a topic of concern for all educators seeking effective methods of ensuring positive outcomes for all students.

Student success in educational programming, but especially for at risk students, is dependent upon the effectiveness of program components in meeting individual needs in all areas of development. The demands of NCLB require that schools move from minimal competencies to requiring that students meet high academic performance.
standards. Educational programming must attend to the affective and emotional needs of at risk students, as well as their academic needs, if educators are to ensure the achievement of these high academic standards. This attention is necessary to ensure engagement of these students with others in the school environment which in turn impacts academic success. Children cannot learn or grow productively in isolation from other people, indeed isolation has been identified as a factor having negative impact on youth at risk, both in the short and long term. For students, social support and interaction is necessary to avoid isolation and the possible negative outcomes of this isolation (Hazler & Denham, 2002).

The goal of improving student academic skills through standards based reform is having unintended ancillary consequences in relation to the high school dropout rate, especially in relation to students with disabilities and those at risk for failure. In spite of this, there are available, a wide range of strategies that can mitigate at least some of the factors that cause students to drop out of school. Martin, Tobin and Sugal, (2002) found that programs such as “school within a school”, Check and Connect, and peer mentoring programs can have a positive impact on at risk students. Nationwide, state high school dropout rates for the 2007-2008 school year ranged from 10.4% to 48.7%, with an Averaged Freshman Graduation Rate of 76.4%. Additionally, the male dropout rate was higher than that for females, and Indian/Alaskan Native and Black students dropped out at a higher rate than Hispanic, White and Asian/Pacific Islander (Stillwell, 2010).

Young people with disabilities drop out of school at twice the rate of their typical peers. Of students identified with behavioral disorders, 55% drop out and up to 42% of students identified with a specific learning disability fail to complete school. Students
with disabilities who drop out of school are less likely than their peers to earn a GED (President’s Commission on Excellence in Special Education, 2002).

Failure to complete high school has serious social and economic consequences for the nation. Annually, these students cost the country an estimated 260 billion dollars in lost earnings, taxes and social services. High school dropouts account for 75% of state prison populations. Individuals in this group are 3.5 times more likely to be arrested than their peers who graduate. The dropout rate also impacts negatively on personal income, employment, literacy and health care. High school dropouts are about three times as likely to slip into poverty from one year to the next, as compared with those who have completed the high school experience. Annual salaries are almost 10,000 dollars less than the typical high school graduate. The unemployment rate for this population is approximately 30%, 13 points higher than those individuals with high school diplomas (NDPC/N, 2004).

According to NDPC/N (2004) student reported reasons for leaving school prior to graduation include: did not like school (51.2%), could not get along with teachers (35%), could not get along with students (20.1%) and felt I didn’t belong (23.2) (NDPC/N, 2004). Martin et al., (2002) also report that dropping out of school is not an impulsive action, but rather a cumulative process, often a result of feelings of alienation in the school setting. This alienation often begins in the elementary years and is characterized by poor attendance and academic difficulties resulting in a cycle of failure. Christensen, et al. (2001) indicate that to promote student engagement with the school environment, educators must provide opportunities for engagement in four areas of development: academic, behavioral, cognitive and affective. She views engagement as the bottom line
in interventions to promote school completion since both academic and social aspects of school life are vital for student success (Appleton, Christenson & Furlong, 2008).

Lack of quality personal relationships with adults and peers, self-concept and feelings of disenfranchisement are also identified as major contributors to the decision to leave school. Providing an environment where at risk students make connections with adults, peers and the community has been found to have positive effects on student perceptions of the school experience. Castleberry and Enger (1998) found that at risk student’s perceptions of success and willingness to adjust work ethic and attitude were all heightened in an alternative placement where they felt relationships with teachers and peers were characterized as family-like, more caring and respectful. A study of Georgia’s state program for chronically disruptive youth by Harnish and Henderson (1996) found that students had positive perceptions of the “family” approach, promotion of student ownership and the bonding that occurred among students. Knight and Kneese (1999) examined at risk student perceptions in four instructional programs. Data collected in this study demonstrated that affiliation with the school environment and teacher support were viewed as important to their success in these programs.

A lack of a sense of belonging, support, and isolation increases the potential for future at risk behavior. Ellis and Small (1998) found that those students with high needs for belonging and inclusion in the school environment were more likely to get less of it than their peers whose needs were not as high. They also found that these same students were more likely to receive less encouragement and affirmation from adults and peers alike. Meeting student needs to be a contributing member of the school community makes it less likely they will exhibit rebellious and/or delinquent behaviors and increases
resilience in coping with personal changes. Conversely, students who experience a
sense of belonging have a more positive attitude toward the school experience. Osterman
(2000) found that students who have a sense of belonging interact with adults and peers in a more appropriate manner and demonstrate higher academic engagement and achievement. The research conducted by Certo, Cauley and Chafin (2003) resulted in data that showed that students engaged with instruction when strong interpersonal relationships were present repeated the benefits of that instruction. The students interviewed for this investigation indicated that interactions with caring adults in the school impacted favorably on their sense of belonging. Additionally, peer interactions and support, along with a climate of acceptance were also found to increase their sense of belonging and engagement.

Common sense would tell us that a child’s development is fostered through the relationships they have with others. Research provides evidence this is indeed the case. Most importantly at early developmental stages, parental influence impacts all areas of development (Zero to Three, 2000). As children grow parental actions continue to make a difference. As children enter and progress through the school experience, parental influence can impact student academic, social and behavioral development as well as the possibility of engagement in unhealthy behaviors. Influences may include but are certainly not limited to parental involvement with their child’s learning experiences, the amount of home support provided, expectations with regard to achievement and behavior, as well as attitudes toward the school and education in general.

Parental involvement has been linked with student academic success in numerous studies. When parents become involved in their child’s learning, a dramatic increase in
student grades, test scores and overall academic outcomes have been noted (Office of Educational Research and Improvement, 2004). A study conducted by Hawes and Plourde (2005) found a slight positive correlation between parental involvement and reading achievement of sixth grade students. Other research found evidence that parental habits in relation to reading influence fifth grade students out-of-school reading habits (McKool, 2007). Gould (2011) examined the relationship between parental involvement in the education of middle schools students and the students’ satisfaction with school. Specifically, this research found that middle students residing with biological parents who were involved with their education had a higher level of satisfaction with their experience in the school setting.

Focus group research conducted by Rubie-Davis, Peterson, Irving, Widdowson and Dixon (2010) found that generally, parents felt that did not have a direct impact on student outcomes. In this same study however, students indicated that they made efforts to meet parental expectations, as long as those expectations were realistic. Sherblom, Marshall and Sherblom (2006) investigated the relationship between perceptions of school climate, including parent perceptions, on math and reading achievement for 3rd and 4th grade students. Additionally, this study found that certain aspects of school climate have a particularly strong relationship with achievement in these areas. Brandon (2007) found that African American parents in particular can feel alienated by schools and school personnel, resulting in a lack of participation in their child’s education. This alienation can stem from a lack of relationships with those responsible for their children in the school setting, including a lack of communication and interactions.
Students with disabilities are considered at risk by the very nature of their learning difficulties. A study conducted by Brown, Higgins, Pierce, Hong and Thoma (2003) found that these students are further marginalized in that they are more likely than their typical peers to feel “disconnected” from the school environment. Additionally, significant differences were noted in the areas of isolation, powerlessness and normlessness. This study also found that the same results were noted for both males and African Americans.

At risk students often are not connected to their peer group which can impact engagement and eventual academic success. Certo, et al (2003) found that in order to promote the affiliation of the at risk student with the school environment, educators should address the quality of student relationships with both adults and peers. Students in this study indicated that non-instructional time in the school setting was often rushed and infringed upon opportunities to socialize. This lack of time to engage with their peers meant that social goals were not always met.

In relation to self-worth and esteem, a lack of affiliation can negatively affect attitude towards school attendance and completion of the school experience. Radziwon (2003) found this to be particularly true at times of transition (i.e. from elementary to middle school and middle to high school). His research demonstrated that a student’s perception of their peer’s beliefs regarding school will impact their level of identification with and sense of belonging to school. This sense of belonging in turn impacts in a positive manner, student self-concept and the belief that peers, as well as adults care about them and what they are learning. These social variables of belonging, support and self-esteem play a major role in academic and affective outcomes in relation to school,
and impact a student’s ability to identify and achieve goals, such as graduating from high school. Effective implementation of programs and strategies that promote and support relationships within the school setting is identified as a quality environmental indicator to enhance the probability of completing the school experience for at risk students. Support programs such as tutoring and mentoring are identified as a means to this end (Field & Hoffman, 2002).

The psychological needs of the at risk learner are the same of those not at risk. However, the at-risk student tends to not receive the level of intervention with regard to their psychological needs to benefit in the educational system. The psychological needs of the at risk learner include: feelings of competence, belonging, usefulness, potency and optimism (Wells, Miller, Tobacyk & Clanton, 2002). The aspect of belonging has to do with acceptance, fitting in and conversely being left out. Often at risk students perceive just the opposite from teachers and peers at school. The manner in which schools and teachers respond to these needs, as they engage with the at-risk learner, will often impact the likelihood of student success. Conrath (1986) as cited by Stegelin and Bailey (2004) also identifies specific classroom behaviors which are identified with the at risk student. These include: low self-confidence and self-worth, limited notion of the future and its possibilities, varying social relationships and friendships and avoidance behaviors.
Background of the Problem

The value of a high school diploma has changed dramatically over the past half century. During the 1950’s, the completion of high school was considered a valued asset in the labor market, opening doors to personal and economic success for graduates. Promising opportunities in relation to the job market and potential careers continued to be more or less ensured for students completing high school through the 1970’s. Beginning in the mid 1980’s, however, technological advances, job market competition and global economic and labor issues began to fuel a demand for more highly skilled workers and in turn transformed a high school education into a minimal requirement for entry into the labor force (National Center for Educational Statistics, 2004).

Currently, a high school diploma is considered a prerequisite to additional education, technical training and job placement for students. For secondary schools, the requirements of NCLB (2002) in relation to graduation rates makes ensuring students complete high school a matter of major importance. Educators are being held more accountable than ever before for the students in their charge. Although there has been an interest in the issue of drop outs since the early 1900’s, recent changes in societal, as well as governmental expectations is changing the focus of this interest from concern with demographic characteristics and causes of the problem, to focus more on promotion of completion of the school experience and improvement of school factors that will contribute to this eventuality (Martin, et al., 2002).

McDill, Natriello and Pallas (1990) found that it is possible to identify potential dropouts early. They contend that certain parts of the profile of a dropout prone student may be visible as early as the third grade. Indeed, the decision to drop out is not
connected to a discrete event, but rather is “the outcome of a long process of
disengagement with measurable indicators that are present in the early grades” (Lehr,
Hansen, Sinclair & Christenson, p. 342). This disengagement with the academic process
coexists with the feelings of alienation students at risk of dropping out most often
experience in relation to the school environment, staff and peers (Worrell & Hale, 2001).

Stearns and Glennie (2006) conducted research utilizing data from the North
Carolina Education Research Data Center at Duke University in relation to factors
contributing to student decisions to drop out of school. The results of this investigation
found significant variations by grade level, age, gender and ethnicity, especially in
relation to identified push and pull factors. Additionally, it was found through this
research that the dropout rate was highest for ninth grade and it was particularly high for
minority groups. The authors of this research suggest that more attention needs to be
given to individual students and the factors that influence their decision to either remain
in school or leave.

Friendships and peer support systems are essential ingredients for a sense of well-
being. Positive involvement with others is needed to affirm self-worth. For students at
risk of failure, there is a need to expand the number and types of positive relationships
and quality connections. Baker (1999) found that effective interpersonal relationships,
respectful and cooperative peer interactions are highly associated with academic
engagement.

Policies that emphasize standards reform must be accompanied by practices that
afford students the opportunity to succeed, to ensure greater school engagement and
retention of the at risk student (Martin et al., 2002). Relationships with others are an
important variable in learning. Educators need to increase concern with and emphasize the importance of relationships in the school setting. Connectedness to others at school and a sense of belonging to the school culture are highly associated with academic engagement and eventual positive outcomes. This has been found to be the case at both the elementary and secondary levels (Baker, 1999).

At risk students often feel a sense of alienation within the school environment. This alienation can impact negatively upon their engagement in the learning process and school outcomes. Educators must give attention to the affective domain of developments in order to provide for the academic success of at risk students. Student perceptions of their ability to succeed will suffer if this area is neglected. Increasing opportunities for at risk students to make positive interpersonal connections in the school environment can only enhance their ability to make academic gains. Considering student need for affiliation with the school environment has the potential to impact positively on student failure and dropout rates.

Researchers suggest a variety of ways to assist school officials to stem the flow of students leaving school prior to graduation. Implementation of these strategies may help schools decrease the rate at which at risk students drop out, and in turn eliminate some of the social and economic problems associated with high school drop outs. Establishment of effective school membership for the at-risk student by strengthening connections with peers is one of the suggested strategies. Peer helping strategies, including tutoring and mentoring programs are one way to heighten this connection. Dopp and Block (2004) investigated a high school program that utilized students with disabilities and typical peers to act as peer mentors to a group of students with disabilities. Positive results were
obtained for both mentors and mentees. Martin et al. (2002) identified numerous peer mentoring programs that use successful older students as mentors for incoming freshmen. In some of these programs school climate has been impacted favorably and average daily attendance of the involved students has shown improvement.

The NDPC/N (2004) indicates that a mentoring relationship can be moderately effective at improving the overall well-being of children and youth. This relationship builds upon the at-risk students’ assets, and the more assets they have, the less likely they are to engage in at risk behavior. Peer tutoring and mentoring are often cited as approaches that provide the impetus for decreased drug use, aggressive behavior and truancy in at risk students. Duckenfeld (2004) indicates that students acting as tutors provide their peers with role models that impact self-esteem, communication and conflict resolution skills. The interaction between the students provide opportunities for increased protective factors, including caring and support from another person, high expectations and opportunities for participation in meaningful activities. Sheehan’s study (as cited by Foster, 2001) found that children in a community based peer mentoring program related to violence prevention showed less support for violence and avoided escalations of aggressive behaviors. Additionally, Powell, (1997) found that a peer mentoring program which targeted youth involved in gangs, resulted in lowered rates of arrests and violence related injuries following participation in the program.

Additionally, peer tutoring and mentoring programs, including peer programs, may well address the psychological needs of the at risk learner identified by Wells, et al. (2002). This could be particularly true for the feelings of competence, belonging and usefulness. According to Brauer, Grady, Matthews and Wilhite (1997), there is evidence
that one to one peer mentoring may produce the greatest return on student learning. Students engaged in the mentoring process “learn through teaching, are helped through helping” (p. 21). In this research investigation, 4th 5th and 6th grade students were assigned as mentors to kindergarten and first grade students. Mentoring sessions focused on conflict resolution, critical thinking and social skills. Data collected demonstrated an improvement for both groups in relation to these targets, as well as academic achievement and attitude toward school.

**Purpose of the Study**

All students, including those at risk, deserve the best that education can provide. Engaging them in the education process is at times an arduous task. Ignoring the wealth of potential in this population is unfair not only to them, but to society. In order to assure tapping into this potential, we must find effective ways to engage them in the learning agenda. It would appear that increasing their connectedness to the school environment and their feelings of self-worth, self-respect and need through a mentoring relationship with a younger child is one means to this end.

The intent of this research was to determine the impact of a cross age mentoring program involving at risk intermediate level students working with at risk elementary students. Specifically the research questions include:

1) Does student participation in a Cross Age Peer Mentoring Program enhance parent perceptions of school climate and connectedness?

2) Does participation in a Cross Age Peer Mentoring Program improve school attendance of mentors?
3) Does participation in a Cross Age Peer Mentoring Program improve school attendance of mentees?

4) Does participation in a Cross Age Peer Mentoring Program improve academic performance of mentors?

5) Does participation in a Cross Age Peer Mentoring Program improve academic performance of mentees?

While mentoring has been shown to have positive impacts for students, it is recognized that it is not a “fix all” strategy. Alone, it cannot remedy all the factors which contribute to at risk students leaving school. The purpose of this study, however, was to determine the effect of this strategy on a few of the factors which contribute to the at risk students’ lack of engagement with the educational process and potential for leaving school early.

Theoretical Framework

There are several theories that provide a context for the use of mentoring strategies as an intervention for students at risk for failure. Four of these theories provide the framework upon which this research will be based. The first of these is that of Erikson’s theory of human development (1950, 1959). Erikson, in his theory, claims that transition to young adulthood requires the conversion of childhood knowledge into a larger social context of where one “fits” in the larger social context outside of the family. Adolescent identity then, is limited or enhanced by early social learning, personal interactions and identification. Expanding opportunities to engage with the larger social environment provides for new social learning and expanding knowledge of oneself. Mentoring activities can facilitate this process.
It would appear that this is especially true for at risk students. Since most at risk youth are less likely to have experienced advantages socially, economically and educationally, their ability to establish independent identities and appropriate roles within their social world may be compromised. Engagement in the mentoring process may well facilitate this process also.

The second theory upon which this research will be built is that of social intervention (Bennett, 1987). Within this theory, there are three conceptions of society, its institutions and the role and responsibilities of the individual. The mentoring process will take into account at least one of these conceptions. The design of the mentoring model in relation to its purpose and the role of the mentor will be determined by which of these three views or combination of views is favored. Powell (1997) identifies the first view as one in which society is open and access to institutions is unrestricted. Barriers to individual growth and development are viewed as a result of deficiencies in the individual. Given this view of society, mentoring is seen as an opportunity to enrich individual development, or disprove or remedy the deficiencies.

The second conception perceives society as blocked by social divisions that are difficult, if not impossible to cross. Inequity in access to and/or distribution of resources is perceived as the culprit in this view. Mentoring under this perception of society takes the form of advocating for the protégés right to equal access, provision of resources and/or teaching of skills required for success. For the mentor, it means enhancing their feelings of worth and what they have to offer to others.

The third conception of society in this theory views society as “organic, growing or evolving” (Powell, 1997, p.10). This view promotes the idea that as long as
individuals have certain skills and prerequisites they can grow and achieve. If development and achievement do not occur, it is most often the result of a “bad fit” between the individual and the social placement, not from personal failure. In this context, society cannot afford to be indifferent to individual developmental needs, since societal growth is linked directly to individual growth. Within the framework of a mentoring program and relationship then, the purpose is to provide participants with the skills necessary to achieve the highest level of success possible. This approach lessens the responsibility of the individual in relation to achieving success and increases the responsibility of the institution, in this case, the school.

Within the larger context of the social intervention theory, the at-risk child is perceived as lacking necessary abilities, preparation, psychological and/or social resources to attain success. These resources include, but are not limited to, positive role models and advocates, as well as community agencies such as churches, ethnic or youth organizations. Involvement in the mentoring process provides the at risk child with the support(s) and resources necessary to aspire to and achieve success. The child views this success as significant since it is determined by individual achievement, importance and responsibility. There is an increase in feelings of control and independence on the part of the child (Powell, 1997).

The third theory underlying this research is that of Durkheim’s alienation theory (LaCourse, Villeneuve & Claes, 2003). Seeman (1959) as cited by LaCourse et al., (2003) defines this multidimensional theory through five distinct features. The first, self-estrangement, manifests itself in low self-esteem, boredom and purposelessness. The second dimension related to the concept of alienation is powerlessness and manifests in
feelings of fatalism, pessimism and loss of control over one’s life. Social isolation is manifested in feelings of loneliness, due to a real or perceived lack of intimate relationships with others. The fourth dimension related to alienation theory is that of normlessness, which is defined as the belief that socially unacceptable behaviors are justified to achieve goals. The final dimension, meaninglessness, especially pertinent in relation to educational issues, is the perceived lack of connection between what is being learned now to what will be done in the future.

Research cited by Brown et al. (2003) indicates that students from diverse ethnic and linguistic backgrounds, students with disabilities, students from lower socio-economic groups and males are often most affected by school policies, teacher attitudes and instructional practices in an adverse manner. This adverse effect may be a contributing factor in the resulting alienation experienced by these students. Often these are the very populations eventually identified as at risk. Given these understandings of the concept of alienation and its impact on at risk students, educators have an obligation to implement practices which may foster more connections within the school setting.

Finally, a developmental assets framework provides a basis for this research (Benson, Scales, Leffert & Roehlkepartain, 1999). The developmental assets framework is based on the Positive Youth Development (PYD), prevention and resiliency research that contend a strength based approach to the development of children and youth is more effective than a deficits model, especially for those most at risk (Benson, Scales, Hamilton & Sesma, 2006). Developmental assets represent the kinds of positive experiences and characteristics that all children should have the opportunity to experience, but more importantly, these assets have been shown to promote positive
behaviors and attitudes and as a result students are less likely to engage in high risk behavior (Search Institute, 2006). Specifically, the external assets of support and empowerment, along with the internal assets of social competencies and positive identity are applicable to this research on peer mentoring for at risk children.

Significance of the Study

The significance of this study is in its contribution to the available literature on peer mentoring/tutoring and the resulting relationships as an effective strategy for at risk students, at the primary and intermediate levels. Under NCLB, academic success, attendance rates and graduation rates are all aspects that will determine if a school has made adequate yearly progress (AYP). This study provides information regarding academic success, attendance rates and parent perceptions of school climate and connectedness, which may improve school retention of the targeted population.

Although most people equate schools almost exclusively with academic learning, they are much more than that. Depending on the factors in play, they are also complex environments that can provide students with opportunities for success in many areas of development or they can be environments that alienate those most in need of affiliation. Successful programs and interventions for students at risk for failure provide a school environment that helps these students develop a sense of commitment to the school community and the learning process.

Mentoring programs are one of the many strategies recommended to address the problem of engaging at risk youth in the educational setting. Traditionally, this strategy has focused on
problem solving, guidance to influence adolescents engaged in risky behavior and prevention of future engagement. Most programs have matched adult community members with at risk high school students in an effort to provide additional social and academic support (Jackson, 2002).

According to a study done by the Office of Juvenile Justice and Delinquency Prevention (1997), youth involved in mentoring programs are less likely to experiment with drugs, be physically aggressive and skip school than those not involved in such programs.

Traditionally, the implementation of peer helping programs in the school environment has utilized high or average achieving older students to tutor and/or mentor younger at risk students. Through these programs, the older students serve as role models for their younger protégés.

Peer mentoring programs have been found to have the potential to contribute to students’ sense of membership in school and increase their feeling of valued contribution. The Big Brother Big Sister organization has set up a program called High School Bigs, in which high school students volunteer to be Big Brothers or Sisters to elementary, middle or junior high school students (Herrera, Kauh, Cooney, Grossman & McMaken, 2008). Additionally, The I AM Connecting program is a peer to peer mentoring program used in the Broward County, Florida schools in which high school students teach an approved character building course to third grade students in one of their feeder elementary schools. In both of these programs, both groups of students demonstrated increased achievement.
There is a lack of information regarding the use of at-risk students in the role of mentor for younger students at risk. Duckenfeld (2004) reports on the use of high school at-risk students as tutors for younger children, and cites improvement in grades, reduction in the number of disciplinary referrals, as well as gains in self-concept and positive attitude toward school as beneficial outcomes of the program. Runge (1997) discusses a mentoring program using at-risk students at an elementary school in Texas, but provides no empirical data regarding the improvements for mentors involved in this program.

Traditional mentoring programs seek to capitalize upon the strengths of the at-risk youth to increase their sense of safety, belonging, leadership and decision making skills. Positive growth and development are fostered when adolescents develop a belief in their abilities, control and connectedness. Mentoring has been shown to improve interpersonal skills and relationships, increase self-control and improve academic achievement. This strategy is thought to be an effective intervention to address the sense of alienation, lack of self-esteem and personal relationships with others, in an effort to promote school success. King et al. (2002) report that research in school-based interventions indicates that mentoring programs that incorporate encouragement, support and empowerment contribute to improved attitudes towards school and significant improvement in academic achievement. Keating et al, (2002) indicate that evaluations of mentoring programs found that school affiliation and self-esteem are favorably impacted by these relationships.

Engagement and affiliation are important aspects of school climate for all students if they are to be successful in the school experience. For students at risk, the lack of these
vital characteristics can only contribute to their continued academic failure. The opportunity to engage in an activity in which they can offer something of value has the potential to enhance a child’s sense of belonging, importance and motivation. The possibility of engaging at risk high school students in a mentoring relationship with a younger at risk student provides such an opportunity.

Concern with the dropout rate, lack of academic and social success within the school environment and post school problems encountered by at risk students provide a foundation for this research. The questions posed and the data obtained regarding the impact of a peer mentoring program on some aspects of the educational experiences for the at-risk student and their parents will contribute to a better understanding of one possible intervention for this population. Regardless of federal legislation demanding accountability, it is the opinion of this writer that we have a moral obligation to better understand the school’s contribution to the problems of the at risk population and seek better ways to address the factors over which we have some control, including our clients feelings of alienation and motivation.

Anticipated Limitations of the Study

There are several limitations that must be considered with regard to the proposed study. The first is the small sample size. Since this study was conducted with participants from just one elementary school, in a moderately sized school district, the number of at risk students at both the primary and intermediate levels will be limited. Secondly, since the study was conducted with an at risk population in just one school, results will not necessarily be generalizable to other districts or schools. The duration of the study must also be considered as a limitation. The time between pre and post data
collection was only four weeks in duration, with students meeting a total of twelve sessions. This time limit may well have impacted the expected results.

Another limitation relates to the possibility of concurrent interventions having an impact on the expected outcomes. The at risk students who will be engaged in the mentoring process will also be included in other academic intervention programs such as Response to Instruction and Intervention (RtII) and positive behavior support. These other interventions may also have an effect on the student’s grades, attendance and attitude toward school.

Definition of Terms

At risk students-students who due to a variety of factors are deemed to be less likely to graduate from school, engage in unhealthy and/or aggressive behaviors

School Climate-the factors that contribute to the tone in and attitudes toward a school

School Connectedness-relates to perceptions and feelings about school and the experiences they have there

Mentor-an older peer who provides guidance in relation to academics, social development, problem solving

Mentee-primary grade level student who is matched with an older peer

Conclusion

Students considered at risk for completing the school experience or participating in unhealthy or aggressive behaviors pose on going challenges for families, schools and society in general. The long term impacts of the decision to drop out of school are numerous and varied, but of heightened concern for those responsible for their education. Strategies to address the specific needs of these students are many and varied in their
approach. There is a need for the education community to increase focus on those factors that can be influence in the school setting and to promote the positive attributes of students to assist in the remediation of their difficulties. Complacency with regard to the at-risk student is not an option. Schools and school personnel must take steps to ensure a quality education and school success for all students.
Chapter Two: Literature Review

Introduction

The issue of high school at risk students, those who are at risk in relation to completing the high school experience has been a concern for years. For educators and policy makers, the concern has recently reemerged for renewed consideration for several reasons. One reason relates to the fact that although adolescents are currently no more likely to drop out than in the past, the cost of that decision has risen sharply. The economic, social, health and judicial implications are much more pronounced now than in the past. Within the global economy, and due to the increase in technology, jobs for which high school dropouts may qualify (e.g. un- or low skilled), will be diminished (Dynarski, Clarke, Cobb, Finn, Rumberger & Smink, 2008). Moretti (2007) found that at risk students have worse outcomes and lower life expectancies, and Waldfogel, Garfinkel and Kelly (2007) indicate that these students will place a strain on government social programs due to the need for food stamps, housing assistance and welfare payments.

According to McWhirter, McWhirter, McWhirter and McWhirter (2004), social interaction, or the lack of it, is one of the factors that can impact a person’s decision to leave school. The opportunity to socialize, engage and affiliate with a social group is beneficial to the student at risk. In a checklist developed by these authors, factors that serve as warning signs in the decision to leave school include: student feels alienated from school, lacks a sense of belonging, does not identify with peer group and has low self-esteem. Christle, Hlivette and Nelson (2007) conducted a study on school characteristics related to high school dropout rates. The results support the contention that schools can impact in a positive manner the dropout rate with a focus on alterable
school characteristics such as climate, high expectations and facilitation of both academic and social success.

Alienation of the at risk students from school, the adults and peers they may encounter in this setting, and conversely a sense of belonging and connectedness to that environment, have been found to have an impact on the decision to leave school prior to graduation. Kerka (2003) indicates that at risk students’ experiences of “isolation, marginalization and failure, contribute to a lack of optimism” and “their experiences of failure may contribute to low self-efficacy, and limit their aspirations and hopes about future life and work” (p. 2). At risk students engaged in a second chance program report that the major factor contributing to their success was a feeling of belonging. Osterman (2000) indicates that a sense of belonging or connectedness works to promote positive outcomes and should be taken into consideration in the educational setting.

It would appear that providing at risk students with the opportunity to engage in learning and other activities that promote a sense of affiliation and connectedness will impact positively on their willingness to engage within the school setting. Mentoring programs, in various forms, are cited in the literature as one method of reaching out to and engaging these students. These programs take many forms in relation to design and model. Some of these programs are community based, while others are school based. One on one mentoring relationships, group mentoring situations and team mentoring are all mentioned in the literature. Traditionally, the mentoring relationship has been between a youth and an older, experienced, caring adult. More recently, a cross age peer mentoring model that matches an older youth with a younger child has been suggested as an intervention for students at risk for failure and eventual dropout.
Identification of Themes

The approach to the literature review for this study on peer mentoring using intermediate students at risk for failure with primary at risk students utilizes five primary themes. These five themes are: students at risk for school failure, the importance of connectedness and school climate for students at risk and parental influence on student success, programs and practices that promote success, mentoring, including peer mentoring, as an intervention for at risk students and finally, the underlying theories supporting the use of this strategy for the purpose of increasing school affiliation and success for these students in the school setting.

In addressing the first, students at risk for school failure, the literature review concentrated on the predictive factors that precede the drop out process, and the results and consequences for these students. The literature, both prior and recent, is replete with research regarding this issue. Early studies tended to focus on individual, student centered factors related to the issue of dropping out of school. More recent research takes into consideration school factors, as well as addressing the need to focus on alterable factors that influence the decision to drop out. Regardless of the date of the research, it would appear that no one factor stands out as a primary cause, but instead combinations of various factors influence the decision to drop out of school.

The importance of student perceptions of school climate and connectedness and the relationship between these two concepts is considered within the second theme. How students perceive the learning and social climate within the school environment can impact their feelings of connectedness within that setting. The experiences of students with regard to feelings of safety, interactions with teachers and peers, sense of belonging
and efficacy in relation to achievement can all influence student perceptions regarding the school environment and eventual outcomes. Additionally, these are all aspects of the school setting that adults have the ability to impact in a positive manner for students; indeed the establishment of positive standards for interactions, expectations and learning is within the realm of responsibility of school personnel. Use of one of the many instruments available to measure school climate and connectedness can provide schools with information that when acted upon can enhance the school environment and the learning agenda to promote the success of the students. Consideration was also given to parental influence in relation to student achievement, general well-being and attitudes toward school and the educational process.

Programs and practices that promote success, both immediate and long term, are considered next. The impact of The No Child Left Behind Act of 2001 in relation to student achievement, attendance and the high school graduation rate is also a consideration in relation to the need to promote school success. Studies of programs at the school level intended to reduce the dropout rate have been analyzed to determine effectiveness and to make recommendations to policy makers, communities and individual schools. Hammond, Linton, Smink, and Drew (2007), through their evaluation of various programs intended to address the needs of the at risk learner and increase the probability of successful school completion, found that it is important to consider as early as kindergarten when developing and implementing programs for this population. Additionally, they stressed the need for those adopting an existing exemplary program, to give careful consideration to the importance of implementing the program with fidelity. This is vital in order to promote the possibility of positive outcomes.
Mentoring as an intervention for the at-risk student is a strategy that has a long history. This history, along with the various forms that mentoring takes, and the subsequent benefits are included within the third theme. Research on various mentoring programs included in the research by Hammond, et al. (2007) labels a number of peer mentoring programs as exemplary, including the Big Brothers/Big Sisters Program, Peer Assistance and Leadership Program and Peer Assisted Learning Strategies Program. These programs, as well as others utilizing mentoring strategies, often target risk factors related to school and social attitudes, as well as school engagement.

Finally, the theories that underlie the efficacy of mentoring as a strategy for students at risk for failure are considered as a final theme in this literature review. The four theories that are considered are: the theory of human development (Erickson, 1950), social intervention theory (Bennett, 1987), alienation theory (Durkheim, 1951), and a developmental assets framework, based upon Positive Youth Development (PYD) (Benson, et al., 2006), prevention and resiliency research. Each of these themes will be examined through a variety of sources. It is the opinion of this writer that these four themes will provide a comprehensive overview of the current literature in relation to the topic of cross age peer mentoring of primary elementary students by intermediate level students.

Summary of Themes

Students at Risk for School Failure

Concern with and research on the dropout issue, including the who, what and why, dates to the early 1900’s (Barclay & Doll, 2001). Investigations by Holly (1916), Counts, (1922) and Smith (1943), as cited by these authors demonstrated that the
proportion of youth attending secondary schools varied based on social class, parent occupation and home conditions. Other research completed mid-century, again cited by Barclay and Doll, also examined non-academic and sociometric measures, identified in the elementary years, as factors influencing the eventual decision to drop out of school. Lack of social support, low peer acceptance and unfavorable sociometric rating by teachers were identified as precursors to disengagement from the school experience.

Currently, the concern and research continue, albeit with an increased sense of urgency. Educators, policy makers and society at large have every reason to stress the importance of this issue given the immensity of its impact. There exists an abundance of research, the focus of which is students at the secondary level and the experiences they have at this level that may impact their decision to leave school. More recent studies however, suggest that the focus on students with risk factors should begin much earlier. They contend that the foundation of success begins with their entrance to school and the experiences they have throughout their schooling. Far too often, educators make attempts to intervene with this population too late in their school career. Early intervention is viewed by many as a key factor in the retention of the at risk student in school.

Alexander, Entwistle and Kabbani (2001), as cited by Christle, et al. (2007) found that when school variables including test scores, grade retention, special services and engagement behaviors were considered, engagement behaviors as early as first grade, were at least as significant in predicting dropout rates as academic scores. These findings support their contention that students who feel a sense of belonging and are connected to school are less likely to drop out. Additionally, a study conducted by Hickman (2007), in
which the developmental pathways of dropouts and graduates were compared and contrasted, found that very early in their educational experience, dropouts began to look significantly different from their peers who would graduate. This research found evidence of differences as early as kindergarten related to academic success, attendance and behavioral problems. The gap between these risk factors between the two populations was also found to widen as students progressed through school.

Research has also centered on the traits and characteristics of students who drop out. The intent of this categorization is to develop intervention programs to stem the flow of students from school prior to graduation. For the most part, categorization of the traits, characteristics and/or predictive factors, fall into one of four domains. As identified by Hammond, Linton, Smink and Drew (2007), these domains include individual, family, school and community factors. Within each of these four, are the specific factors found to contribute to the ultimately detrimental decision to drop out. Widely cited factors such as race, ethnicity, gender, disability and school performance are included in the individual domain, along with connectedness and engagement. Within the family domain are factors such as socioeconomic status, family structure and dynamics. School structure, resources and academic practices are included in the school domain. Finally, included in the community domain are type and location of school and the demographic characteristics of the community. They also indicate, as do other researchers, that there is no single risk factor that will predict with any degree of accuracy, the identification of those students who will drop out of school. Additionally, students interviewed cited a variety of risk factors across the identified domains, and the authors contend that interactions among these factors also play a role in the decision to leave school.
Recent research leans toward a focus on “early warning data” as opposed to socioeconomic factors as more predictive in relation to the dropout issue. These data include such factors as failing grades in core courses, low grade point average, low scores on achievement tests, grade level retention, attendance rates and disciplinary problems (Pinkus, 2008). Roderick (1993), as cited by Pinkus (2008), found that 4th grade students who eventually dropped out, generally earned a C- grade point average and ranked in the lowest quartile of their 4th grade class. Additionally, it was found that students with absenteeism rates in excess of 20%, cut classes once a week or more, or were tardy in excess of ten times a month were six times more likely to drop out. It is incumbent that schools with access to this type of data develop individualized intervention strategies to address the needs of these students (Kennelly & Monrad, 2007).

Suh and Suh (2007) also identified low grade point average, behavioral issues, attendance and perceptions of teachers and peers, along with 15 additional factors as ones that have the potential to contribute to dropout potential. Their research found that various combinations of these risk factors resulted in differing rates of drop out behavior. Additionally, in relation to factors that have the potential for decreasing the dropout rate, optimism was found to be one critical factor. They suggest that effective mentoring programs may increase positive outlooks and a sense of belonging for at risk students.

The number of risk factors was also found to impact the dropout rate (Suh, Suh, & Houston, 2007). The potential for dropping out for students with one risk factor was found to be 17%, two risk factors, 32.5% and three factors 47.7%. When considering absenteeism, peer relations, respect and expectation of remaining in school, absenteeism and peer relations appeared to have more of an impact on dropout than the other two
indicators. Additionally the number of risk factors identified at the elementary level is lower than at the secondary level. This finding supports the idea of intervening with at risk students earlier, when the number and significance of these factors are lower.

Balkans and Herzog (2005) as cited by Kennelly and Monrad (2007), found that for students with the combination of 1) 20% absenteeism rate, 2) poor grades for behavior and 3) failing grades in either reading or math resulted in more than half leaving school. Additionally they found that students at the middle school level, who eventually left school exhibited difficulties with academics or engagement, but not simultaneously. From this they surmise that these two factors combine to increase the risk of dropping out closer to entrance to high school.

Studies related to student reported reasons for leaving school prior to graduation result in identified factors as varied as they are numerous. Focus group and individual interview research conducted by Bridgeland, DiDiani and Morison (2006) provided 16-24 year olds the opportunity to identify their reasons for leaving school. Among the reasons given were lack of connection to the school environment, low expectations of adults, classes not interesting and lack of structure and parental involvement.

Along with the characteristics and traits that fall within the aforementioned domains, research also discusses push-out/pull-out theory in relation to the drop out phenomenon. Pull-out factors as defined by Lehr et al., (2004) are those situations or events that pull student interest away from school and result in disengagement and eventual dropout. Specific pull out factors identified by young adults in research by Stearns and Glennie (2006) include employment, family responsibilities, such as having a child or caring for siblings or older family member and having a friend who drops out.
Push out factors are those experiences students encounter within the school environment that result in student frustration or alienation (Lehr et al., 2004), to the extent that they leave school prior to graduation. Specific push factors include school policies such as suspension and expulsions, grade retention and failing grades due to excessive absenteeism. In three separate studies conducted between 1980 by Ekstrom (1986), Jordan (1994) and Bridgeland et al., (2006), as cited by Hammond et al, (2007) students identified more push than pull factors as contributing to their reasons for leaving. These included: didn’t like school, missing too many days, couldn’t keep up with school work, didn’t get along with teachers and had no significant peer group. Within the category of school issues, engagement, (academic, behavioral, cognitive and affective (Christenson, 2005) along with the concepts of affiliation and motivation, either as stand-alone issues or issues relating to social and academic success, are frequently cited as reasons for the decision to drop out.

Based on data collected by Jordan et al. (2004), dropout reasons varied by age, grade ethnicity and gender. Specific findings included: the pull factor of employment increases in importance based on age and grade in both males and females. With regard to the pull factor of family responsibilities, African American and Latina females were more likely than Caucasian females to identify this as their reason for leaving school. Ninth grade students on the other hand, including all gender and ethnic groups left school for disciplinary reasons. Males and African Americans were more likely than females or students of other ethnic backgrounds to leave school due to suspensions, expulsion and or incarceration.
In today’s society, having approximately one third of students dropping out of school has profound economic and social consequences, not only for the student and their immediate family, but also for the community in which they live and society in general. Sun, Khatiwada and McLaughlin (2009) found unemployment rates for high school dropouts during 2008 to be 54%. This is in comparison to 32% of their graduate peers and 21% for young adults with one to three years of college. Even when employed, dropouts encounter fewer possibilities for employment and usually find themselves in un- or low skilled jobs resulting in lower pay. It was also determined that average annual salary for a dropout in the United States was $8,358, compared to the national average of $14,601 for all graduates and $18,283 for those with one to three years of college. With regard to national economic impact, Amos (2008) estimates that a single high school dropout costs the United States approximately $260,000 in lost earnings and taxes. Based on this estimate, dropouts from the class of 2008 will cost the U.S. more than 319 billion over the course of their lifetime. These data should increase concern at all levels, school community, state and national, for reducing the number of high school dropouts.

According to the Education Commission of the States (2004), at risk students are also more likely to become dependent on public assistance, have health problems and engage in criminal activity. Individuals who drop out tend to have poorer health and to suffer premature deaths from cardio-vascular disease, cancer and diabetes. States save an average of $13,706 in Medicaid benefits and care for the uninsured when an individual graduates from high school. Estimated national savings of 17 billion could have occurred if all students in the class of 2006 had completed their high school experience.
According to Sun, et al. (2009), during 2006-2007, 1.4% of the nation’s 16-24 year olds were residing in correctional facilities. Of those young people incarcerated, 6.3% were high school dropouts. This figure represents an incident rate 63 times higher than those with a four year college degree. Additionally, students with disabilities drop out of school at twice the rate of general education students. In a study conducted by Quinn, Rutherford, Leone, Osher and Poirer (2005) it was found that of youth served in juvenile corrections facilities, 34% were identified as having disabilities. Youths with emotional disturbance accounted for 48% of the population and 39% were identified as having specific learning disabilities.

The Importance of Connectedness for at Risk Students

In 2003, the University of Minnesota convened a conference at the Wingspread Conference Center in Racine, Wisconsin to identify the knowledge base and research indications related to the concept of connectedness. As a result of the discussions, interactions and research presented at that conference, the participants authored the “Wingspread Declaration on School Connectedness.” The basic elements of the Declaration included the following assumptions: strong bonds with school will enhance student success, high expectations, staff support and a feeling of safety will heighten student connectedness, academic success, attendance and dropout rates can be impacted by student feelings of connectedness, motivation and engagement. The Declaration contended that all these factors, which impact achievement, are related to connectedness, as are lower rates of at risk behaviors such as disruptive behavior, substance abuse and emotional issues (Blum, 2005).
The basic concept underlying the term connectedness is a sense of belonging. Within the literature it is also referred to as school engagement, school attachment and school bonding (Blum, 2005). Whitlock (2004) identifies connectedness as “a healthy, protective relationship between youth and the environments in which they grow up” (p. 5). The concepts of belonging, attachment and mutual positive regard with adults, peers, institutions and practices within those environments are implied by the term. Feeling valued and respected is also identified as a component of the concept.

While educators and school entities may have little impact on the status variables (e.g. socioeconomic status, disability, family structure) affecting the at risk student, they do have the opportunity to provide for more positive results in relation to alterable variables including connectedness that may impact a student’s decision to drop out of school. McWhirter, et al. (2004) identified five characteristics that differentiate low risk and high risk youth, which they have labeled the “five C’s of competency” (p. 82). These 5 C’s include: critical school competencies, concept of self and self-esteem, connectedness, coping ability and control. Similarly, Lerner (2005) has identified 5 C’s related to the Positive Youth Development theory that include: competence, confidence, connection, character and caring/compassion. These are considered to be positive indicators and factors which will influence the ability of students to engage in positive, healthy behaviors in all areas of development. In both constructs, connectedness is included as a factor influencing the development of students and both authors suggest that the lack of this attribute can have a negative impact on student engagement in the school setting, including academic success and eventual dropout.
Various studies have utilized data from the National Longitudinal Study on Adolescent Health (Add Health) to assist with making determinations regarding the impact of school connectedness on students. The participants in a study conducted by Resnick, as cited by the Center for Disease Control and Prevention (CDC/P, 2009) included 12,118 students in grades 7-12. This study was concerned with protective factors for eight health risk outcomes that included: emotional distress, suicidal thoughts, violence, use of three substances and two types of sexual behavior. It was found that school connectedness was the only school related variable that was protective for all eight. Research by Catalano, Haggerty, Oesterle, Fleming and Dawkins (2004) provided evidence that school bonding, which was enhanced by specific interventions related to classroom instruction and classroom management, had a positive impact on academic performance, social competence and reduced school problems and violence. Additionally, school bonding in this study was found to reduce incidences of misbehavior, grade retention and eventual dropout.

The association between school connectedness and school climate has been investigated by McNeely, Nonnemaker and Blum (2002) and Wilkins (2008). McNeely et al. surveyed students in 80 middle schools nationwide and found the average level of school connectedness to be 3.64 on a 5 point scale. Extra-curricular offerings, which provide the opportunity for social interactions with peers, were found to be positively associated with school connectedness. Wilkins found that students in an alternative placement for school avoidance behaviors, identified school climate as a determining factor in their willingness to attend the program. Specifically they included comfort,
acceptance and involvement in trusting interpersonal relations with both adults and peers as being important and present.

Making connections with both the adults and peers in the school setting has been shown to promote positive outcomes for students. McNeely (2003) identified the concept of social belonging as an indicator of school connectedness. Students, especially those at risk were found to be more academically engaged and less likely to participate in inappropriate and/or antisocial behaviors. Social connectedness was found to have a positive impact on grade point average and out of school suspensions.

Connections with adults in the school setting were shown by Murray (2003) to act as a protective factor in various developmental areas. Specifically he identified positive and supportive teacher student relationships as a strong protective factor for students with disabilities. Klem and Connell (2004) indicate that student connectedness to the school environment diminishes as students progress through their school experience. By high school 40-60% of students lack the connections necessary for success. Their study indicates that 35% of elementary students included in the investigation were at high risk levels for engagement in the school setting. Teacher support, including care and concern, was found to have a significant impact on feelings of engagement and consequently attendance and test scores.

The literature on effective schooling practices indicates that at risk students are in high need of a school culture that is steeped in care and concern. According to Kerka (2003), these students often do not feel they are understood and/or cared about by the adults in their lives. She also asserts that when these youth are seen as having resources rather than deficits and when these resources are capitalized upon, positive results are
realized. When at risk students are viewed as having assets rather than deficits they are less likely to engage in the behaviors that place them at risk. Research on youth development programs validate the importance of recognizing and capitalizing on such assets as connectedness, feeling valued, a sense of personal responsibility, self-esteem, confidence in one's personal efficacy, and a sense of a larger purpose in life, among others (Edwards, Mumford and Serra-Roldan, 2007).

In a study conducted by Baker (1999), in which teacher-student interaction and relationship quality were examined, results indicate that student perceptions of a caring, supportive relationship and positive classroom environment were related to school satisfaction and achievement. The research utilized multiple measures, including classroom observation, interviews and self-report questionnaires to obtain information from sixty-one third through fifth graders identified as at risk, regarding their perceptions. Student self-reports on the Things That Happen in School social support measure were evaluated using a two sample t-test. The results indicated that children highly satisfied with school feel more social support than those who dislike school. Differences on the classroom social climate measure, the Psychological Safety Index, were evaluated and resulted in significant findings in relation to perceptions of a positive and caring social environment in the classroom. Here, satisfied students perceived a more positive and caring classroom environment than did dissatisfied peers. The results of this study confirm findings that support from teachers foster a positive learning environment and helps students affiliate with school.

Hall-Lande, Eisenberg, Christensen, and Neumach–Sztaniner (2007) found that social isolation in adolescents is a contributing factor to unhealthy psychological
symptoms and behavior, including depression, low self-esteem and suicide ideation. These characteristics are often found in students at risk for not completing school. Additionally they found school connectedness and healthy peer relations act as protective factors. They suggest that intervention to strengthen these protective factors can result in positive psychological outcomes, impacting favorably on the at risk student by decreasing the possibility of leaving school.

Parental influences, including interactions and relationships with their children and the school, have also been found to impact student academic success and overall well-being. The study of the impact of parental involvement on the reading achievement of sixth grade students by Hawes and Plourde (2005) utilized survey techniques with both parents and students. The survey considered factors such as time spent on homework with parental help, family reading habits, and parent’s involvement in parent teacher conferences, among others. Survey responses from both parents and students were averaged and compared to the students’ reading comprehension level as determined by the McLeod Reading Comprehension Test. The Pearson Product Correlation formal was used to compare the results of these two data sets. The resulting $r=0.129$ showed a slight, but not necessarily significant positive relationship.

Rogers, Theule, Ryan, Adams and Keating (2009) examined the association between children’s perceptions of their parents’ education involvement and school achievement in relation to active participation in and management of learning in the home. The results of this study indicate that family-school relationships do indeed have an effect on student achievement. Specifically, the findings from this research demonstrate that mothers’ emotional support for children’s learning is a positive factor in
relation to achievement. Family-school connectedness and its relationship with the early social development of children was investigated by Serpell and Mashburn (2011). Although this study depended upon teacher rating, it still provided evidence of the importance of parental connection to the school with regard to student development. Additionally, this work found that the quality of the relations between teachers and parents matters more for students who possess social and economic risks.

School climate and parental involvement was studied by Resenblatt and Peled (2002). They found that certain aspects of school climate, including rules, professional code and caring does impact parent cooperation based and conflict based involvement in the educational experiences of their children. Both school level and individual-level data were obtained from teacher and parents representing twenty elementary schools. The results supported the researchers’ initial contention that an ethical school climate characterized by rules, professional code and caring value was linked with parental involvement. Specifically, the study found an increase in cooperation based parental involvement, especially for those parents of low socio-economic means.

With regard to school climate variables and the concept of connectedness, parental attachment to children strongly predicted the experience of the school environment and school connectedness for their child (Shochet & Smyth, 2006). In this study student in grades 8-12 completed questionnaires relate to their sense of school membership, parental attachment, school activity involvement and classroom environment. The findings supported the view that child parent attachment does affect school connectedness. Additionally, the researchers suggest that for those students lacking connections to school due to poor attachment, interventions to enhance the
connections may require the opportunity to develop new attachment experiences. This study suggests that providing opportunities to develop these relationships and attachments within the school setting may well enhance student perceptions of school climate and connectedness.

The perception of both student and parents, of school climate and connectedness to school appears to affect and heighten a student’s basic psychological needs, including safety, belonging, autonomy and competence. Additionally the active involvement that results from social connections helps students to develop empathy, communication skills, positive values and social skills (California Department of Education, 2005). Social interactions, connections with peers, connections with adults, feeling a part of a group and having a feeling of contribution all serve to enhance the connectedness of students within the school setting resulting in educational motivation, classroom engagement, higher academic achievement, good attendance and decreased probability of dropping out, to name a few. Parental influences on student school success and perceptions of their experiences, as well as their connections with and feeling about the school climate should also be taken into account. Although non-academic constructs such as connectedness are often considered a “soft approach” to the dropout problem by practitioners, research supports its consideration in developing and implementing interventions for at risk students (Blum, 2005).

School Climate and Connectedness Relationship and Measures

The adage that “people don’t care how much you know until they know how much you care” is one that educators and policymakers might be well served to consider as they explore strategies to promote school and student success. Parents send their
children to school expecting them to receive the best possible education, but there is also an expectation that those charged with this task will care for the students. Having a strong knowledge base without the complementary skills of caring, collaboration, and ability to connect will not provide the best opportunity for competition in a global marketplace. Social and emotional learning must also be a concern and educators need to model and engage in these skills with the students for whom they are responsible (Greenberg et al., 2003). Noddings (1992) states “A child’s place in our hearts and lives should not depend on his or her academic prowess” (p 13). Additionally, she states that “A caring relation is, in its most basic form, a connection or encounter between two human beings—a carer and a cared for. …..both parties must contribute to it in characteristic ways” (p.15).

School climate intersects closely with the concepts of caring, connectedness, engagement and community in school. Researchers have investigated the influence and components of school climate for over a century. Cohen (2006) indicates that the impact of climate on the learning process was first considered by Perry in 1908. Although there are many definitions of school climate, researchers generally agree that it reflects student, teacher, parent and community subjective experience in the school setting (The Center for Social and Emotional Education, 2010). Additionally, the Center suggests four areas that impact perceptions of school climate: safety, relationships, teaching and learning and instructional environment. Relationships, caring and connectedness are viewed as essential to student academic and developmental growth.

Connectedness, or feelings of belonging within the school environment, was found to act as a protective factor for students in relation to engagement in high risk
behaviors in the areas of health, violence and substance abuse (Catalano et al., 2004) and as a predictor of academic outcomes (Shindler, Jones, Williams, Taylor & Cadenas, 2008). The relationship between connectedness and school climate has been examined by these and other researchers. The Center for Comprehensive School Reform and Improvement (2009) indicates that assessing school climate and student connectedness can require a review of multiple data sources including, but not limited to: perception surveys, student discipline records and attendance records. They indicate that a climate of distrust, disrespect and/or disconnection impedes student achievement and conversely positive school climate can be viewed as the foundation upon which schools can build connections to promote success.

There are a variety of assessments available to measure school climate and connectedness. Many of these obtain perceptions from multiple sources including teachers, staff, parents and community members. Fewer assess student perceptions of climate and connectedness. This is especially true for students at the elementary level. Examples of scales that include secondary student perceptions of school climate include: the Kettering Scale of School Climate, School Climate Questionnaire, National Association of Secondary School Principal’s School Climate Survey and Effective School Battery to Assess School Climate. Additionally, not all measures of school climate are concerned with the same aspects of the construct. Some are limited in scope such as the Character Development Survey, which is concerned specifically with the improvement of skills in the six areas of character development promoted by the Josephson Institute Center for Youth Ethics, while others collect perceptions regarding specific influences on school climate such as bullying and safety. The studies included in
this review of literature for the proposed study are therefore limited to those concerned with school climate and student connections and assessments which include perceptions of elementary level students.

Interpersonal relationships, communication and school bonding are all factors identified by Hernandez and Seem (2004) as being influential with regard to climate. They indicate that positive relationships reduce the risk of antisocial behavior and play an important role in a positive school climate. Communication is identified as fostering inclusiveness, while school bonding is important in promoting student feelings of trust and respect resulting in a sense of connectedness. A social environment that promotes communication and interaction and an affective environment that promotes a sense of belonging and self-esteem are two aspects of school climate identified by Tableman (2004) that support student learning.

Loukas, Suzuki and Horton (2006) define school climate as “the quality and frequency of interpersonal interactions, a multidimensional construct encompassing interpersonal, organizational and instructional dimensions” (p. 491). Positive school climate has been linked with student perceptions of connectedness to the school community. In a study conducted by these researchers, assessment of four aspects of school climate including friction, cohesion, competition and overall satisfaction with class, it was found that perceived quality of interactions and the school climate promoting these interactions resulted in the reduction of possible future engagement in at risk behaviors. These researchers utilized two school climate measures to come to this conclusion: The My Class Inventory (MCI, 1982) and climate and connectedness items from the National Longitudinal Study of Adolescent Health (Add Health, Resnick et al.,
The MCI is used to assess the climate of elementary and middle school classrooms. Reported internal consistency reliabilities for the MCI were reported as .70, .68, .70 and .57 for the cohesion, competition, friction and satisfactions scales utilized. The internal consistency reliability of the five items relating to school connectedness was reported as .75.

Sherblom, Marshall and Sherblom (2006) investigated the relationship between school climate and achievement in math and reading through an examination of student, teacher and parental perceptions of inclusion, concern, respect, collaboration and sense of belonging. The authors utilized achievement data from the Missouri Assessment Program, which is a state assessment of student academic progress. To assess school climate the Caring School Community Survey, a modification of the Development Studies Center, Child Development Project (CDP) survey was utilized. The original CDP survey has demonstrated strong validity and reliability ranging from .70 - .87 on the various subscales. The modified version utilized in this research also produced reliabilities in the range of .70 for both student and staff perceptions of school climate. Analysis of data collected demonstrated that student sense of well-being, positive classroom community, trust/respect for teachers, concern for others and liking for school were all strongly correlated with achievement in math and/or reading. Their findings suggest that climates that enhance the relational and social interaction, and communication and relationships within a school, will promote academic success.

Shindler et al. (2008) explored the relationship between student academic achievement and aspects of school climate, as well as the potential causality of the relationship between the two. Their focus was the promotion of a “psychology of
success,” as opposed to a “psychology of failure” as a result of school climate factors utilizing the School Climate Assessment Instrument (SCAI). A “psychology of success” orientation is supported by student sense of competence, feeling of acceptance and belonging, and internal locus of control, all three of which can be influenced favorably by school climate. The SCAI was developed by the Alliance for the Study of School Climate, and is identified as a valid and reliable instrument for pre/post intervention assessment, as well as being appropriate for longitudinal assessment of climate at one school. Subscale reliability is reported as .7 to .8, intra rater reliability at .9 and high inter-dimension reliability (levels of reliability correlated across measured dimension).

Data collected by Shindler et al. (2008) utilizing the SCAI, demonstrated a strong relationship between school climate quality and academic achievement levels. Additionally, the authors contend that “While the direction of the causality between the two variables is not entirely indicated by the data, the substantial relationship between climate and similar school rating suggests that a conclusion can be drawn that, to a good degree, better climates led to achievement, and were not simply a byproduct.” (p.6).

Promotion of a “psychology of success” in relation to student sense of competency, feelings of acceptance and belonging and internal locus of control is also indicated as impacting positively upon school climate, student sense of belongings and achievement.

With the recent renewed emphasis on student achievement and closing the achievement gap, The National School Climate Council (2007) has made a number of recommendations for policymakers to consider in relation to the needs and challenges facing schools as it relates to accountability and school climate. These recommendations include: the creation of standards for school climate, its assessment and guidelines for
selecting a school climate assessment; include school climate measures in accountability standards; the use of school climate assessment and improvement efforts as a method to coordinate education and mental health and home-school-community initiatives; and expand and explicitly address school climate within school programs. A number of states have developed standards related to school climate, and in some cases, surveys and/or scales to assess it. In June of 2010, Pennsylvania drafted voluntary school climate standards in response to President Obama’s Race to the Top initiative. Other states, including Alaska, Minnesota, Illinois, Connecticut and California have been assessing school climate state wide on either a voluntary or required basis for several years.

The California Healthy Kids Survey (CHKS) is identified as one aspect of the California School Climate Survey, utilized to better understand the relationship between students’ health behaviors and academic performance. Within the subscales of the this survey is included the School Connectedness Scale (SCS), which was derived from Add Health. Furlong, O’Brennan and You (2009) conducted a study to determine the reliability and validity of the SCS component of the CHKS and its relationship to school connectedness for students. The connectedness scale utilizes five items to measure student perceptions. These include: I feel close to people at this school, I am happy to be at this school, I feel like I am part of this school, The teachers at this school treat students fairly and I feel safe in my school. A five-point Likert scale is used to measure student perceptions ranging from 1 (strongly disagree) to 5 (strongly agree). The results of this investigation which used responses from 500,800 students resulted in reliability and validity coefficients that were in agreement with the Add Health study that found coefficients to be within an acceptable range.
Alaska is another state that has responded to the call for consideration of school climate and student connectedness as a contributing factor to student success, protective factors and positive health outcomes. In 2002, the Alaska School Boards Association contracted with American Institutes for Research to evaluate the Alaska Initiative for Community Engagement (Alaska ICE), which promotes a shared responsibility for preparing children for the future. As a component of this evaluation a School Climate and Connectedness Survey (SCCS) was developed for student staff and parents and has been administered annually since 2005 (Osher, Spier, Kendziora & Cai, 2009).

The student version of the SCCS includes items in nine areas that provide scale scores. Additionally, two composite scores, Overall Climate (High Expectations, School Safety and School Leadership) and Overall Connectedness (Respectful Climate, Peer Climate, Caring Adults and Community Involvement) can be obtained. Following administration of the survey in 2005, 2006 and 2007, resulting in approximately 47,000 student surveys, researchers found an internal reliability of .59 to .94 in 2006 and from .64 to .87 in 2007, overall in the acceptable to good range. Further, it was determined through data analysis that several aspects of school climate and connectedness are related to student achievement and that positive change in these constructs is related to significant gains in student scores on state achievement tests in reading, writing and math. The relationship between climate and connectedness and reading achievement, changes in student ratings of Caring Adults and Overall Connectedness were found to be significantly positive, with p values of <.05 and <.01 respectively. The relationship with writing achievement was found to be significant in the areas of Caring Adults (p< .05) and Overall Connectedness (p< .05, with Social and Emotional Learning (p <.10) while
not found to be significant was found to be worthy of note. Improvements in mathematics were found to be significantly correlated with Caring Adults and Peer Climate ($p<.05$) and Overall Connectedness ($p<.01$). These data demonstrate that positive changes in student perceptions of school climate and connectedness are associated with increases in academic performance (American Institutes for Research, 2009).

The Center for the 4th and 5th R’s (2001) developed the School as a Caring Community Profile to assist schools in measuring perceptions of the various constituencies that make up the school. The SCCP-II is a 43 questions survey with the first 26 items relating to student perceptions. The dimensions measured by this instrument include the following: perceptions of student respect, student friendship and belonging, shaping of their environment and perceptions of support and care by and for staff and parents. Evaluation of this instrument found reliabilities for the scales ranging from $a=.73$ on the perceptions of support and care by and for parents to $a=.90$ on the perceptions of students’ shaping of their environment, with the other three having $a$’s in the $.82-.88$ range.

The National School Climate Council has developed the Comprehensive School Climate Inventory. The CSCI I is intended to measure the perceptions of students in grades 3-5, school staff and parents with regard to twelve dimensions of school climate including: sense of social emotional security, social support in relation to both adults and students and school connectedness/engagement, among others. The CSCI was evaluated to determine scale reliability and convergent validity through a pilot test of 64 schools resulting in 27,000 submitted surveys. The results of this pilot demonstrated reliability
for CSCI subscales ranging from .62 to .96. Reliability was reported as .87 on the Social Support-Adults sub scale, .87 on the Social Support-Students sub scale and .83 on the School Connectedness/Engagement subscale. Validity was found to be statistically significant with 8 of the 10 scales having correlations above .60. The unified climate scale was significantly correlated with an index of academic performance as well as graduation rates for high schools (Center for Social and Emotional Education, 2002).

Most school climate surveys available for use at the elementary level are concerned with perceptions of 3rd through 5th grade students. The only measure located that examines factors associated with primary age student’s feelings about school is the Feelings about School (FAS) instrument, which measures the perceptions of students in kindergarten and first grade in relation to their academic competence, feelings about the teacher and general attitudes toward school. A study by Valeski and Stipek (2001) provided evidence of both reliability and validity in relation to the use of FAS with kindergarten and first grade students. Reliability for the four subscales: perceived competence in math, perceived competence in literacy, feelings about relationship with teacher and general attitudes toward school were a=.68, .61, .52 and .74 for kindergartners and .63, .74, .59 and .79 for first graders. Overall findings of the study suggest that academic performance is more noticeable to first graders and that their judgments of academic ability and attitudes toward school were reflective of actual performance. Additionally students who liked their teacher and felt the teacher cared about them were more positive about the school experience, which supports previous research findings that caring relationships with adults in the school setting will impact positively on attitudes toward school and engagement with academic content.
Providing supports and interventions for students at risk for failure is a sometimes difficult, but vital task that educators must address. Consideration of school climate and student connectedness within the school environment has the potential to increase the possibility of success for all children. Educators have an obligation to students, parents and society to provide opportunities that enhance student learning while capitalizing on student strengths and innate abilities. Cross age peer mentoring is just one of many possible interventions that may impact their perceptions of the school experience resulting in more positive outcomes.

Programs and Practices for the At Risk Population

The topic of effective, high quality education means many things to many people. Some would like our children to be better prepared in relation to “basic skills”; others are more concerned with schools ensuring that students leave school with adequate technology skills, while the agenda for still others is that children learn discipline, citizenship and positive values. All of these are important in preparing students to be contributing, successful members of society at large. To combat the problems that plague students at risk for school failure, educators must be aware and responsive to their needs in all of these areas. The most important concern is that all students have the right to receive a quality education that assures academic success. The passage of No Child Left Behind has forced this issue to the forefront. Educators can no longer be complacent about the success of the subgroups identified by President Bush in this law. NCLB is forcing educators to analyze the techniques, processes and procedures that are used for the mainstream child to determine if these tactics are also resulting in success for all students, including those at risk.
Programs and practices for the at-risk student should focus on student strengths, rather than focusing on remediation of real or presumed deficiencies (Zarrett & Lerner, 2008). Research by Fields and Hoffman (2002) also contends that it is the quality of the school experience, rather than the characteristics of the students, that will determine success or failure. When there is a mismatch between the needs of this population and the capacity of the school to accommodate and respond to them in a manner that enables them to maximize their social, emotional and intellectual development, students are placed at risk by the system. The contention is that instead of categorizing students, educators should be more concerned with increasing and enhancing the capacity of the school to respond to the individual needs of all learners (Kerka, 2003). This attention to school climate, intended to increase student engagement in this environment, is identified as best practice by Kennelly and Morad (2007) and The California Department of Education (2005). In both of these reports, positive school climate factors resulted in correlations with attitudes toward school, academic motivation and reduction of problem behaviors.

Certo, Cauley and Chafin (2003) conducted interviews with 33 high school students regarding perspective on instruction, teachers, friends and activities in their schools. Student responses to open-ended, semi-structured interviews were analyzed resulting in the identification of seven common themes, three of which were teacher and staff support, peer relations and overall school climate. Students often indicated increased motivation in situation where teachers showed care and concern for them, as well as an increased sense of belonging.
Knesting (2008) engaged high school students identified by staff as at risk for dropping out, who remained in school striving to complete the experience, in a case study, to determine factors contributing to their persistence. Data collected from the 17 participants indicated that adult listening and communication of caring were two factors critical to the students’ ability and willingness to remain in school. She contends that concerned listening to students identified as at risk will provide schools with information regarding their experiences that can improve school climate, resulting in students remaining in school. Additionally, the students indicated that caring and supportive staff played a critical role in helping them maintain their engagement in the educational process. Students also identified caring adults as increasing their sense of belonging.

Knesting’s study also demonstrated, from the student perspective, the importance of having social connections with a peer group. They indicated that it was viewed as very important to have their own group of friends, and that friendships are viewed as so important that interactions with friends was what they most look forward to about school. When social needs are met, students’ level of engagement is likely to increase and conversely, when students experience a “disconnect” interest in school and academic engagement decreases.

Lehr, et al. (2004) identified the modification of school structure as one of five types of interventions to consider when making decisions regarding at risk youth. Specifically “a school within a school” and Career Academies (Kennelly & Monrad, 2007) are suggested as specific interventions to more effectively meet the needs of the at risk learner. One example of the “school within a school” intervention is the Multicultural Alternative Middle School Program for At Risk Students (Martin et al.,
An evaluation of this program, which averaged 20 students identified as at risk, indicated that students attitude regarding the program were positive, they were learning more and trying harder. Results of data collected from a self-concept scale indicated that students had an average to slightly above average view of themselves as learners, while most at risk usually score low in relation to this construct. Career Academies are identified by both Lehr, et al., (2004) and Hammond, et al (2007) as exemplary intervention programs for at risk students. These academies combine academic and career training for students, with the career focus including among others, technology, media, heath, business, etc. Evaluation of career academies indicates that student attendance, grade point average and courses passed are all positively influenced. Additionally, dropout rate was reduced and employment outcomes improved.

Interventions that support student connectedness in the school setting include the Check and Connect Program, Coca Cola Valued Youth Program, Twelve Together and Developmental Peer Mentoring Programs. Lehr 2004) and Sinclair, Christenson and Thurlow (2005) indicate that the Check and Connect Program is designed to enhance the school connectedness and engagement of students through establishing a long term relationship with a mentor/monitor. This program seeks to demonstrate to students that caring adults want them to learn and succeed. Evaluation of this program by Sinclair, Christenson, Lehr and Anderson (2003) provided data that indicated positive results in relation to remaining in school and course completion.

The Coca Cola Valued Youth Program, which is based on a positive assets model, provides at risk students with the opportunity to provide tutoring & mentoring for younger students. This program has been shown to build the self-esteem and self-concept
of the at risk student as measured by the Piers-Harris Self-Concept Scale, as well as the Quality of School Life Scale. Additionally the program was found to have a positive impact on grades, achievement test scores and dropout rates. Two year participants had only a 1% dropout rate, while a comparison group demonstrated a 12% dropout rate (Intercultural Development Research Association, 2005).

Finally, Twelve Together is identified as a one year peer support and mentoring program intended for middle and high school students encountering difficulty with academics or behavior. Weekly after school peer groups consisting of twelve students, identified as both high and low risk, are convened, with discussion focusing on student interest, and social issues. An evaluation of this program placed it in the promising category, with potentially positive effects for staying in school by the Institutes of Education Science (2007).

The development of interventions for students at risk for school failure/dropping out is a complex and at times daunting task. Ensuring that the interventions utilized promote factors which influence school completion requires careful thought and consideration to the multiple risk factors involved. Kennelly and Monrad (2007) indicate that more research is needed on dropout prevention programs and strategies if educators are to make a significant impact on the dropout crisis.

Mentoring as an Intervention for At Risk Students

The concept of mentoring dates back to Greek mythology. Odysseus, in Homer’s *The Odyssey*, entrusted his son, Telemachus, to an old man called “Mentor” when Odysseus set off on a ten year journey. During part of Telemachus’ travels, Mentor’s
advice saved him from his death. The father-like relationship between the young Telemachus and the wise, loving Mentor set a standard for future mentoring relationships.

Mentoring then, is identified as a strong, positive and caring relationship, in which guidance and assistance is provide, usually by an older, more experienced person to a younger and/or less experienced person. Grossman (2009) indicates that the child mentoring concept dates to the late 19th century. At that time children from financially poor families would engage with “friendly visitors” who acted as role models for them. In 1904 the Big Brothers/Big Sisters organizations was established to provide children with positive adult role models who provided guidance and assisted in the development of social skills.

While any child (or adult) can benefit from interactions with a concerned mentor, interest in this practice to support students, especially those deemed at risk for problem behaviors, violence substance abuse, dropping out, etc., is at an all-time high (Jekulah, Moore, Hair & Scarupa, 2002). According to Rhodes and DuBois (2006) three million young people nationwide are engaged in a formal mentoring relationship. This figure represents a six fold increase over the past ten years, and demand for programming of this nature continues to force expansion. Additionally they contend that school based programs account for approximately 70% of the formal mentoring programs in place across the nation.

Mentoring programs are one of the many promising best practice strategies recommended to address the problem of engaging at risk youth in the educational setting. This recent, renewed interest in formal mentoring programs, for school age children,
most likely results from a combination of factors. The increased accountability for educational performance is forcing educators to seek out prevention and intervention strategies to address the needs of those students most at risk. Additionally, the reduction in fiscal resources available for non-essential programs compels schools and districts to carefully consider cost-benefit analysis when implementing intervention programs, and mentoring addresses this issue. Ease of access and service to at risk students who may not have the opportunity to engage with community based programs may also be a factor (Randolph & Johnson, 2008).

By far, the most common mentoring type is the traditional one on one relationship between a concerned, caring adult role model and a school age youth. A great deal of research has been conducted regarding the strengths and challenges of these adult-child programs. Rhodes and DuBois (2006) contends that this traditional approach to mentoring seeks to capitalize upon the strengths of the at risk youth to increase their sense of safety, belonging, leadership and decision making skills. Positive growth and development are fostered when adolescents develop a belief in their abilities, control and connectedness (Scales & Roehlkepartain, 2003).

Mentoring of at risk adolescent girls through the Big Brothers/Big Sisters program was evaluated using qualitative methods by Maldonado, Quarles, Lacey and Thompson (2008). The major findings of this study in relation to the perceptions of the girls included increased resiliency, increased feelings of academic success, improved social skills and positive feelings regarding their futures. For adolescents, these improvements promote the possibility of moving from the at risk category.
In a study conducted by Converse and Legnagaris-Kraft (2009), 17 at risk, 13-15 year olds were mentored by school staff for 18 weeks. Comparison of office referrals, attendance patterns and changes in attitude toward self, peers and teachers were investigated, with data showing a decrease in office referrals and significant positive changes in attitude toward the three groups targeted. The results relating to attitude demonstrate an improvement in the area of school connectedness. The same results were not demonstrated by students in the control group.

Schmidt, McVaugh and Jordie (2007) investigated the impact of a mentoring program on fourth and fifth grade students in relation to self-concept, anxiety, depression and relationships with peers. The involvement of students at these grade levels over a two year period was based on research that indicates prevention/intervention strategies may be more beneficial than later interventions (Hickman, 2007), as well as the importance of a sustained relationship resulting in a more significant, positive impact (Rhodes & DuBois, 2006). This study utilized college students as mentors, and with the exception of relationships with peers, students in mentoring relationships demonstrated improvements in all other variables, while no change was demonstrated in any variable for non-mentored students.

Keating, et al. (2002) indicate that youth who encounter lower levels of social support from either adults or peers tend to be more withdrawn, inattentive and have less hope regarding future possibilities, which in turn may increase delinquent patterns of behavior due to the lack of appropriate role models. The lack of these positive role models, especially in the home, may well decrease levels of resiliency, unless healthier relations and role models are found outside the home. In a mentoring program targeted
toward 34 students in this situation, and therefore deemed at risk for delinquent behaviors or mental health issues, positive findings were reported by the authors after six months of mentoring by adult, community volunteers and university students. Specifically, the comparison of pre and post intervention data for both intervention and nonintervention group demonstrated significant improvements in behavior and self-esteem.

King et al. (2002) conducted an exploratory study on the effectiveness of The Healthy Kids Mentoring Program which was designed to foster high levels of self-esteem, positive connections with school, peers and family, as well as decrease involvement in risky behavior. In an experimental design, 28 4th and 5th grade students were paired with mentors from the local high school and community. Data indicated that the program produced significant increases in self-esteem, school, peer and family connectedness. Significant, positive findings were also reports in relation to fighting, bullying and substance abuse. Additionally academic improvements were noted in 71% of the students engaged in the program.

According to Powell (1997), both successful and struggling students can gain from peer or cross age mentoring relationships, and at risk students may benefit significantly. For the at risk child, helping others provides reinforcement of worth, increases their sense of competence and feelings of appreciation. The perceived responsibility for another person contributes to these positive feelings, resulting in increased school engagement. Karcher, Nakkula and Harris (2005) indicate that a mentoring relationship between students with disabilities, especially at times of transition (i.e., from elementary to high school, high school to college and college to work) can
improve the probability of success in the new environment. They also stress the importance of self-efficacy and ability to seek help in relation to program success.

Evaluation of mentoring relationships between individuals with disabilities was the focus of a case study conducted by Stumbo, Blegen and Lewis (2008). In this study, high school students with disabilities were engaged in a mentoring program with college students, also with identified disabilities. Participants completed a survey and participated in exit interviews to evaluate the program and interactions with mentor/protégé. The evaluations, which included topics such as self-advocacy and study skills among others, resulted in average ratings of six on a seven point scale, with protégés ratings being slightly higher. Additionally mentors indicated that they felt they had made a difference and enjoyed the experience.

School based peer mentoring programs and the impact they have on mentors and protégés, as well as school climate, have also been investigated by various researchers. Stader and Gagnepain (2000) found that the transition of a tutoring program to a mentoring program increased not only participation in the model but peer acceptance, cooperation, attendance (average daily attendance increased from 88% to 93%) and decreased the dropout rate from 10% to 3%. Surveys of the freshman protégés provided data that indicated 52% had improved their attitude toward school. This evaluation supported the idea that a peer-mentoring program can improve student connectedness within the school setting and school climate in general.

Bullying and harassment behaviors are often fostered by the sense of isolation the at risk student feels in the school setting. These behaviors may manifest in the at risk student being either the actor or the victim of these behaviors (Hazler & Denham, 2002).
Frieman and Frieman (2000) found that using high school students as peer mentors resulted in a significant reduction in harassment and improved school climate at the elementary level. Participation in a formal peer-mentoring program can provide these students with a sense of affiliation, self-worth confidence and patience.

Illig (1999) found that the grade point average and attendance of high school students involved in a mentoring relationship improved significantly, regardless of whether their role was mentor or protégé. In another study, a peer mentoring program using students in grades four through six found significant increases in interpersonal skills, the use of conflict resolution and academic achievement (Brauer, et al., 1997). Additionally, Foster (2000) cites research by O’Donnell (1997), in which the Collaborative after School Prevention Program utilized inner city high school students as mentors for elementary and middle school children from the same community, which found that participants developed social skills and improved academic skills. All of this research backs up claims that mentoring relationships have a positive effect on academic behaviors, attitudes and motivation.

The informal evaluation of a small, school based mentoring program targeting students diagnosed with emotional/behavioral disorders as both mentors and protégés is discussed by Burrell, Wood, Pikes and Holliday (2001). They indicate that student mentors demonstrated enhanced self-esteem and self-confidence, as well as increased tolerance and caring about others. For protégés the program appeared to impact positively on social skills, self-perceptions and academic engagement. Academic gains in spelling, as a result of a developmental mentoring program using at high school students as mentors for elementary students, is also discussed by Karcher, Davis and
Powell (2002). In addition to the academic gains realized by the students in this study, improved connectedness to school and family as measured by the Hemingway: Measure of Pre-Adolescent Connectedness was also demonstrated.

Additional studies of cross age peer mentoring programs have demonstrated strong improvements in connectedness to school and peers, and academic achievement by protégés (Karcher, 2007). These results have been observed to be more significant when using high school students as mentors and middle school students as protégés/mentors in training. Mentor improvements as cited by Karcher (2009) were noted in school related connectedness and self-esteem.

For the child at risk for school failure, either elementary or secondary, effective interventions must be sought and implemented if educators are to meet the challenges of NCLB. Peer mentoring may well be one effective strategy to ensure improved interpersonal relationships, affiliation with school and peers and eventual academic success. Utilizing intermediate level at risk students to mentor primary at risk students could well be a win-win situation, with both groups benefiting from the attention, care and concern of the other.

Theoretical Framework

The first theory that provides support for and influences the use and design of mentoring with at risk students is that of Erikson’s theory of human development, known specifically as psycho social theory (1950). This theory identifies eight stages of ego development which proposes that the stages of human development continue throughout our lifetime, not just childhood. It also places emphasis on social influences in relation to
personality development. The two stages that are specifically relevant to the mentoring process are the fourth stage, competence and the fifth stage, fidelity.

The fourth stage, competence, applies specifically to the children in the mentoring relationship in that this is when they learn to engage in the task of education and to acquiring the social skills necessary to experience success. The child who has passed through the earlier stages of development unscathed will most likely enter this stage with a foundation of trust, autonomy and initiative, and will engage in the learning and socialization processes effectively enough to be industrious. The child who has experienced past failure, or who does not easily acquire these essential skills during this stage will doubt the future. The child’s relationships with those outside of the family, expanding to those in the neighborhood and the school, influence their thinking about themselves, and their competence. In relation to the at risk child, the lack of academic and/or social success often results in feelings of inferiority or incompetence. Both mentors and protégés can benefit and improve their feelings of competence through the mentoring process and relationship.

The older elementary child acting in the role of mentor is entering the fidelity stage of development. In this stage, the adolescent seeks to answer the question “Who am I?” This is the stage, according to Erikson, when children seek to find out who they are and how they fit into the larger social context of society, independent of the family unit. Failure of adults influential in the child’s life, previous and current, to assist the adolescent in establishing this sense of identity may lead to feelings of inadequacy, isolation and indecisiveness on the one hand, or over identification with fringe groups (i.e. cliques, gangs, cults) on the other. At risk adolescents often display these
characteristics. Many students in this group also lack experiences and/or social connections that contribute in a positive manner to their social and educational development, resulting in confusion about their expected social roles.

The second theory relevant to the mentoring process as an intervention for at risk children is that of Bennett’s social intervention theory. This theory is concerned with conceptions of society, societal institutions and responsibilities of the individual within these contexts. Social intervention would be considered particularly relevant in mentoring programs.

For students at risk for failure, one of the deficiency issues they face that is often perceived as a barrier to success in the school environment is that of academic engagement and affiliation with both the environment and others in the environment. All people have a need to belong. Affiliation allows adolescents to form and maintain relationships with others, to be more than just an individual. Newman and Newman (2001) argue that there tends to be an over emphasis on the process of individuation and individual identity formation when working with adolescents. This emphasis results in a devaluing and under emphasis of group affiliation, which in turn affects the adolescent’s ability and opportunity to achieve a sense of belonging and connection. The lack of this opportunity has a negative effect on engagement in the academic process in the school setting.

Roth and Damico (1994) found that adolescents make more of an effort academically when they feel that their teachers care about them, when they are accepted by a peer group. The expected payoff for these students is not school matriculation, but the opportunity to engage socially with those in the environment, adults and especially
peers. They identify a need to experience this sense of belonging in order to maintain engagement with the academic component of the school environment. This is especially true for students placed at-risk, as their ability to form attachments and affiliate may be compromised at the outset, due to lack of formation of family and prior peer affiliations.

Mentoring then provides this population with an opportunity to engage in affiliating opportunities with others engaged in the mentoring process. The fact that most at-risk students do not join extra-curricular activities, sports or academically related, leaves a void that the mentoring relationship and group affiliation helps to fill.

The third theoretical support for this research is that of Durkheim's (1950) alienation theory. In this theory alienation is considered multidimensional with five discreet aspects. These aspects are identified specifically by LaCourse (2003) as they relate to the adolescent population as; self-estrangement, powerlessness, social isolation, normlessness and meaninglessness. LaCourse investigated the theoretical structure of adolescent alienation through a second-order confirmatory factor analysis. The manifestations of alienation theory were examined in a sample of 275 French-speaking adolescents in Montreal, Canada in an effort to determine if the constructs measured are invariant across gender. The subjects ranged in age from 14 to 18 with a mean of 16.22.

The study utilized a questionnaire consisting of 15 items (3 per construct). A Likert-type format was utilized with responses ranging from 1 (totally disagree) to 6 (totally agree). The data analysis used a second order confirmatory factor analysis, in which the five dimensions were related to the general factor of alienation in separate gender groups. The results of the research indicate that the general concept of alienation fits the five dimensions fairly well, although the shared variance between the dimensions
varies greatly. In turn, using the general term alienation to describe these different dimensions may interfere with a complete understanding of the nature and development of alienation in children and adolescents.

LaCourse (2003) found through his analysis that self-estrangement and powerlessness best define the concept of alienation in both genders of adolescents. Normlessness and meaninglessness were found to be moderately correlated, but loosely related to alienation. He states that the role of these two dimensions in relation to alienation may need to be reconsidered.

The social and environmental conditions present in the school and classroom setting can have a profound impact on student feeling of alienation. Those students who are at risk are especially susceptible to the dimensions of self-estrangement and powerlessness. For students who do not feel a sense of belonging to adults and peers in the school setting, the results may include diminished motivation, allegiance to peer groups with anti-academic norms and/or dropping out of school (Smerdon, 2002).

The traditional approach to addressing the needs of all youth, but particularly those at risk, has been to identify deficits and then to provide programs and strategies that might “fix” the deficits and more specifically, the child. Positive Youth Development (PYD) and the developmental assets framework instead take the opposite, more positive approach to assisting children. This framework is a strength-based approach that emphasizes positive experience, based on children’s strengths, skills and possibilities (Benson, et al., 2006). The intent of considering a positive approach as opposed to one that identifies deficits is to promote success through the strengthening of inherent assets.
already possessed by children, resulting in the reduction of engagement in high risk behaviors and increased opportunities to thrive in all environments.

PYD is concerned with the strengthening of the positive attributes or developmental assets possessed by children in order to more fully develop competency, confidence, caring, character and connectedness, and to foster both prevention and resiliency (Zarrett & Lerner, 2008). The concept of PYD as an approach to adolescent development has its origins in community based youth organizations such as 4H, Boys and Girls Clubs and Big Brothers/Big Sisters. These organizations recognize and through their programs promote the potential for change that is innate in all youth. Research by Lerner (2005) found three common features of organizations that are effective in promoting positive youth development. These include: positive, long term relationships between youth and adults, activities that build important life skills and opportunities for children to utilize these skills as both participants and leaders. Additionally, these organizations were found to be effective in capitalizing on the positive developmental assets identified by Benson, et al. (2006).

The 40 developmental assets, 20 internal (commitment to learning, positive values, social competencies and positive identity) and 20 external (support, empowerment, boundaries and expectation and constructive use of time) have been demonstrated through research to have greater effect sizes than other comprehensive school reform movements such as Success for All (Scales & Roehlkepartain, 2003). Longitudinal research conducted by Roehlkepartain, Benson and Sesma (2003) in a Minneapolis suburban school district followed students from 6th to 8th grade to when they were in 10th to 12th grade. The intent of the study was to determine if there was a
correlation between student-reported developmental assets and academic achievement, as measured by GPA and standardized test results. The findings of this study provide evidence that the number of developmental assets children possess are related to a variety of student achievement measures, even when controlling for variables such as gender, SES and race/ethnicity. Specifically it was found that 6th to 12 grade students with 0-10 assets had an average GPA of 2.1 with steady increases in GPA as the number of assets increased, to a 3.2 GPA for students with 31-40 assets. Equally, if not more important was the finding that over a three year period students with a higher number of assets demonstrated increased GPA, while those lacking in assets showed no increase.

Within the educational setting these assets can be fostered by teacher responsiveness and connection, and student involvement in school and extra-curricular activities, which increases connections with peers. Sharma and Griffin (2003) found that intentional interventions utilizing a developmental assets approach can impact positively on student achievement, as measured by decreased failing grades. Over the course of the three year study, the percentage of students receiving failing grades in the spring, decreased by 50% in the fall of the following year. Baseline data showed 44% of 9th grade students received at least one F, with post intervention data being reduced to 20%. The interventions utilized for this research included on going, comprehensive training for staff in the developmental assets approach, implementation of the “I Time” program to promote connections, team building, communications skills and social competencies, and increased coordination among staff to heighten awareness of student situations and concerns, strengths and challenges.
The use of a PYD/developmental assets approach within the school setting has the potential to transform relationships, promote the belief that teachers can make a difference in the lives and successes of children in spite of variables that all too often are perceived as insurmountable and strengthen relationships among school, home and community resources. Cross age peer mentoring as a strategy can play a role in promoting asset development for all students, including those at risk. Guerra and Bradshaw (2008) indicate that schools are a primary developmental environment for most children and as such the importance of connectedness within this setting can impact the positive development of children. Providing opportunities for increased connections, with adults and peers, a positive school climate, caring, responsibility and self-esteem throughout students’ school experiences has the potential to enhance their lives, academic success and outcomes in other developmental areas.

Conclusion

The results of this literature review provide the foundation for the investigation proposed in this paper. The review focused on students at risk for failure and eventual drop out, along with factors that contribute to the problem and the impact of a student’s decision to leave school prior to graduation. Various studies included in the review provide evidence relating to the impact of both push and pull factors that may initiate the impetus for this far reaching decision, as well as the importance of a positive school climate and student connectedness in acting as protective factors. Strategies to address the needs of the at risk learner are many and varied. The most successful strategies to assist this population target multiple risk factors and are an integral aspect of the school environment. Nurturing a positive school climate is one strategy that can be
accomplished through assurance of students’ physical and emotional safety, appropriate program structure, maintaining high expectations and opportunities to engage in meaningful experiences. Taking into account the need for students to make connections and meaningful contributions within the school environment, the use of a cross age peer mentoring strategy may address at least some of the needs of this group of students, to promote the possibility of school completion and to decrease the likelihood of their engagement in other unhealthy or dangerous behaviors. A positive school climate is a necessary prerequisite essential to students making connections with others in the school environment.
Chapter Three:  Methodology

Introduction

The intent of this study was to investigate the impact of a Cross Age Peer Mentoring Program on parent perceptions of school climate and connectedness in a suburban school district in Western Pennsylvania. Additionally, the researcher was interested in the possible impact of the program on academic achievement, as measured by standardized test results, report card grades, and/or screening/diagnostic assessments and on school attendance patterns. In this chapter the procedure, cross-age mentoring program/eligibility criteria, participant sample, instrumentation, and data analysis will be discussed.

This research sought to determine the impact of a Cross Age Peer Mentoring Program on parent perceptions of school climate and connectedness, as well as impact on student participant academic measures and school attendance patterns, by answering the following questions:

1.) Does student participation in a Cross Age Peer Mentoring Program enhance parent perceptions of school climate and connectedness?

2.) Does participation in a Cross Age Peer Mentoring Program improve school attendance of mentors?

3.) Does participation in a Cross Age Peer Mentoring Program improve school attendance of mentees?

4.) Does participation in a Cross Age Peer Mentoring Program improve academic performance of mentors?

5.) Does participation in a Cross Age Peer Mentoring Program improve academic performance of mentees?
The research questions relating to parent perceptions of school climate and connectedness, as well as impact on the academic performance and attendance patterns, were answered as the following hypotheses were tested:

1) Participation in the Cross Age Peer Mentoring Program does not enhance perceptions of school climate and connectedness for parent of participants.

2) Participation in the Cross Age Peer Mentoring Program does not improve school attendance for mentors.

3) Participation in a Cross Age Peer Mentoring Program does not improve school attendance for mentees.

4) Participation in the Cross Age Peer Mentoring Program does not improve academic performance of mentors.

5) Participation in the Cross Age Peer Mentoring Program does not improve academic performance of mentees.

The resulting analysis of data obtained through this investigation contributes to the current body of knowledge regarding cross age peer mentoring with at risk students at the elementary level. Specifically, the impact of this strategy on parent perceptions of school climate and connectedness as a result of their child’s participation in the program is considered, since parental influence, involvement in and feelings regarding the school and school climate have been demonstrated to have an impact on student academic performance, social skills and overall well-being.

This study utilized a quantitative (survey) methodology. A survey completed by parents of participants, prior to and following engagement in the CAPMP provided quantitative data utilizing descriptive and inferential statistics regarding their perceptions.
school climate and connectedness. Test scores, (diagnostic, screening, standardized achievement tests), report card grades and attendance patterns pre and post participation in the program were also reviewed to determine if any improvement was noted for either fourth and fifth grade mentors or first and second mentees

Procedure for Determining Eligibility and Participation

Since the information for determining eligibility for participation in the cross age peer mentoring was contained in student records, an initial permission request was sent to parents of all first second, fourth and fifth grade students. The *Parental Permission to Review Student Educational Records* (Appendix C) requested that the researchers be permitted to review the official school records of their child, to determine eligibility to be asked to participate in the research. Seventy four requests were sent to parents of first grade students and seventy two were sent to parents of second grade students. The return rate for first grade was 77% (57 out of 74) and for second grade 79% (56 out of 72). One hundred forty one *Permission for Review of Educational Records* were sent to parents of all enrolled fourth and fifth grade students The return rate for permission from parents of fourth grade students was 86% (65 of 76) and 91% (59 of 65) for fifth grade. Student assent for review of records was then sought and obtained from those first, second, fourth and fifth grade students whose parents returned the parental permission using the *Student Assent for Review of Educational Records* (Appendix D) and related script (Appendix E). The record review then commenced, with the focus on the predetermined eligibility criteria. Since not all permission to review educational records forms were returned, it is possible that additional students at each of the four grade levels may have been eligible.
The review of student records was conducted and involved the review of a total of 237 student records. This review revealed that of these 237 students whose parents gave permission for review of records, there were 10 first grade students eligible utilizing the determined criteria, 9 second grade students, 11 fourth and 13 fifth. Although six additional students were determined to possess the eligibility requirements, behavior referrals and related discipline negated their participation.

*Permission/Consent to Participate in a Research Study* (Appendices F and G) forms were sent to all 43 of the parents of students determined to be eligible through this process. The return rate for this permission/consent was 100% for first grade, 67% for second, 82% for fourth and 70% for fifth. Table 1 summarizes the number of permission/consent forms sent and received, as well as student assent obtained, resulting in final research participant numbers for each grade level. As was the case for the permission to review records, since not all parents returned this permission/consent, additional students who were eligible for participation were not included. Assent was then sought from all 32 of the students whose parent returned the permission and consent. This was accomplished using the *Assent to Participate in a Research Study* and related script found in Appendices H and I. All students from whom assent was sought agreed to participate in the research. One fourth and one fifth grade student were not included as participants in the research, but were given the opportunity to participate in the building’s established Peer Helping Program. Data for all participants were input into a *Microsoft Excel* spreadsheet by the building technology coordinator to determine the specific risk factors for each child, as well as the number of risk factors found in the participant group. A *Confidentiality Agreement* (Appendix A) was signed by the researcher and the building
technology coordinator to ensure all information obtained as a result of this process would remain confidential. Student identifiers were replaced by numerical designations to ensure anonymity.

Table 1 Permission/Consent and Assent Sent and Received

<table>
<thead>
<tr>
<th>Grade</th>
<th>Enrollment/Permission for Review of Records Sent</th>
<th>Permission/Assent for Review of Records Received</th>
<th>Permission/Consent for Participation Sent</th>
<th>Permission/Consent &amp; Assent for Participation Received</th>
<th>#1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>74</td>
<td>57 (77%)</td>
<td>10 (17%)</td>
<td>10 (100%)</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>72</td>
<td>56 (79%)</td>
<td>9 (16%)</td>
<td>6 (67%)</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>76</td>
<td>65 (86%)</td>
<td>11 (17%)</td>
<td>9 (82%)</td>
<td>82</td>
</tr>
<tr>
<td>5</td>
<td>65</td>
<td>59 (91%)</td>
<td>13 (22%)</td>
<td>9 (69%)</td>
<td>82</td>
</tr>
<tr>
<td>Totals</td>
<td>287</td>
<td>237 (83%)</td>
<td>43 (17%)</td>
<td>34 (79%)</td>
<td>32</td>
</tr>
</tbody>
</table>

1Number of final participants at each grade level

2One student in fourth grade and one in fifth were not included as participants to ensure one to one matching of mentors and mentees. These students were given the opportunity to participate in the building’s previously established Peer Helping Program.

The Comprehensive School Climate Inventory was sent to the parents of all participants (N=32), with a return rate of 100%. The surveys were coded to ensure anonymity, with pre and post surveys being coded in the same manner. Only the technology coordinator was aware of which parent received each survey. The return rate for the post survey was 93.75%. One student moved immediately following the conclusion of the research period and another student withdrew from the research after one week.
The CAPM Program paired at risk fourth and fifth grade students with at risk first and second grade students. Student participants, mentors and mentees were paired based on staff knowledge of individual strengths and challenges for program participation. Considerations for pairing included such things as matching fourth and fifth grade mentors with strengths in reading or math with those first and second grade students with challenges in those specific areas. Another consideration was concerned with those students who receive speech/language therapy, by making a concerted effort to provide those with difficulties in this area with a student who would be able to model speech sounds/patters and/or language skills that might benefit their partner. Additionally, thought was given to the personalities of the students participating so that a quiet, more reserved student was not paired with one who might overwhelm him/her with their more active, outgoing personality.

Fourth and fifth grade students, who acted as mentors to the first and second grade students, participated in two training sessions, each two hours in duration, scheduled at the conclusion of the regular school day. The training was conducted by the building guidance counselor and two learning support teachers and facilitated by this researcher. Training sessions included instruction and activities on tutoring, active listening, friendship skills, problem solving and confidentiality. Discussion also included the importance of modeling appropriate behaviors and work habits.

Following the training, mentors and mentees met a total of twelve 30 minute sessions, over a three week period, the first three weeks in May. The mentoring sessions consisted of tutoring and paired interactions (e.g. board games, physical activities,
computer games related to academic subjects). Sessions took place in the school library under the guidance and direction of the guidance counselor and/or learning support teachers, who provided the mentor training. All activities were interactive in nature, with student mentor-mentee pairs being engaged with each other, as well as content, for the duration of each session. Activities and skill focus were rotated to provide a variety of opportunities for interactions, as well as possible improvement of academic skills.

The literature review provided evidence that even at the primary level, as early as kindergarten, students with multiple factors are at an increased risk for engagement in numerous academic, social and health behaviors which may contribute to non-completion of the school experience (Hickman, 2007). With this in mind, criteria for participation in the CAPM Program included a minimum of two risk factors for both primary and intermediate groups. Additionally, factors considered included only those over which the school has influence, such as academic achievement as demonstrated in multiple ways (various assessment measures, report card grades, etc.) and attendance. Status risk factors related to family make up, i.e. family dynamics and socio-economic status were not considered or included in the selection criteria.

Criteria for primary students’ (first and second grade) participation as mentees in the CAPM Program included any combination of two or more of the following factors: scoring at the Strategic or Intensive level on the winter administration of The Dynamic Indicators of Basic Literacy Skills (DIBELS) screening, scoring in the Basic or Below Basic range on the Early Math Diagnostic Assessment (EMDA), scores below the district established proficiency score of 75% in math or reading on midyear assessments, eligibility for special education services, a grade of less than C in math or reading on the
mid-year report card issued in January, 2012 and/or absences in excess of ten days during the 2010-2011 school year or the first semester of the 2011-2012 school year.

Intermediate participants who acted in the role as mentors included 4th and 5th grade students who were determined to be at risk based on the following criteria: scoring below proficient on the Scantron Performance Series in reading or math on the January administration, a score of less than 75% on the district math curriculum based assessment, a grade less than C in math or reading on report card issued in January, 2012, eligibility for Special Education services and/or absences in excess of ten days during the 2010-2011 school year or during the first semester of the 2011-2012, ending in January, 2012.

Participants

As summarized in Table 1, a total of 16 first and second grade students, were participants in the CAPM Program, with their parents participating in the related research. Although parental consent and student assent was obtained from 18 fourth and fifth grade students, only 16 were final participants, to ensure the required one to one pairing of mentors and mentees. Two of the 18 were randomly selected to be provided with the opportunity to participate in the building’s established Helping Hands Program. The training for the student mentors was conducted by the guidance counselor and two learning support teachers under the guidance of the researcher.

Table 2 summarizes the number of first and second grade students with the identified risk factors and the total number of participants at these two grade levels. One first grade student selected for inclusion in the research was identified as having two risk factors, one was found to have three and two were found to have four. The remaining six
students were found to have five or more risk factors. Specifically, all first grade students who participated in the research program scored at the Strategic or Intensive intervention level on the DIBELS screening conducted in January, 2012. Five scored basic or below on the Early Math Diagnostic Assessment, eight scored less than 75% on reading or math assessments at mid-year, and three in reading only and five in both reading and math. A total of nine students were enrolled in a special education program. Additionally, eight had a recorded grade of less than a C on the district letter grading scale in math or reading and five were absent in excess of 10 days during the 2010-2011 school year and/or the first semester of the 2011-2012 school year.

Second grade students identified as having three risk factors numbered three and three additional having four risk factors. None of the second grade students who participated in the research program scored at the Strategic or Intensive intervention level on the DIBELS screening. Five scored basic or below basic on the Early Math Diagnostic Assessment and six second grade students scored less than 75% on reading and/or math assessments at mid-year, three in reading only, one in math only and two in both reading and math. Four students were found to be receiving special education services. Only one student was found to have a recorded grade of less than a C on the January report card. Finally, three were absent in excess of 10 days during the 2010-2011 school year and/or the first semester of the 2011-2012 school year.

Table 2 Number of First and Second Grade Mentees with Identified Risk Factors

<table>
<thead>
<tr>
<th>Criteria</th>
<th>First Grade Mentees</th>
<th>Second Grade Mentees</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIBELS Screening-Strategic</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>January, 2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk Factor</td>
<td>EMDA</td>
<td>5</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>------</td>
<td>---</td>
</tr>
<tr>
<td>EMDA Basic/Below Basic</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>&lt; 75% Math Mid-year</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>&lt; 75% Reading Mid-year</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Eligible for Special Education Services</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Report Card Grade &lt; C</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Math or Reading-January, 2012</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Absent &gt; 10 days during 2010-2011 or First Semester 2011-2012 School Year</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With regard to fourth and fifth grade mentors, Table 3 summarizes the number of students with identified, eligible risk factors and the total number of participants at these two grade levels. Two fourth grade students determined to be eligible for participation in the research was found to have two risk factors and four were found to have three. Two additional students were found to have six or more. The specific risk factors for this group included ten scoring below proficiency in math and/or reading on the Scantron Performance Series, four in reading only, one in math only and three in both reading and math. Five scored below the district established proficiency score on the math curriculum based assessment. Eight were found to be eligible for Special Education services. All students had a recorded grade of C or above in both math and reading on the January issued report card. With regard to attendance, the review of records found that none of the fourth grade student participants missed in excess of ten days.

Five students enrolled in fifth grade whose parents returned permission for review of records was found to have two risk factors, two were found to have four and one was identified with four. Seven participants scored below proficient on the Scantron
Performance Series, four in reading only, one in math only and two in both. One student scored below 75% on the district curriculum based math assessment and one had a recorded grade of less than C in reading on the January, 2012 issued report card. All eight were found to be receiving Special Education services and only one fifth grade student participating in the research had missed in excess of ten days of school.

Table 3 Number of Fourth and Fifth Grade Mentors with Identified Risk Factors

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Fourth Grade Mentors</th>
<th>Fifth Grade Mentors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scantron Reading Performance Series</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Scantron Math Performance Series</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Score of &lt; 75% on End of Year Math CBA</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Report Card Grade &lt; C Math or Reading-January, 2012</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Eligible for Special Education Services</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Absent &gt; 10 days during 2010-2011 or First Semester 2011-2012 School Year</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total Number of Risk Factors/Total Number of Students</td>
<td>24/8</td>
<td>20/8</td>
</tr>
</tbody>
</table>

As indicated in the review of literature, Suh and Suh (2007) discussed the significance of the number of risk factors in relation to the potential for dropping out. Additionally, their findings indicate that these risk factors can be identified early, and that in conjunction with the number of risk factors, this can be a predictor in relation to the possibility of students dropping out of school. Table 4 summarizes the number of students with two, three, four and five or more risk factors at each grade level who participated in this research.

Table 4 Number of Mentors and Mentees with Multiple Risk Factors
<table>
<thead>
<tr>
<th>Number of risk Factors</th>
<th>First Grade</th>
<th>Second Grade</th>
<th>Fourth Grade</th>
<th>Fifth Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Factors</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3 Factors</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>4 Factors</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5+ Factors</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Number of Students</td>
<td>10</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

Instruments

Surveys and questionnaires are utilized for research in many fields, including education. These instruments can provide valuable information to schools and school personnel regarding attitudes and perceptions of various groups toward instruction, curriculum or programs, among others (Gay & Airasian, 2000). Assessment of parent perceptions of school climate and connectedness was accomplished utilizing The Comprehensive School Climate Inventory (National School Climate Center, 2002). Parents of students participating in the CAPM Program were asked to complete this survey prior to and following their child’s participation in the program. The CSCI was developed by The National School Climate Center to measure student, staff, parent and community perceptions of school climate. The intent was to provide a tool for assessment of climate to provide a foundation for planning and implementing changes to improve school climate to in turn, enhance student learning (Cohen, 2010).

The scale utilizes a Likert type scale for each of the items, with some items phrased for reverse scoring to control for “response set”. The scale contains seventy items. The response scales contain five responses which include “Strongly Disagree”, “Disagree”, 

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“Neither Agree Nor Disagree (Neutral)”, “Agree” and “Strongly Agree”. During data analysis for this research, items phrased for reverse scoring were recoded in order to assure consistent response meaning across all items. The Parent Version of the CSCI has been shown to effectively assess parent perception of their relationships with staff, among staff, among students and between staff and students. Additionally, classroom and school safety, respect for individual differences, high expectations, the development of empathy, personal responsibility and decision making are considered.

This instrument considers four factors in relation to school climate, with twelve related dimensions. The four factors are safety, teaching and learning, interpersonal relationships, and institutional environment. The CSCI can provide meaningful data regarding parental perception of the degree to which their child feels healthy, safe, engaged, supported and challenged in the school setting. Additionally, creating and promoting school-parent partnerships by obtaining and giving serious consideration to parental thoughts about the school through the use of this survey supports students’ learning and achievement (Cohen, Pickeral & McCloskey, 2009).

Investigation of the technical aspects of the CSCI has been conducted by a number of researchers, beginning in 2003. Studies concerned with the reliability and validity of this instrument have been conducted more recently and include those by Gangi (2010), Haggerty, Elgin and Woolley (2010) and Guo, Choe and Higgins–D’Assessandro (2011). These investigations have provided more information regarding the survey in all its forms including student, staff and parent. Gangi (2010) set out to identify the most empirically sound school climate measures. Of the 102 instruments identified and evaluated, the CSCI was rated number 2 in relation to overall quality and quality of
reliability, validity and norm data. Haggerty et al, (2010) evaluated 72 school assessment instrument based on the following criteria: possess sound psychometric properties, be appropriate for program evaluation, readily available to schools and not be designed to assess specific programs. Of the 72, the CSCI was included in the final 9 meeting the pre-established criteria.

Specific testing regarding the validity and reliability of the CSCI was accomplished through a pilot test of 64 schools. This initial testing provided evidence of scale/subscale reliability coefficients ranging from .70 to .88 (subscales) and .96 for the unified scale (NSCC, 2010). Additionally, it was found that 67% of the subscales across all versions of the survey had alpha coefficient between .80 and .97. Convergent validity was determined by running correlations between the ten factor scales, as well as the unified scale and on a measure on non-academic risk. Correlations on 8 were found to be above .60.

Cohen (2010) states that “Survey development is–literally –an unending process” (p. 5). With that mindset, the NSCC has continued to refine the CSCI since the initial investigations into its psychometric properties. Ping, et al. (2011), investigated the reliability of the instrument. Cronbach’s alphas were computed for each factor and the unified scale. Using .70 as an acceptable reliability coefficient, 9 of the 10 subscale factors had alphas ranging from .70 to .90, with the unified scale coefficient being .94. Specifically, analysis of the Parent Version of the CSCI has resulted in good construct validity and strong internal consistency as demonstrated by Cronbach’s alphas. Table 5 summarizes the CSCI factors, dimensions and includes number of items for each dimension.
### Table 5 Comprehensive School Climate Inventory

<table>
<thead>
<tr>
<th>Factors</th>
<th>Dimensions</th>
<th>Examples of Indicators</th>
<th>Number of Items in each Dimension</th>
<th>Number of Items in each Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Rules and Norms, Sense of Physical Security, Sense of Social-Emotional Security</td>
<td>Clearly communicated rules, sense of safety-from physical harm, verbal abuse, exclusion</td>
<td>6, 5, 9</td>
<td>20</td>
</tr>
<tr>
<td>Teaching and Learning</td>
<td>Support for Learning, Social and Civic Learning</td>
<td>Use of supportive teaching practices, varied opportunities to demonstrate knowledge and skills, support for development of personal responsibility, ethical decision making</td>
<td>10, 9</td>
<td>19</td>
</tr>
<tr>
<td>Interpersonal Relationships</td>
<td>Respect for Diversity, Social Support-Adults, Social Support - Students School Connectedness &amp; Engagement, Physical Surroundings</td>
<td>Mutual respect for differences, Supportive and caring adult relationships, supportive peer relationships Positive identifications with school, cleanliness, order, adequate resources</td>
<td>4, 8, 5</td>
<td>17</td>
</tr>
<tr>
<td>Institutional Environment</td>
<td>School Connectedness &amp; Engagement, Physical Surroundings</td>
<td></td>
<td>8, 6</td>
<td>14</td>
</tr>
</tbody>
</table>

School Records

All student data, both pre and post, collected for the purpose of answering the research questions were input into a *Microsoft Excel* spreadsheet by the building technology coordinator. These data included: DIBELS and EMDA scores for first and second grade mentees, Scantron Performance Series scores (for both math and reading) and grade quality point averages for math and reading for fourth and fifth grade mentors, along with attendance data for all participants. The Confidentiality Agreement signed for data related to the earlier review of records remained in effect for this process. Students
were given numerical identifiers to assure anonymity. Attendance and academic records were reviewed to determine if participation in the program had an impact upon these two dependent variables. For the purposes of this research, attendance was defined as days present the three months prior to participation in the program (February, March and April). These data were then compared to data for the period of participation in the program, the first three weeks in May, to determine if there was any improvement, with comparisons being made to mean days of attendance during the three months prior to and the three week period of participation.

Academic performance was also examined to determine impact of student participation in the mentoring program. Academic records were reviewed for all participants. First and second grade students’ academic performance was measured through examination of the results of the DIBELS assessment. This assessment is administered three times per year, September, January and May. Comparison of the scores and performance levels obtained in January were compared to the results of the May administration. All first grade participants had scored at either the Intensive or Strategic levels on the January assessment. Specifically, scores were compared to determine the number of student participants who moved from the Intensive to Strategic level and from Strategic to Proficient. The EMDA was also used to determine possible academic impact of the program on first and second grade participants. This assessment is also administered three times per year, September, January and May, with student skill levels identified as Below Basic, Basic and Proficient, based on student performance. Analysis of the January and May administrations was conducted to determine the number of students who progressed from Below Basic to Basic, or Basic to Proficient.
Fourth and fifth grade participants’ academic gains were measured using letter grade quality point averages in reading and math from February through April, (prior to participation in the program) with comparisons being made to the grade quality point averages obtained during program participation (the first three weeks in May). Grade averages in both math and reading are included in the data analysis results. Scores on the Scantron Performance Series for both math and reading were also considered in relation to academic impact of the CAPM Program. The Scantron Performance Series is an on-line achievement test that provides immediate scoring results and is administered three times per year, September, January and May. This program provides scaled scores for both subjects, math and reading, each time it is administered. Data is also provided regarding scaled score gains, specifically indicating whether students made significant gains outside of the standard error of measurement. With regard to academic impact of the CAPM Program, differences in mean scores for both math and reading were compared.

Data Analysis

Data analyzed to answer the research questions included parent surveys, academic indicators and attendance information. Parent responses to the CSCI, both pre and post student participation in the CAPM Program provided the data for the first research question. Academic data for first and second grade mentees included analysis of the results of the DIBELS assessment from the January and May administrations and were analyzed to determine impact on literacy/reading skills and the EMDA, again from the January and May administrations, to determine impact on math skills. Comparison of the results of the January and May administrations of the Scantron Achievement Series for
both reading and math, along with comparison of quality comparison s in both math and reading for fourth and fifth grade mentors, provided information regarding academic impact for these participants. Finally, attendance for both groups, mentees and mentors was compared to answer the research questions regarding impact of this program on this factor.

Analysis of Research Question Number One

1) Does participation in the peer mentoring program enhance parent perceptions of school climate and connectedness?

The null hypothesis for this question is as follows: Participation in the peer mentoring program does not enhance perceptions of school climate for parents of student participants. The independent variable related to this research question is participation in the cross age mentoring program, while the dependent variable is parent perception of school climate and connectedness.

Data from the pre and post surveys were analyzed to determine if parent perceptions of school climate and connectedness changed as a result of their child’s participation in the mentoring program. Data collected from the administration of the survey were analyzed using the Statistical Packages for the Social Science (SPSS) software. The SPSS program was used to report descriptive data related to the factors, combined factors and the unified scale. Inferential data were also obtained through the use of dependent t-tests.

Data obtained from parent responses on the CSCI were analyzed for each of the four factors it considers: safety, teaching and learning, interpersonal relationships and institutional environment, as well as for the unified scale. Additionally, analysis of the
combined safety and teaching and learning factors was done to address the concept of climate, with the factors of interpersonal relationships and institutional environment used to address the concept of connectedness.

Data from the CSCI were input into a Microsoft Excel spreadsheet by the building technology coordinator and included numerical identifiers for each parent, to assure anonymity. The spreadsheet contained parent responses to each item from the CSCI using a Likert-type scale with Strongly Disagree coded as a 1, Disagree as a 2, Neutral as a 3, Agree as a 4 and Strongly Agree as a 5. Items negatively worded on the survey were recoded to ensure consistent meaning across all items. The data contained on the spreadsheet was imported into the SPSS statistical program to calculate and analyze the data resulting in means for each question, composite scores for each of the four factors for both pre and post survey results. The mean scores were then compared using \( t \)-tests, resulting in \( t \)-scores, which provided information regarding differences (significant or not significant) in means, pre and post. Mean scores for each of the four factors Safety (safety), Teaching and Learning (tchlrning), Interpersonal Relationships (interrelshps) and Institutional Environment were obtained. Additionally, scores were obtained for Climate (climate) and Connectedness (connected), as well as the unified scale. All analyses were conducted with an alpha level of \( \alpha .05 \).

Analysis of Research Question Numbers Two and Three

2.) Does participation in a Cross Age Peer Mentoring Program improve school attendance of mentors?

3.) Does participation in a Cross Age Peer Mentoring Program improve school attendance of mentees?
The null hypotheses for these two questions are as follows: participation in a Cross Age Peer Mentoring Program does not improve school attendance of mentors and participation in a Cross Age Peer Mentoring Program does not improve school attendance of mentees.

These two questions are concerned with the attendance patterns of both first and second grade mentees and fourth and fifth grade mentors. The pre data period for comparison purposes was the three month period prior to initiation of student participation in the CAPM Program (February, March and April) and the time during which students actually participated (the first three weeks in May,). Days in attendance were calculated for these two time periods. These data, along with the data necessary to answer research question numbers four and five, were input by the building technology coordinator into the Microsoft Excel spread sheet containing parent survey responses. Analysis included obtaining descriptive statistics and performing dependent \( t \)-tests to determine if significant differences were observed between pre and post participation attendance patterns.

Analysis of Research Question Number Four

4.) Does participation in the peer mentoring program improve academic performance of mentors?

The null hypothesis for this question is: Participation in the peer mentoring program does not improve academic performance of mentors.

Academic performance was measured utilizing two different variables. The first was the results of standardized test results in math and reading. The mean scores from
the January administration of the Scantron Performance Series were compared to the
mean scores on the May administration to determine if there was a significant difference.
Both math and reading scores were analyzed and reported. Additionally, grade point
averages in both math and reading, for the three months prior to initiation of the research,
were compared to the grade point average achieved during participation in the CAPM
Program to determine if participation had any impact on this variable. The analysis
involved obtaining mean scores and standard deviation, along with \( t \)-scores

Analysis of Research Question Number Five

5.) Does participation in the peer mentoring program improve academic
performance of mentees?

The null hypothesis for this question is as follows: Participation in the peer mentoring
program does not improve academic performance of mentees.

Academic performance data will include analysis of DIBELS and EMDA results
obtained during the January and May administrations of these assessments for first and
second grade students. The January results were considered to be pre data and the May
administration results were considered post data. Results from this analysis will be
reported for both assessments to address math and reading performance for this
population of participants. Movement from the Intensive to Strategic or Strategic to
Proficient levels of performance/need on the DIBELS, and from Below Basic to Basic or
Basic to Proficient will provide evidence of impact or lack of impact of the program on
this variable. Chi-square tests were performed on both DIBELS and EMDA results to
determine if there was a significant difference in the percentage of students at each
performance level, pre and post.
Conclusion

The impact of a CAPM Program on parent perceptions of school climate and connectedness, as well as the effect of participation on student participants’ attendance and academic performance, was the focus of this research. Fourth and fifth grade students with a minimum of two risk factors acted as mentors to first and second grade students also identified as at risk, through pre-established criteria. The mentoring program paired mentors and mentees randomly and provided multiple opportunities for the pairs to engage in a variety of learning opportunities.

Data collected for this study were analyzed using qualitative methodology to answer the research questions. A survey developed by the National School Climate Center provided data regarding parent perceptions of school climate and connectedness. Additionally, data was compared with regard to the school attendance and academic performance impact of the program on the participants.

Research provides evidence that student success can be impacted by climate and connectedness within and to the school environment (Karcher, 2007). The literature review also provided evidence that parents are influential with regard to the development of their child’s skills, attitudes and beliefs including those that are school related. It is the contention of this researcher that providing opportunities for at risk students to make connections with other students in the school setting will yield positive results. Thought to be included in the positive outcomes are: improved perceptions of climate and connectedness and improvement of academic measures and attendance.
Chapter Four: Results

Introduction

The purpose of this study was to examine the impact of student participation in a CAPM Program between first/second grade students and fourth/fifth grade students on parent perceptions of school climate and connectedness and student grades, standardized test/diagnostic assessment results and attendance. To facilitate answering the posed research question, numerous data were collected and analyzed. Parents of all students
participating in the Cross Age Peer Mentoring Program completed a school climate survey responding to various items regarding their perceptions of school climate and connectedness prior to and following their child’s participation in the program. Pre and post data with regard to standardized test/diagnostic assessment scores in math and reading, student grades, reported in percentages for math and reading and attendance were also collected and analyzed to determine if participation in the CAPM Program improved any of these variables. This chapter is organized according to the research questions posed for this study. Several tables are included to illustrate the details of the data collection and analysis, including the data for each participant, parent responses to survey questions, along with attendance, grades and standardized test/diagnostic assessment results.

Findings for Research Questions

**Research Question One:** Does Student Participation in a Cross Age Peer Mentoring Program Enhance Parent Perceptions of School Climate and Connectedness?

In an effort to answer this question, parents of students participating in the cross age responded to questions on the Comprehensive School Climate Inventory. This survey contained 70 questions regarding four factors related to school climate and connectedness, including Safety, Teaching and Learning, Interpersonal Relationships and Institutional Environment. Analysis of the four factors along with the unified scale was completed with both the pre survey responses and post survey responses. Additionally, survey items related to safety and teaching and learning were specifically considered to obtain information regarding school climate, while those relating to interpersonal relationships and institutional environment were considered in relation to school
connectedness. Nine of the items on the survey were phrased for reverse scoring to control for response set (n=8 in Safety and n=1 in Institutional Environment). These were recoded in the SPSS program prior to analysis to ensure the same meaning for all scores obtained on the survey. This analysis provided a variety of statistics for each factor. The first data obtained were frequencies for every item within each of the four factors. Percent of agreement across respondents for items on the surveys were calculated, along with differences found between pre and post. The data resulting from this analysis can be found in Tables 6, 7, 8 and 9. Table 6 specifically addresses the Safety Factor responses. The range of agreement for the pre-survey was 56.7% to 100% for individual items, with a total factor agreement of 85.17%. Post survey agreement for individual items also ranged from 56.7% to 100%, with 86.55% agreement across all responses. The noted difference between pre and post factor responses was +1.38%. This difference was the smallest noted for the four factors. Additionally, it is noted that increases in agreement were significant with Item #46 (Students at my child’s school will try to stop students from insulting or making fun of other students) and Item # 48 (Very few students make fun of other students.). Both of these items address the issue of verbal bullying/harassment so the positive increase in agreement appeared to indicate an improvement in this aspect of school safety.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Pre-Survey</th>
<th>Post-Survey</th>
<th>Difference Pre to Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Number</td>
<td>Percent of Agreement</td>
<td>N</td>
<td>Percent of Agreement</td>
</tr>
<tr>
<td>14</td>
<td>100.00</td>
<td>32</td>
<td>100.00</td>
</tr>
<tr>
<td>17</td>
<td>90.70</td>
<td>32</td>
<td>93.40</td>
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<tr>
<td>31</td>
<td>87.50</td>
<td>32</td>
<td>83.30</td>
</tr>
<tr>
<td>39</td>
<td>96.90</td>
<td>32</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table 7 provides the percentage of agreement for items contained with the Teaching and Learning factor. For the 19 items parents responded to related to this factor, agreement on the pre-survey ranged from 43.8% to 100% and from 60% to 100% on the post survey. Agreement across all items was found to be 72.86% and 83.45%, pre and post, with a calculated difference of +10.59%. This change from pre to post is the largest of the four factors. Within this factor a number of individual survey items increased significantly from pre to post survey. Among them are Item # 63 (My child’s teachers help him/her figure out how he/she learns best) with an increase of 23%, Item # 52 (In my child’s school, he/she works on listening to others so that he/she really understands what they are trying to say), with an increase of 19.5% and Item # 9 (My child’s teachers encourage him/her to try out new ideas (think independently) ) with an increase of 18.6%. A number of reasons may explain this positive increase, including an increase in parent awareness of teaching strategies and methodologies, perhaps related to increased communication about these strategies with their child.
Table 7 Teaching and Learning Factor-Percent of Agreement for Individual Items and Across All Items

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Pre-Survey N</th>
<th>Percent of Agreement</th>
<th>Post-Survey N</th>
<th>Percent of Agreement</th>
<th>Difference-Pre to Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>32</td>
<td>68.00</td>
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<tr>
<td>18</td>
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<td>100.00</td>
<td>0.00</td>
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<td>27</td>
<td>32</td>
<td>75.00</td>
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<td>80.00</td>
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<td>32</td>
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<td>86.70</td>
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<td>93.40</td>
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<td>93.80</td>
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<td>96.70</td>
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<td>84.40</td>
<td>30</td>
<td>93.40</td>
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<td>52</td>
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<td>63.30</td>
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<tr>
<td>54</td>
<td>32</td>
<td>43.80</td>
<td>30</td>
<td>60.00</td>
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<td>71.90</td>
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<td>Total</td>
<td>32</td>
<td>72.86</td>
<td>30</td>
<td>83.45</td>
<td>+10.59</td>
</tr>
</tbody>
</table>

The results of the analysis of the items contained with the Interpersonal Relationships factor are depicted in Table 8. For the 17 items in this factor, agreement for the pre-survey ranged from 62.5% to 100% and for the post-survey from 76.7% to 100%. Agreement across all items was calculated to be 83.21% (pre) and 89.20% (post), with a difference of +5.99%. Item # 22 showed a marked positive increase from pre to post survey. The increase in this survey item, (Student’s in my child’s school work well with each other even if they’re not in the same group of friends) may have resulted from the same increased awareness as indicated for the items in the Teaching and Learning factor discussed previously.

Table 8 Interpersonal Relationships Factor-Percent of Agreement for Individual Items and Across All Items
The analysis information regarding items agreement for the final factor, Institutional Environment can be found in Table 8. This factor contains the fewest number of items (14) of the four factors in the survey. The percent of agreement for individual items for both the pre and post survey was 65% to 100%. Agreement across all items for the pre-survey was 89.47% and for the post-survey 94.85% resulting in a difference of +5.38%. Item # 44, “We need more basic supplies in my child’s school (for example books, paper and chalk)”, showed a significant positive increase. It is thought that since this was one of the items that required recoding, perhaps parents misread and/or misinterpreted the question resulting in the increase.

Table 9 Institutional Environment Factor-Percent of Agreement for Individual Items and Across All Items

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Pre-Survey</th>
<th>Post -Survey</th>
<th>Difference-Pre to Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent of Agreement</td>
<td>N</td>
</tr>
<tr>
<td>6</td>
<td>32</td>
<td>87.50</td>
<td>30</td>
</tr>
<tr>
<td>38</td>
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<td>65.70</td>
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<td>5</td>
<td>32</td>
<td>83.70</td>
<td>30</td>
</tr>
<tr>
<td>16</td>
<td>32</td>
<td>90.60</td>
<td>30</td>
</tr>
<tr>
<td>37</td>
<td>32</td>
<td>96.10</td>
<td>30</td>
</tr>
<tr>
<td>55</td>
<td>32</td>
<td>84.40</td>
<td>30</td>
</tr>
<tr>
<td>58</td>
<td>32</td>
<td>87.60</td>
<td>30</td>
</tr>
<tr>
<td>65</td>
<td>32</td>
<td>87.50</td>
<td>30</td>
</tr>
<tr>
<td>68</td>
<td>32</td>
<td>93.80</td>
<td>30</td>
</tr>
<tr>
<td>12</td>
<td>32</td>
<td>68.70</td>
<td>30</td>
</tr>
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<td>15</td>
<td>32</td>
<td>75.10</td>
<td>30</td>
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<td>22</td>
<td>32</td>
<td>62.50</td>
<td>30</td>
</tr>
<tr>
<td>67</td>
<td>32</td>
<td>90.70</td>
<td>30</td>
</tr>
<tr>
<td>70</td>
<td>32</td>
<td>87.50</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>83.21</td>
<td>30</td>
</tr>
<tr>
<td></td>
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<td>---</td>
</tr>
<tr>
<td>1</td>
<td>32</td>
<td>65.60</td>
<td>30</td>
</tr>
<tr>
<td>8</td>
<td>32</td>
<td>84.40</td>
<td>30</td>
</tr>
<tr>
<td>19</td>
<td>32</td>
<td>87.50</td>
<td>30</td>
</tr>
<tr>
<td>23</td>
<td>32</td>
<td>87.50</td>
<td>30</td>
</tr>
<tr>
<td>26</td>
<td>32</td>
<td>84.40</td>
<td>30</td>
</tr>
<tr>
<td>50</td>
<td>32</td>
<td>83.80</td>
<td>30</td>
</tr>
<tr>
<td>56</td>
<td>32</td>
<td>96.70</td>
<td>30</td>
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<tr>
<td>60</td>
<td>32</td>
<td>96.90</td>
<td>30</td>
</tr>
<tr>
<td>28</td>
<td>32</td>
<td>100.00</td>
<td>30</td>
</tr>
<tr>
<td>34</td>
<td>32</td>
<td>100.00</td>
<td>30</td>
</tr>
<tr>
<td>36</td>
<td>32</td>
<td>93.80</td>
<td>30</td>
</tr>
<tr>
<td>41</td>
<td>32</td>
<td>96.90</td>
<td>30</td>
</tr>
<tr>
<td>51</td>
<td>32</td>
<td>100.00</td>
<td>30</td>
</tr>
<tr>
<td>44</td>
<td>32</td>
<td>75.00</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>89.47</td>
<td>30</td>
</tr>
</tbody>
</table>

Reliability

In order to determine interrelatedness of the items included in each of the four factors, as well as the Unified Scale and Climate and Connectedness measures, a reliability analysis was conducted to obtain alpha coefficients for each. Table 10 provides the specifics for this analysis. Cronbach’s alpha for the pre-survey factors were found to be highly reliable. The Safety Factor consisted of 20 items (.864), Teaching and Learning consisted of 19 items (.866), Interpersonal Relationships consisted of 17 items (.874) and Institutional Environment consisted of 14 items (.835). Post-survey reliability analysis provided evidence that three of the four factors were considered highly reliable. Cronbach’s alphas for the Safety, Teaching and Learning and Interpersonal Relationships factors were .762, .788 and .771 respectively. Only the Institutional Environment factor (.572) was calculated at a less than acceptable reliability. This finding is consistent with that of Guo, et al. (2011), with an alpha for this factor reported to be .58.

Reliability for the Unified Scale both pre and post was found to be high (70 items; 9.54) and (70 items; .901) respectively. The analysis of the Climate items (n= 39)
resulted in alphas of .913 (pre) and .834 (post), and the Connectedness items (n=31) alphas of .909 and .808. These results demonstrate that the four factors, Unified Scale, Climate and Connectedness items contained on the pre-survey are reliable in relation to internal consistency. For the post survey, all but the Institutional Environment factor were found to have very good reliability.

Table 10 Cronbach’s Alpha for CSCI Factors, Unified and Combined Climate and Connectedness

<table>
<thead>
<tr>
<th>Factor</th>
<th>Pre-Survey</th>
<th>Post-Survey</th>
<th>Documented Cronbach’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td></td>
<td></td>
<td>.73</td>
</tr>
<tr>
<td>n=20</td>
<td>.864</td>
<td>.762</td>
<td></td>
</tr>
<tr>
<td>Teaching &amp; Learning</td>
<td></td>
<td></td>
<td>.81</td>
</tr>
<tr>
<td>n=19</td>
<td>.866</td>
<td>.788</td>
<td></td>
</tr>
<tr>
<td>Interpersonal Relationships</td>
<td></td>
<td></td>
<td>.77</td>
</tr>
<tr>
<td>n=17</td>
<td>.874</td>
<td>.771</td>
<td></td>
</tr>
<tr>
<td>Institutional Environment</td>
<td></td>
<td></td>
<td>.58</td>
</tr>
<tr>
<td>n=14</td>
<td>.835</td>
<td>.572</td>
<td></td>
</tr>
<tr>
<td>Unified Scale</td>
<td></td>
<td></td>
<td>.94</td>
</tr>
<tr>
<td>N=70</td>
<td>.954</td>
<td>.901</td>
<td></td>
</tr>
<tr>
<td>Climate</td>
<td></td>
<td></td>
<td>.73</td>
</tr>
<tr>
<td>n=39</td>
<td>.913</td>
<td>.834</td>
<td></td>
</tr>
<tr>
<td>Connectedness</td>
<td></td>
<td></td>
<td>.58</td>
</tr>
<tr>
<td>n=31</td>
<td>.909</td>
<td>.808</td>
<td></td>
</tr>
</tbody>
</table>

Descriptive and Inferential Analysis

Next, the four factors were analyzed to obtain descriptive statistics, including mean scores and standard deviations. These data along with results of dependent t-tests are depicted in Table 10. These data were obtained for both pre and post survey responses. Dependent t-tests were conducted to compare the means of the four factors and the Unified Scale, prior to and following participation in the CAPM Program. The analysis indicated a statistical difference in two of the four factors and the Unified Scale. For the safety factor, no significant difference was reported between pre (M=4.131, SD=
and post surveys (M= 4.1800, SD= .3016): $t= -1.644(df = 29)$, $p = .111$. The teaching and learning factor analysis resulted in $t= -1.644(df = 29)$, $p = .001$ which provide evidence of a significant difference for this factor as well as interpersonal relationships, $t= -2.538(29)$, $p = .017$. For the final factor, Institutional Environment, no significant difference was found, $p = .892(20)$, $p = .380$. Mean and t-scores were also obtained for the unified scale. The results of this analysis indicate a significant difference, $t= -2.893(29)$, $p = .007$.

Table 11 Comparison of Means of the Four Factors and the Unified Scale Pre and Post Survey Results

<table>
<thead>
<tr>
<th>Factor</th>
<th>Descriptives</th>
<th>Pre Survey</th>
<th>Post Survey</th>
<th>t-score</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>M</td>
<td>4.131</td>
<td>4.180</td>
<td>-1.644</td>
<td>.111</td>
</tr>
<tr>
<td></td>
<td>n=20 SD</td>
<td>.405</td>
<td>.301</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching &amp; Learning</td>
<td>M</td>
<td>3.922</td>
<td>4.068</td>
<td>-3.696</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>n=19 SD</td>
<td>.374</td>
<td>.298</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal Relationships</td>
<td>M</td>
<td>4.082</td>
<td>4.184</td>
<td>-2.538</td>
<td>.017</td>
</tr>
<tr>
<td></td>
<td>n=17 SD</td>
<td>.393</td>
<td>.280</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional</td>
<td>M</td>
<td>4.327</td>
<td>4.371</td>
<td>-.892</td>
<td>.380</td>
</tr>
</tbody>
</table>
Table 12 provides information on the analysis of the combined Safety and Teaching and Learning factors to address the construct of Climate and the combined Interpersonal Relationships and Institutional Environment factors to address Connectedness. Mean scores and standard deviations were obtained for each of these, with a follow up dependent t-test being conducted to determine if any significant difference was evident. The results of the dependent t-test for these two sets of combined factors indicated a statistically significant difference in both with Climate being $t=2.950(29), \ p=.006$ and Connectedness $t=-2.490(29), \ p=.019$.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Descriptives</th>
<th>Pre-Survey</th>
<th>Post-Survey</th>
<th>t-score*</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate</td>
<td>M</td>
<td>4.042</td>
<td>4.125</td>
<td>-2.950</td>
<td>.006</td>
</tr>
<tr>
<td>n=39</td>
<td>SD</td>
<td>.339</td>
<td>.252</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connectedness</td>
<td>M</td>
<td>4.177</td>
<td>4.268</td>
<td>-2.490</td>
<td>.019</td>
</tr>
<tr>
<td>n=31</td>
<td>SD</td>
<td>.360</td>
<td>.237</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^*df$ for each dependent t-test was 29

The results of the analysis of the pre and post CSCI surveys completed by parents of first, second, third and fourth grade students who participated in the CAPM Program,
show differences in means for pre and post survey results for Teaching and Learning, Interpersonal Relationships, the Unified Scale and the combined factors used for Climate (Safety and Teaching and Learning) and Connectedness (Interpersonal Relationships and Institutional Environment).

Research Question Two: Does Participation in a Cross Age Peer Mentoring Program Improve School Attendance of Mentors

Research Question Three: Does Participation in a Cross Age Peer Mentoring Program Improve School Attendance of Mentees?

Attendance data was collected for all participants for the three month period prior to participation in the CAPM Program and attendance during participation. Attendance was defined as days in attendance when school was in session. These data were analyzed to obtain descriptive statistics including means and standard deviation for both time periods. Table 13 provides descriptive statistics for all participants mentees, mentors and the ten students whose attendance patterns place them at risk (in excess of 10 days during the first semester of the 2011-2012 school year) for both time periods, along with $t$-scores and level of significance. A dependent sample $t$-test comparing attendance prior to and during student participation in the CAPM program provided evidence of a significant difference for attendance for all participants, $t=-3.292(29), p=.003$. Additionally $t$-scores were obtained for mentees, mentors and the group considered at risk in relation to attendance. The results of those tests, respectively are $t=-2.814(14), p=.014$, $t=-1.815(14), p=.091$ and, $t=-2.905(9), p=.017$. These results indicated a significant difference in attendance for the mentees and at risk group. Cohen’s $d$ was also calculated
for each of these groups. The at risk population (N=10) was the only group
demonstrating a very large effect size with $d=1.342$.

**Table 13 Comparison of Means for Attendance Before and During Participation in the CAPM Program**

<table>
<thead>
<tr>
<th>Participants</th>
<th>Descriptives</th>
<th>Before</th>
<th>During</th>
<th>t-Score</th>
<th>$p$ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>All N=30</td>
<td>M</td>
<td>89.564</td>
<td>95.095</td>
<td>-3.292</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>9.622</td>
<td>6.924</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentees n=15</td>
<td>M</td>
<td>85.454</td>
<td>93.307</td>
<td>-2.814</td>
<td>.014</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>10.820</td>
<td>7.976</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentors n=15</td>
<td>M</td>
<td>93.673</td>
<td>96.860</td>
<td>-1.815</td>
<td>.091</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>6.206</td>
<td>5.387</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At-Risk n=10</td>
<td>M</td>
<td>81.029</td>
<td>92.351</td>
<td>-2.905</td>
<td>.017</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>10.690</td>
<td>9.218</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^a$Attendance is reported in percentage of days present.

$^b$df for each dependent $t$-test was 29

$^c$df for each dependent $t$-test for mentees and mentors was 14

$^d$df for each dependent $t$-tests for at risk group was 9

Research Question Number Four: Does Participation in a Cross Age Peer Mentoring Program Improve Academic Performance of Mentors?

Research question four was concerned with the possible impact of participation in a CAPM Program on the academic performance of mentors. Exploration of this question used the results of the Scantron Performance Series test results from the January and May administrations for fourth and fifth grade mentors. Additionally, average grade percentages in math and reading for the three month period before participation were compared with average grade percentages in both subjects immediately following the program. Analysis included obtaining descriptive statistics (means and standard
deviations) and conducting a t-test to determine if any significant difference was obtained in the means of the pre and post variables. Table 14 depicts the descriptive statistics obtained for both Scantron Performance Series and average grade percentages in both math and reading, along with t-scores and significance levels.

The results of the dependent t-tests for Scantron math and reading are, \( t = -3.631(14), p = .003 \) for math and \( t = -4.284(14), p = .001 \) for reading, providing evidence of a significant difference in the means for both assessments. Grade percentages, based on a hundred point scale, were also analyzed to obtain mean scores, standard deviations and t-scores. No significant difference was found for math grade percentages, based on pre data (M=88.59, SD=.0800) and post data (M=86.11, SD=.0695), \( t = -.727(14), p = .479 \). Pre reading (M=88.03, SD=.0621) and post reading (M=88.80, SD=.0544) also showed no significant difference, \( t = -1.507(14), p = .154 \). Cohen’s \( d \) was also calculated for each of these variables, with on a very large effect (\( d = 1.105 \)) evident in the Scantron math scores.

Table 14 Comparison of Means of Academic Variables Before and After Participation in CAPM Program

<table>
<thead>
<tr>
<th>Variable</th>
<th>Descriptives</th>
<th>Before</th>
<th>After</th>
<th>t-Score</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scantron-Math</td>
<td>M ( N=15 )</td>
<td>2296.20</td>
<td>2460.40</td>
<td>-3.631</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>143.499</td>
<td>156.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scantron-Reading</td>
<td>M ( N=15 )</td>
<td>2320.20</td>
<td>2496.13</td>
<td>-4.284</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>276.97</td>
<td>193.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade-Math</td>
<td>M ( N=15 )</td>
<td>85.40</td>
<td>86.11</td>
<td>-.727</td>
<td>.479</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>7.92</td>
<td>6.95</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Scantron results are reported as scaled scores. Grades are reported as percentages.

c\( df \) for each dependent t-test was 14.

Research Question Five: Does Participation in a Cross Age Peer Mentoring Program Improve Academic Performance of Mentees

Academic data for the mentee, first and second grade students included DIBELS and EMDA. These data were nominal in nature with values for DIBELS being 1=Intensive, 2=Strategic and 3=benchmark. The EMDA values are 1= Below Basic, 2=Basic and 3= Proficient. Analysis of these data was accomplished using Chi-square. The results of this analysis can be found in Table 16. Due to the constant score of 1 (Intensive) for the DIBELS pre-test, Chi-square results were not computed. Additionally, only three of the ten students moved from Intensive (1) to Strategic, so it would appear that student participation in the CAPM Program did not have an impact on this academic variable.

**Table 15 Chi-square Analysis of Pre and Post DIBELS Assessments**

<table>
<thead>
<tr>
<th></th>
<th>Pre-DIBELS</th>
<th>Intensive</th>
<th>% within Pre-DIBELS</th>
<th>66.7%</th>
<th>33.3%</th>
<th>100.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intensive</td>
<td>3</td>
<td>1</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Count</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% within Post-DIBELS</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analysis results for the EMDA can be found in Table 16. This analysis indicated that again, we find that there is no statistically significant relationship between the variables. Chi-square results \( \chi^2(2, N = 9) = 4.37, p = .0112 \). Five students did move up a level, with four moving from Below Basic to Basic and one moving from Basic to Proficient.

**Table 16 Chi-Square Analysis of Pre and Post EMDA Assessments**

<table>
<thead>
<tr>
<th></th>
<th>Below Basic</th>
<th>Basic</th>
<th>Post -EMDA Proficient</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Below Basic</strong></td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>% within Pre-EMDA</td>
<td>42.9%</td>
<td>57.1%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Post-EMDA</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>77.8%</td>
</tr>
<tr>
<td><strong>Basic</strong></td>
<td>6</td>
<td>3</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>% within Pre-EMDA</td>
<td>66.7%</td>
<td>33.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Post EMDA</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>22.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>% within Pre-EMDA</td>
<td>33.3%</td>
<td>55.6%</td>
<td>11.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Post EMDA</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Conclusion**

The overall results of the statistical analyses used to answer the first research question posed suggest that parent perceptions of school climate overall (Unified Scale) did show a statistical difference from pre survey to post survey. With regard to the four factors within the CSCI, significant differences were found in the Teaching and Learning and Interpersonal Relationships factors. Analysis of the composite scores for Safety and Teaching and Learning (Climate), as well as the combine Interpersonal Relationships and Institutional Environment (Connectedness), resulted in significant differences for both.

The second and third research questions were concerned with attendance patterns of participants before and during participation in the CAPM Program. Significant
differences were found for all participants, mentees and the group of students considered at risk due to attendance patterns during the first semester. No significant difference was noted for the mentors in the program.

Academic variables contained within the fourth research question, pertaining to fourth and fifth grade mentors, were concerned with changes in Scantron reading and math scores, and grade average percentages in reading and math. While significant differences were noted in Scantron results for both math and reading, no differences occurred in the grade percentages for either subject.

The final research question was concerned with the impact of participation on the academic performance of first and second grade mentees. A Chi-square test was performed on both assessments used for first and second grade mentees. No significant difference in scores was noted, although some students did show improvement through movement from one level to the next.

**Chapter Five: Discussion**

**Introduction**

Educators in public school settings have always had a professional, if not moral obligation to provide opportunities for success for the students for whom they are responsible. This obligation has recently been intensified because of the accountability standards required under the No Child Left Behind Act (2002), as well as the increased competition from charter and cyber schools. The increased emphasis on closing the achievement gap among the various subgroups and increasing the graduation rate places more pressure on schools to ensure that all
students, especially those most at risk, succeed. Strategies to address this issue are many and include early intervention, increased student engagement, improving upon instructional strategies, school with a school and more. Regardless of the status variables over which schools have no control, such as socio-economic background, family makeup or dynamic and the presence of a disability, schools are expected to achieve the established high standards.

The research presented in this paper was concerned with the use and possible impact of a CAPM Program between fourth and fifth grade students and first and second grade students. Specifically, the research sought to determine if this strategy had an impact on parent perceptions of school climate and connectedness, attendance and/or academic performance of the student participants. Data were collected from parents regarding their perceptions of school climate and connectedness and student records were reviewed to obtain pre and post data on attendance and academic performance. Analysis of these data was conducted to determine the impact of student participation in the program on the variables. The research questions posed for this research included:

1) Does student participation in a Cross Age Peer Mentoring Program enhance parent perceptions of school climate and connectedness?

2) Does participation in a Cross Age Peer Mentoring Program improve school attendance of mentors?

3) Does participation in a Cross Age Peer Mentoring Program improve school attendance of mentees?

4) Does participation in a Cross Age Peer Mentoring Program improve academic performance of mentors?
Does participation in a Cross Age Peer Mentoring Program improve academic performance of mentees?

As was the case with Chapter Four, this chapter is organized according to the research questions.

Discussion of Findings

Research Question One: Does Student Participation in a Cross Age Peer Mentoring Program Enhance Parent Perceptions of School Climate and Connectedness

Positive school climate and connectedness are essential aspects of successful schools. Numerous studies speak to the importance of these attributes in relation to student success. Interpersonal relationships, communication and school bonding are factors identified by Hernandez and Seem (2004) as being influential with regard to school climate. These factors contribute to feelings of inclusion, trust and respect, which in turn influence student success.

Sherblom, Marshall and Sherblom (2006) found that student sense of well-being, trust, respect and liking for school were all strongly correlated with academic achievement. Shindler, et al. summed it by say that “better climates led to achievement and were not simply a byproduct.” (p.6).

Although most of the studies reported on in the literature review address student perceptions of school climate and connectedness, parent perceptions of these constructs should also be considered. Parent perceptions of climate and connectedness can be influential in relation to the feelings developed by their child about the school experience and conversely, their child’s feeling can influence parental feelings (Rogers, et al., 2009). Hawes and Plourde (2005) found that parental interactions and relationships with their
children and the school can have an impact on student academic success and overall well-being. This study found a slight positive correlation in the comparison of parent and student responses to questions regarding parent involvement and other issues related to school climate and connectedness. Although the current study solicited only parental perceptions, it would appear that at least to a certain extent, their perceptions may well mirror their child’s perceptions. The significant difference found between pre and post CSCI results may well provide indirect data regarding student perceptions. The possibility of parental perceptions influencing student perceptions of school climate and connectedness in the current study is based on anecdotal information and is not a focus of the study, but is nevertheless worth considering in the context of this research.

The significant findings in relation to parent perceptions of climate and connectedness as they pertain to the current study are found specifically in the Teaching and Learning factor and the Interpersonal Relationships factor, the second of which speaks directly to communication and connections between and among those in the two settings (home and school). It would appear that from a parental perspective, the CAPM Program did make a difference in their thoughts about the school with regard to at least these two factors. Similar to Serpell and Mashburn’s (2011) study it would appear also that although the current study depends on perception of parents rather than students, the findings support the importance of parental connections to school, with regard to student achievement. Significant findings were also found in the results of the dependent t-tests conducted on responses to the Unified Scale and the Climate and Connectedness items. Research done by Karcher, (2009) and Keating, et al. (2002) found that strong positive perceptions of school climate and connectedness are correlated to higher academic
achievement. These findings are consistent with the results of the current study, although it must be pointed out that concurrent interventions most likely played a part in the increased academic achievement of the mentors. These academic gains are discussed in relation to research questions four and five.

Consideration should also be given to the impact of a possible “ceiling effect” with regard to the data collected from the parent surveys on climate and connectedness. A ceiling effect occurs when there is a score limitation at the top of a scale of measurement and a large concentration of participants score at or close to this limit. In the case of the two factors, Safety and Institutional Environment, in which significant differences did not occur pre to post survey, the ceiling effect may have played at least a part. The percent of agreement for the pre-survey for these two factors was 85.17% and 89.47% respectively, with the descriptive statistics being $M=4.131$, $SD=.405$ and $M=4.327$, $SD=.399$, again, respectively. With these data being relatively strong, it is possible that obtaining $t$-scores that demonstrate a significant difference may be difficult, especially when taking into account the short time frame.

Parents, in the end, are important consumers of the educational process. Obtaining their thoughts and feelings about the school as an institution can provide some insight as to their child’s relationship to and within the school. Both of these relationships can, in turn directly influence other factors that place children at risk. Expectations on the part of both parents and students can impact school outcomes, as found by Rubie-Davis, et al. (2010). These findings provide at least some support for the improvement of student perceptions of climate and connectedness in conjunction with changes in parent’s perceptions, as occurred in the current study. Positive parental
perceptions of the connections made in school, may very well provide the base upon which to build positive student perceptions and effect positive changes in academic outcomes for students.

Research Question Two: Does Participation in a Cross Age Peer Mentoring Program Improve School Attendance of Mentors?

Research Question Three: Does Participation in a Cross Age Peer Mentoring Program Improve School Attendance of Mentees?

There are any number of variables that place students at risk for eventual school dropout. These include both status factors such as socio-economic background, race and family dynamics, as well as factors over which the school does have control such as instructional strategies, student engagement, response to behavioral problems and connections to and within the school environment (Bridgeland, DiDiani & Morison, 2006). Attendance rate is one of the many factors cited by Pinkus (2008) that is predictive in relation to dropping out of school prior to receiving a diploma. Kennelly and Monrad (2007) found that students with absenteeism rates in excess of 20% or were tardy in excess of ten times per month were six times more likely to drop out. Students must be in school to learn and be successful and educators must be resolute in their approach to addressing this issue.

A study conducted by Converse and Legnugaris-Kraft (2009) compared office referrals, attendance patterns and changes in attitude toward self, peers and teachers of a group of 13-15 year old who were mentored by school staff for 18 weeks, to a control group. Of the variables considered, attendance was the only one that did not result in significant differences. This finding is similar to the findings in the present study for the
mentor group. Analysis of school attendance by mentor participants resulted in no significant differences in the mean attendance prior to and during participation in the CAPM Program. On the other hand, Stader and Gagnepain (2000) found that a high school level peer mentoring program resulted in improved attendance, with average daily attendance increasing from 88% to 93%. In the current study, only one of the mentor participants was identified as at risk for attendance and overall mentor attendance initially was 93.84, with an increase to 96.86, which could account for the difference in findings. Although a significant difference was not found in this study for the mentor group, it is noted that the initial attendance rate was higher than that in the Stader and Gagnepain study and still showed an improvement. The one mentor participant with a lower attendance rate (88.0%) did improve to 100% during the mentoring period. Additionally, it is noted that attendance for all participants in the present study, mentor and mentees combined, showed a significant difference in the mean (p=.003), which supports the 2000 study findings.

Hickman (2007) found that there was evidence, as early as kindergarten, of differences between students who eventually dropped out and those who completed the school experience. Attendance patterns were one of the differences found to be predictive of students dropping out of school. This finding would appear to support the use of programs such as peer mentoring that may improve attendance at this early age and negate the deterioration of this factor as the child proceeds through school, which Hickman also found to be the case. With regard to attendance of the first and second grade mentees, findings in the current study contrast to those found for mentors. Significant differences were found for this group as a whole (p=.017), as well as for the
nine students considered at risk for attendance (p=.035). These findings support not only the Stader and Gagnepain (2000) results but also the results of a study by Illig (1999) who found that attendance of high school students involved in a mentoring relationship improved, regardless of their role (mentor or mentee). Additionally, the findings in the current study provided evidence that the CAPM Program did impact significantly on the 10 students identified as at risk for attendance issues. One of these ten was the mentor discussed earlier, while the other nine were first and second grade mentees. The significant improvement in the attendance of the at-risk group supports the findings in two of the three studies mentioned previously. It is the opinion of this researcher that the findings for attendance for mentees and those students deemed at risk for attendance problems is especially important. As noted earlier attendance is one of the many factors cited in relation to students leaving school prior to graduation. Just as educators look to early intervention in relation to academic issues, it would appear that participation in a CAPM Program has the potential to establish good attendance patterns and possibly reverse poor patterns.

Research Question Four: Does Participation in a Peer Mentoring Program Improve Academic Performance of Mentors?

Many, if not most of the studies reviewed regarding CAPM Programs, considered the effect of these programs on the academic performance of participants. Given the previously mentioned accountability issues and expectations for closing the achievement gap, this is to be expected. At a time when school “survival” is dependent upon the results of academic high stake tests, schools would be remiss to not make this a focus of improvement efforts. It is suggested that given this concern, more should consider the
implementation of a CAPM Program to address this concern, especially given the results found in previous studies, in relation to academic improvements.

Zarrett and Lerner (2008) discuss the importance of programs and practices that focus on student strengths, rather than deficits. Along those same lines, Shindler, et al. (2008), promote a “psychology of success”, which they indicate impacts positively upon student achievement. The use of a CAPM Program supports both of these approaches.

To provide at risk students, at any level the opportunity to engage with peers, to make use of the skills they have to help others, and to “show what they know”, increases the focus on student strengths and a psychology of success approach that can increase students feelings of competence, feelings of acceptance and connectedness. These feelings have been found to promote academic success (Sherblom, Marshall & Sherblom, 2006).

The Coca Cola Valued Youth Program, based on a positive assets model much like the approach of the previously mentioned researchers, provides at risk students with the opportunity to tutor and mentor younger students. This program, evaluated by the Intercultural Development Research Association (2005), was found to impact positively on a number of variables, including grades and achievement test scores. These and other findings at least partially support the findings in this study. The analysis of academic data for the mentor participants in relation to the Scantron Achievement Series in math and reading showed significant differences in the means, pre and post participation in the program. Admittedly, these results are mitigated by the fact that other interventions had been implemented to address this academic variable, and the contrast in the length of time between pre and posttest in relation to the duration of the mentoring program.
King, et al. (2002) also found, through an exploration of the Healthy Kids Mentoring Program, that 71% of the student participants demonstrated academic improvements. With regard to the results of the current study, his findings were not supported with regard to improvement of grade point average for mentors. It is again necessary to recognize several things in relation to the contrast in findings however. Due to the fact that the mentor participants were all identified with special needs, and had IEP’s that included specially designed instruction, their learning needs were being met as evidenced by the pre mean average of 85.99. Additional research is suggested to more fully investigate the relationship between the CAPM Program and academic variables.

Research Question Five: Does Participation in a Peer Mentoring Program Improve Academic Performance of Mentees?

Although mentoring programs of various forms were reviewed and found to have a positive effect on academic variables for students involved in them, no research was found relating to a cross age peer mentoring approach involving primary grade students. In this respect, the current study provides a starting point for additional investigation involving this population. It is the thinking of this researcher that as mentioned earlier in this chapter, early intervention is found to be essential with regard to student progress in areas such as reading and math. Again, as discussed, it behooves school personnel to give consideration to the use of a cross age mentoring approach to address the issues, academic and otherwise, faced by primary students identified as at risk. Taking a
proactive approach to the problems faced by students at the primary level is not only the right thing to do, but may also have positive results in relation to accountability issues, increased academic success and make financial sense. This last would be in relation to providing effective interventions to students prior to the need for special education service which are costly for schools. It would seem that results similar to those found for intermediate grades, middle and secondary students could well be expected and demonstrated.

The analysis of DIBELS as one of the academic measures for the first and second grade participants were not reported due to the constant of 1 for the pretest. Additionally only 3 of the 10 students moved from the Below Basic to Basic level. It is the thought of this researcher that the use of numerical scores and/or another reading variable might provide different results. The Chi-square was computed for the EMDA, but with no significant findings. Of the nine students included in the analysis of this variable, five did move to the next level, from 1 to 2 and one from 2 to 3. Although not significant, it is still important to note this improvement. As with the DIBELS, it may be beneficial to consider another source for math variable.

The research review did however provide evidence that CAPM Programs result in improved connections to others in the school (Karcher, 2007) and that these increased connections result in improved academic support. A study by Ornelles (2007) found that a classroom based interventions used with at risk first grade students that focused on increasing interactions with peers resulted in a higher level of engagement in academic activity. For those students reticent about interactions with peers or adults in the school environment, and/or who lack an appropriate or significant peer group (which also place
them at risk for dropping out according to Hammond et al, 2007), participation in a mentoring relationship with peers may help not only social skills but also academics.

Green, Alderman and Liechty (2004) investigated the effect of peer tutoring sessions on second grade students identified as at risk for literacy skills. Tutored students demonstrated a median gain of 30 words read correctly as opposed to 20 words for a comparison group. Again, the results of the current student did not reject the null hypothesis for this research question, but the results of the Green, et al. (2004) study support this researcher’s contention that other measures of academic progress may result in different findings.

Although the overall results of the analysis for this research question supported the null hypothesis, other research has demonstrated that academic success of first grade students can be enhanced through the use of the various components of a CAPM Program, which suggests that further research may help to clarify this issue.

Limitations of Study

In the opinion of the current researcher, there is a need to revisit the limitations of this study first mentioned in Chapter 1. It is my belief that these limitations did, in at least some cases, impact the expected results. The biggest limitation, in my opinion is that of the length of the research period. Originally, the research time period was scheduled to be a grading period (nine weeks). A three week period, in my opinion, does not provide sufficient time to for the efficacy of a program to be thoroughly examined and evaluated. The current results certainly provide a starting point, especially given that there were significant differences noted in at least some of the variables. This is especially true in that concurrent interventions prior to and during the research period
most likely had some effect on the outcomes. It is suggested that additional research to
address this particular limitation is vital to determining the true worth of this program in
relation to addressing the needs of the at risk population.

Culture, climate and levels of connectedness are attributes unique to each
individual building, and even individual classrooms within the school (Koth, Bradshaw &
Leaf, 2008). Since the current study took place in just one elementary school, it is
recognized that the results are not necessarily generalizable to other buildings, even those
within the same district. This suggests to me that implementation of the same study in all
three elementary buildings in the district, or the use of one of the buildings as a control
group may provide more meaningful results about all or both of the school involved.

Although many of the studies referred to in the literature review used sample
populations smaller than the 30, in the current study, I feel that a larger sample may have
provided more meaningful data. Considering the data presented in Tables 6, 7, 8 and 9
relating to percentage of agreement for each of the factors found within the CSCI, it was
noted that in cases where percentage of agreement was low, although there were few
responses of 1 and 2 (Strongly Disagree and Disagree), there were a number of Neutral
responses (3). To me this would indicate at the least some ambivalence of the part of the
respondents and perhaps a certain lack of awareness of those particular dimensions
(dimensions as represented by the items) within the school. This may have related to the
fact that some of the student participants had not been in the building any longer than a
year or two, and relationships and understanding of the climate represented within the
school may not yet be well established.
Although I feel that the use of a CAPM Program to enhance the learning and possibility of school completion for the participants is a viable strategy, it is evident that additional research is necessary to ascertain the accuracy of my view and to promote acceptance of this approach by others.

Implications for Practice

This study was significant to the field of education in that it added to a body of research that relates specifically to those most in need—the at risk learner. Although there are a multitude of investigations in the literature that address strategies to assist this population, there are not as many that address the combination of at risk, cross age peer mentoring and the constructs of climate and especially connectedness. Each of these three factors has its own set of unique characteristics, but there is also much that links them together and provides a rationale for uniting them in an approach to working with these students. If at risk students have connections with both adults and peers within the school setting, there is a chance that some of the factors that place them at risk will be improved upon i.e. academics, attendance, sense of belonging, etc. A CAPM Program supervised by teachers and counselors provides these students with the opportunity to develop these connections or to increase the number of connections they have, with both adults and peers. If we focus on the “psychology of success” (Shindler, et al, 2008) and/or the concepts of assets (Lerner, 2007) rather than a “psychology of failure” or deficits by providing students with the opportunity to demonstrate their skills, to be in a position of helping others, success and assets are emphasized and capitalized upon. As supported by the literature review, any of these approaches to supporting the at-risk
population can only result in positive outcomes for at least some, if not most of this population.

Although one of the biggest things I learned from this program was not found in the results of the data analysis, and is actually more anecdotal in nature, I still feel it is worth discussing. Throughout the research period, the CAPM Program was approached by both the adults involved and the participants in a most positive manner. Student participants were often overheard asking teachers if they would be “mentoring” that day. During the actual mentoring sessions, student mentors were observed to work very hard to explain how to solve problems and/or understand concepts being practiced in a variety of ways. The overall attitude and demeanor of both mentors and mentees was observed to be caring, positive and possessed of a certain level of excitement. From these observations it would appear that both groups reaped benefits related to relationship building and academics.

Interestingly, the learning support teachers directly involved with implementation of the program were observed to be extremely supportive of it. At the conclusion of the research period, they continued with the mentoring sessions and have indicated that they will implement the program during the next school year, most likely at the beginning of October. This willingness to continue and enthusiasm for the program would appear to demonstrate recognition of the efficacy of a “non-traditional” approach to the support of at-risk students. It would also appear that these teachers in particular feel at least some sense of ownership with regard to the program, as well as commitment to utilizing strategies that may assist this population in the targeted areas (academics and attendance) as well as in other areas such as speech/language and social skills.
It would appear that this approach has merit in relation to helping the at risk population in the areas of connectedness, academics and attendance. The findings of the current investigations support the findings of other researchers who have investigated mentoring in relationship to academics (Karcher, et al., 2006) and connectedness (Stader & Gagnepain, 2000), among others. A mentoring relationship does have the potential to impact favorably on these and other variables. Although it may not be the answer to all the problems faced by these students, and for some may not be appropriate at, as demonstrated by one student withdrawing from the program, it is suggested that to totally ignore its potential is to shortchange schools and students alike.

Recommendations for Future Research

The literature review provides evidence that school climate and connectedness can have a favorable impact on student performance in the school setting, as well as to act as a protective factor with regard to engagement in risky behaviors, such as drug and alcohol use, early sexual initiation and delinquent behaviors. The current study at least partially supports this contention. It is suggested that additional research may provide more positive and conclusive evidence that a CAPM Program can be influential with regard to these and other at risk factors. The following are recommendations with regard to additional studies in relation to this intervention:

1. Since students are the “product” of the school, seeking their perceptions regarding school climate and connectedness as a result of participation in a CAPM Program would provide primary source data.

2. Transition grades are mentioned in the literature review as being
particularly important in relation to the decision to drop out of school (Radziwon, 2003). With this in mind, it would be advantageous to pair ninth grade students making the transition to high school with elementary students in a cross age model to determine the impact on academic and attendance variables.

3. The short duration of the study in this paper posed a significant limitation. It is suggested that the same research questions be used to investigate the impact of this program over a longer period of time which may provide more concise data.

4. The inclusion of an additional school would provide the opportunity to compare parent or student responses in relation to climate and connectedness, as well as other variables using an experimental approach.

5. Additional information/insight regarding the program could also be obtained through an interview protocol and/or follow up survey of the student participants, both mentors and mentees. Their perspective on the program components and how the program could be improved has the potential to provide valuable information regarding this approach to helping the at-risk population.

Conclusion

Although it is not suggested that a CAPM Program is the end all approach to the difficulties faced by students at risk for failure and non-completion of the school
Experience, it is thought that it is one approach that should be given serious consideration. Schools across the nation face ongoing challenges with regard to finances, accountability, increasing test scores and ensuring increased graduation rates, among many others. Schools and school personnel constantly seek out programs and practices that will provide both them, and the students they serve an advantage in relation to the previously mentioned challenges. This study provides some insight into the use of just one strategy that may address at least some of these concerns.

This study provided some information regarding parental perceptions of school climate and connectedness in relation to their child’s participation in a CAPM Program. Analysis of their responses to a survey about these constructs provided evidence that their perceptions post participation were improved. This improvement may well signal improvement in other areas for both parents and students, including but not limited to increased involvement with the school, student attitudes about school and the relationships they have within it, and academics. These types of improvements are supported by the literature as being possible through the implementation of a CAPM Program.

Statistical analysis of specific student variables including academic performance/progress and attendance resulted in some noted improvements. Attendance patterns and rates were particularly impacted in a positive manner, demonstrating a significantly positive t-score. Increased attendance rates, especially for those deemed at risk can in turn result in improved academic skills, since children cannot acquire the curricular content if they are not in school. Although improvement in attendance was not evident in relation to the students acting as mentors, it was noted that this may have been
the result of average or above average attendance rates for this group prior to implementation of the program.

The positive results for academic for the mentor group must be considered in combination with the fact that other concurrent interventions most likely played at least some part in the improvement. Nevertheless, the findings are in agreement with previous studies investigating programs of this kind and their influence on academic variables. Chi-Square analysis of the academic variables for the mentee group did not result in evidence of significant improvement from pre to post participation. It is suggested however that the use of ordinal or scale data for both the DIBELS and the EMDA may have offered the evidence lacking by using the nominal data.

As educators struggle to meet the needs of the diverse populations they serve, examination of a variety of strategies to help students who encounter multiple factors that place them at risk is essential. The examination of the use of a CAPM Program for the at-risk population at the school involved in this study provided enough evidence to ensure its implementation in the upcoming school year. It is also hoped that sharing of the results of the current study with the other two elementary buildings within the same district will provide the opportunity for students in those building to benefit from a similar program.
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Appendix A
Confidentiality Agreement

This confidentiality agreement between ________________________________ and
______________________________ is entered into on this date,
______________________________, and relates to data obtained on students from Wilson
Elementary School in the West Allegheny School district who are participating in a
research study titled Perceptions of School Climate and Connectedness: The Impact
of a Cross Age Peer Mentoring Program. It is agreed that any and all data and
information obtained by ______________________________ shall be kept in the
strictest of confidence. _____________________________ agrees that the data and information she has access to as a result of assisting with this study shall not be shared with anyone. Data and information shared with the researcher, Kathleen Ann Sites shall be stripped of all identifying student information so that collected data cannot be connected or attributed to any student participant.

Signature of Researcher _____________________________ Date _____________________________

Signature of Data Collector _____________________________ Date _____________________________

Appendix B
Comprehensive School Climate Inventory Parent Version
Sample Questions
Please respond to each of the statements below by circling the answer that best describes how you feel.

1. My child's school tries to get students to join in after school activities
   Strongly Agree  Agree  Neither Agree or Disagree  Disagree  Strongly Disagree

2. Adults who work in my child's school treat students with respect.
   Strongly Agree  Agree  Neither Agree or Disagree  Disagree  Strongly Disagree
3. In my child’s school, he/she talks about ways to help control his/her emotions.

   Strongly Agree   Agree   Neither Agree or Disagree   Disagree   Strongly Disagree

4. Many students at my child’s school go out of their way to treat other students badly.

   Strongly Agree   Agree   Neither Agree or Disagree   Disagree   Strongly Disagree

5. Adults in my child school seem to work well with one another.

   Strongly Agree   Agree   Neither Agree or Disagree   Disagree   Strongly Disagree

6. Students in my child’s school respect each other’s differences (for example, gender, race, culture, etc.)

   Strongly Agree   Agree   Neither Agree or Disagree   Disagree   Strongly Disagree

7. In my child’s school, students have learned ways to resolve disagreements so that everyone can be satisfied with the outcome.

   Strongly Agree   Agree   Neither Agree or Disagree   Disagree   Strongly Disagree

8. My child’s school tries to get all families to be part of school activities.

   Strongly Agree   Agree   Neither Agree or Disagree   Disagree   Strongly Disagree

9. My child’s teachers encourage him/her to try out new ideas (think independently).

   Strongly Agree   Agree   Neither Agree or Disagree   Disagree   Strongly Disagree

10. My child has been insulted, teased, harassed or otherwise verbally abused more than once at this school.

    Strongly Agree   Agree   Neither Agree or Disagree   Disagree   Strongly Disagree

11. In my child’s school, he/she talks about the way his/her actions will affect others.
12. Students have friends at school they can turn to if they have questions about homework.

13. In my child’s school, he/she discusses issues that help him/her think about how to be a good person.

14. In my child’s school, there are clear rules against physically hurting other people (for example, hitting, pushing or tripping).

15. Students have friends at school they can trust and talk to if they have problems.

Comments:

National School Climate Center (2002)

DUQUESNE UNIVERSITY
600 FORBES AVENUE  ♦  PITTSBURGH, PA 15282

Appendix C
PARENTAL PERMISSION FOR REVIEW OF STUDENT EDUCATIONAL RECORDS

TITLE: Perceptions of School Climate and Connectedness: The Impact of a Cross Age Peer Mentoring Program

INVESTIGATOR: James E. Henderson, Ed.D.
IDPEL Program Director
School of Education
SOURCE OF SUPPORT:

This study is being performed as partial fulfillment of the requirements for the doctoral degree in education at Duquesne University.

PURPOSE:

We are asking for permission to review your child’s educational records to determine if they can be invited to take part in a study that will be done during the final grading period of the 2011-2012 school year. The purpose of the study is to see if participation in a mentoring program between older and younger students, which is known as cross age peer mentoring, helps to improve report card grades, scores on standardized math and/or reading tests, (for example Scantron and DIBELS), or attendance at school.

If you agree to give permission for the review of your child’s educational records, he or she will also be asked to give their assent for us to review their records.

These are the only requests that will be made of you and your child at this time.

RISKS AND BENEFITS:

There are no known risks beyond those of everyday life. While there may be no direct benefit to you, if your child is invited to participate in the study, his or her participation may help educators decide if
mentoring programs help to improve student grades, test scores or attendance. It may also benefit educators by helping to find ways to improve parent feelings about schools, the people in schools and the learning that takes place there.

**COMPENSATION:**
There is no compensation for participation in this project. However, participation in the project will include no monetary cost to you. A self-addressed, stamped envelope is provided for return of the signed permission form to the student investigator.

**CONFIDENTIALITY:**
All information obtained through the review of your child’s educational records will be kept confidential. Your child’s name will not be paired with any grades, test scores, attendance or any other identifying information. Instead of your child’s name, a number will be used.

All data collected for this research will be kept for five years, in a locked filing cabinet in the student investigator’s home, after which it will be destroyed.

**RIGHT TO WITHDRAW:**
You are under no obligation to give permission for the review of your child’s educational records. If you give permission and change your mind at any time, you are free to withdraw your permission and any data collected will not be used for this study. Withdrawal from the study, as well as withdrawal of any data collected, will not result in any negative consequences for you or your child. Please be certain that your child understands that he or she has the right to refuse to permit the student investigator to review his or her educational records to determine if they are eligible to take part in this study.

**SUMMARY OF RESULTS:**
A summary of the results of this study will be supplied to you, at no cost, upon request.

**VOLUNTARY PERMISSION:**
I have read the above statements and understand what is being asked of me and my child. I understand that my child must voluntarily agree to the review of his or her educational records. I also understand that at any time I am free to withdraw
my permission for any reason, at any time, and that any information collected will also be withdrawn and not used in the study. On these terms, I certify that I am willing to have my child’s records reviewed to determine if they are eligible to participate in this study.

I understand that should I have any further questions about my child’s participation in this study, I may call Kathleen Ann Sites, 724-695-5270, Dr. James Henderson, 412-396-4880 or Dr. Joseph Kush, Chair of the Duquesne University Institutional Review Board, 412-396-6326.

Parent/Guardian’s Signature

Date

________________________

Researcher's Signature

Date

DUQUESNE UNIVERSITY
600 FORBES AVENUE ◆ PITTSBURGH, PA 15282

Appendix D

STUDENT ASSENT FOR REVIEW OF EDUCATIONAL RECORDS

TITLE: Perceptions of School Climate and Connectedness: The Impact of a Cross Age Peer Mentoring Program

INVESTIGATOR: James E. Henderson, Ed.D.
IDPEL Program Director
STUDENT INVESTIGATOR:  
Kathleen Ann Sites  
1928 Elmbrook Lane  
Pittsburgh, PA  15243  
412-398-1843  
Kathy.Sites@hotmail.com

SOURCE OF SUPPORT:  
This study is being performed as partial fulfillment of the requirements for the doctoral degree in education at Duquesne University.

PURPOSE:  
You are being asked to give us assent to look at your school records, to see if you are a student we can ask to participate in a study. The purpose of the study is to see if being in a mentoring program between older and younger students helps to improve your grades, test scores or attendance.

Since you are younger than 18 years of age, your parent(s) must give permission us to review your school records. Because you are a school age child, you are too young to give legal consent. Your parents have already given us their permission to look at your records. However you still have the right to agree or disagree to allow us to do that. When a child your age agrees to give permission for someone to look at their school records or to participate in a study it is called assent.

Listen carefully while I tell you again what we are asking you to do.
Script (attached) will be read to students. The student will be given the opportunity to ask questions to clarify what will be asked of him/her.

Right now, the only thing we are asking of you is if we can look at your school records to see if you are a student that can be in our study.

RISKS AND BENEFITS: When we look at your school records, it will not hurt you in any way or make a difference in how we feel about you. If we ask you to be in the study, it will not hurt you in any way. We hope that if you are in the study, it will help teachers learn how to help more students improve their grades, test scores and attendance.

COMPENSATION: You will not receive any money or gifts for participation in this project. However, if you do decide to participate, it will not cost you any money.

CONFIDENTIALITY: All information that we get by looking at your school records will be kept confidential. That means that your name and any other identifying information will not be used anywhere in any of the data collected or reports written. No one will know anything about your school records, including your grades, test scores and attendance. We will use a number instead of your name in all of the papers about this study.

Data collected for this research will be kept for five years, in a locked filing cabinet in the student investigator’s home, then it will be destroyed.

RIGHT TO WITHDRAW: You do not have to agree to allow us to review your school records. You will be able to tell us no or even that you want us to stop once we have started, and no one will be upset, disappointed or treat you any differently. If you tell us to stop looking at your school records after we have started, we will not use anything we have already seen that is in your school records and no one will be upset disappointed or treat you any differently.
SUMMARY OF RESULTS: If you want to know about the results of this study, we will share the information with you and your parents.

VOLUNTARY ASSENT: The study has been explained to me. I understand what you want me to do. I understand that I must say yes to allow you to review my school records, but that it is alright for me to say no. I know that I can change my mind at any time and the information in my records will not be used. I give my permission for my school records to be reviewed for this study.

If I have any questions at any time about being in this study, I know I can ask my parents and they will get the answers for me by calling, Kathleen Ann Sites, 724-695-5270, Dr. James Henderson, 412-396-4880 or Dr. Joseph Chair of the Duquesne University Institutional Review Board, 412-396-6326.

Student Signature ___________________________ Date ___________________________

Researcher's Signature ___________________________ Date ___________________________

Appendix E

SCRIPT FOR ASSENT PROCESS

Review of Educational Records

We are asking for your permission to look at your school records to see if you can participate in a study. The purpose of the study is to see if being in a mentoring program between older students and younger students will help to improve report card grades, test scores or attendance. Your parents have already given us permission to look at your
school records, but you have the right to say yes or no, too. If you say no, we will not look at your records for this study.

If you say yes, and allow us to look at your school records to see if you can be in the program and then you change your mind, you can let us know and we will stop using your information. No one will be upset or disappointed if you say no or change your mind.

If you are a student we ask to be in the study, we will ask you if you want to work with another student to see if it helps you with your grades, test scores or attendance. When older students help younger students it is a helping program called mentoring. If we ask you to be in the mentoring program to help us with this study you will not have to say yes. You will be able to tell us no at that time, and no one will be upset or disappointed. Even if you decide to say yes at first, and then change your mind, you will be able to stop being in the program at any time and no one will be upset with you. Also, we will not use any information about you that we already have.

Remember, right now we are just asking you to let us look at your school records to see if you are a student we would like to ask to be in this study and the mentoring program. You do not have to say yes. Do you have any questions about what we are asking you right now? Do you agree to let us look at your school records, knowing that at any time you can change your mind? If you agree, we would like you to sign this form that says we have your permission to look at your school records.

**NOTE:** Additional explanations will be made, as needed, to be certain that students understand what is being asked of them.
Appendix F

PERMISSION/CONSENT TO PARTICIPATE IN A RESEARCH STUDY
Parents of First and Second Grade Students
TITLE: Perceptions of School Climate and Connectedness: The Impact of a Cross Age Peer Mentoring Program

INVESTIGATOR: James E. Henderson, Ed.D.
IDPEL Program Director
School of Education
Department of Foundations and Leadership
412-396-4880
Henderson@duq.edu

STUDENT INVESTIGATOR: Kathleen Ann Sites
1928 Elmbrook Lane
Pittsburgh, PA 15243
412-398-1843
Kathy.Sites@hotmail.com

Wilson Elementary School
100 Bruno Lane
Imperial, PA 15216
724-695-5270
KSites@westasd.org

SOURCE OF SUPPORT: This study is being performed as partial fulfillment of the requirements for the doctoral degree in education at Duquesne University.

PURPOSE: You are being asked to give your permission for your child to participate in a study to be conducted during the final grading period of the 2011-2012 school year. The purpose of the study is to see if participation in a mentoring program between older and younger students, which is known as cross age peer mentoring, helps to improve report card grades, scores on standardized math and/or reading tests, (for example Scantron and DIBELS), or attendance at school. The review of records for which you had previously given permission, provides evidence that your child is encountering difficulty in one or more of these areas, and may benefit from participation in this program. We also want to see if student participation in the mentoring program makes a difference in how you feel about the school, the people in the school, and the learning that goes on in the school. Your answers
to questions about the school will tell us about the school climate.

If you give your permission for your child to participate in this study, he or she will be paired with a fourth or fifth grade student and they will be given the chance to work together on math and reading skills, educational computer programs and games, board games, to read books together in the library and other similar activities that children do at school. He or she will do this two to three times a week for about 30 minutes with the help of an adult staff member. There will be a total of twelve sessions. Your child will not miss any academic instruction in his or her classroom as a result of participation in this program. The sessions will be scheduled to avoid academic instructional times.

At the beginning and end of the mentoring program, we will look at your child’s grades, standardized test scores and attendance to see if participating in the mentoring program helped to improve any of these things.

We will also ask you to answer questions on a survey form that will tell us your feelings about the school, the people in the school and the learning program at the school. We will ask you to answer these survey questions before and after your child is in the mentoring program. We will use your answers to these questions to see if there are any changes in your feelings about the school following your child’s participation in the mentoring program.

If you give permission for your child to participate in this study, he or she will also be asked to agree to participate.

These are the only requests that will be made of you and your child at this time.

**RISKS AND BENEFITS:**

There are no known risks beyond those of everyday life. While there may be no direct benefit to you, your child’s participation may help educators decide if mentoring programs help to improve student report card grades, test scores or attendance.
may also benefit educators by helping to find ways to improve parent feelings about school, people in schools and the learning that takes place there.

**COMPENSATION:**
There is no compensation for participation in this project. However, participation in the project will require no monetary cost to you. A self-addressed, stamped envelope is provided for return of the signed permission/consent form to the investigator.

**CONFIDENTIALITY:**
All information obtained as a result of your child’s participation in this study will be kept confidential. Your child’s name or any other identifying information will not appear on any records, notes or within the final document. Instead of using a name, we will use a number to match grades, test scores and attendance to the correct student.

You will not be asked to write your name on the surveys. You will also be assigned a number. The same number will be used for the survey you answer before your child is in the mentoring program and the survey you answer after they are in the program.

Data collected for this research will be kept for five years in a locked filing cabinet in the student researcher’s home, after which it will be destroyed.

**RIGHT TO WITHDRAW:**
You and/or your child are under no obligation to participate in this study. You are free to withdraw your permission for your child to participate at any time and you child’s information, participation and any data collected will be excluded from the study. Withdrawal from the study, as well as withdrawal of any data collected, will not result in any negative consequences for you or your child. Please be certain that your child understands that he/she has the right to decline participation in this study.

**SUMMARY OF RESULTS:**
A summary of the results of this study will be supplied to you, at no cost, upon request.

**VOLUNTARY PERMISSION/CONSENT:**
I have read the above statements and understand what is being requested of me and my child. I also
understand that my child’s participation is voluntary and that I am free to withdraw my permission/consent for any reason, at any time and that any information collected will also be withdrawn and not used in the study. On these terms, I certify that I am willing to have my child participate in this study, and am willing to complete the pre and post survey instruments that will be provided.

I understand that should I have any further questions about my child’s participation in this study, I may call Kathleen Ann Sites, 724-695-5270, Dr. James Henderson, 412-396-4880 or Dr. Joseph Kush, Chair of the Duquesne University Institutional Review Board 412-396-6326).

Parent/Guardian Signature ___________________________ Date ____________

Researcher's Signature ___________________________ Date ____________

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Appendix G

PERMISSION/CONSENT TO PARTICIPATE IN A RESEARCH STUDY
Parents of Fourth and Fifth Grade Students

TITLE: Perceptions of School Climate and Connectedness:
The Impact of a Cross Age Peer Mentoring Program

INVESTIGATOR:  
James E. Henderson, Ed.D.  
IDPEL Program Director  
School of Education  
Department of Foundations and Leadership  
412-396-4880  
henderson@duq.edu

STUDENT INVESTIGATOR:  
Kathleen Ann Sites  
1928 Elmbrook Lane  
Pittsburgh, PA  15243  
412-398-1843  
Kathy.Sites@hotmail.com

Wilson Elementary School  
100 Bruno Lane  
Imperial, PA  15216  
724-695-5270  
KSites@westasd.org

SOURCE OF SUPPORT:  
This study is being performed as partial fulfillment of the requirements for the doctoral degree in education at Duquesne University.

PURPOSE:  
You are being asked to give your permission for your child to participate in a study to be conducted during the final grading period of the 2011-2012 school year. The purpose of the study will be to see if participation in a mentoring program between older and younger students, which is known as cross age peer mentoring, helps to improve report card grades, scores on standardized math and/or reading tests, (for example Scantron and DIBELS), or attendance at school. The review of records for which you had previously given permission, provides evidence that you child is encountering difficulty in one or more of these areas, and may benefit from participation in this program. We also want to see if student participation in the mentoring program makes a difference in how you feel about the school, the people in the school, and the learning that goes on in the school. Your answers
to questions about the school will tell us about the school climate.

If you give your permission for your child to participate in this study, he or she will be paired with a first or second grade student and they will be given the chance to work together on math and reading skills, educational computer programs and games, board games, to read books together in the library and other similar activities that children do at school. He or she will do this two to three times a week for about 30 minutes with the help of an adult staff member. There will be a total of twelve sessions. Your child will not miss any academic instruction in his or her classroom as a result of participation in this program. The sessions will be scheduled to avoid academic instructional times.

At the beginning and end of the mentoring program, we will look at your child’s report card grades, standardized test scores and attendance to see if participating in the mentoring program helped to improve any of these things.

We will also ask you to answer questions on a survey form that will tell us your feelings about the school, the people in the school and the learning program at the school. We will ask you to answer these survey questions before and after your child is in the mentoring program. We will use your answers to these questions to see if there are any changes in your feelings about the school following your child’s participation in the mentoring program.

If you give permission for your child to participate in this study, he or she will also be asked to agree to participate.

These are the only requests that will be made of you and your child at this time.

**RISKS AND BENEFITS:**

There are no known risks beyond those of everyday life. While there may be no direct benefit to you, your child’s participation may help educators decide if mentoring programs help to improve student grades, test scores or attendance. It may also
benefit educators by helping to find ways to improve parent feelings about school, people in schools and the learning that takes place there.

**COMPENSATION:**
There is no compensation for participation in this project. However, participation in the project will require no monetary cost to you. A self-addressed, stamped envelope is provided for return of the signed permission/consent form to the investigator.

**CONFIDENTIALITY:**
All information obtained as a result of your child’s participation in this study will be kept confidential. Your child’s name or any other identifying information will not appear on any records, notes or within the final document. Instead of using a name, we will use a number to match grades, test scores and attendance to the correct student.

You will not be asked to write your name on the surveys. You will be assigned a number. The same number will be used for the survey you answer before your child is in the mentoring program and the survey you answer after they are in the program.

Data collected for this research will be kept for five years in a locked filing cabinet in the student researcher’s home, after which it will be destroyed.

**RIGHT TO WITHDRAW:**
You and/or your child are under no obligation to participate in this study. You are free to withdraw your permission for your child to participate at any time and you child’s information, participation and any data collected will be excluded from the study. Withdrawal from the study, as well as withdrawal of any data collected will not result in any negative consequences for you or your child. Please be certain that your child understands that he/she has the right to decline participation in this study.

**SUMMARY OF RESULTS:**
A summary of the results of this study will be supplied to you, at no cost, upon request.

**VOLUNTARY PERMISSION/CONSENT:**
I have read the above statements and understand what is being requested of me and my child. I also
I understand that my child’s participation is voluntary and that I am free to withdraw my permission at any time, for any reason. And that any information collected will also be withdrawn and not used in the study. On these terms, I certify that I am willing to have my child participate in this study, and am willing to complete the pre and post survey instruments that will be provided.

I understand that should I have any further questions about my child’s participation in this study, I may call Kathleen Ann Sites, 724-695-5270, Dr. James Henderson, 412-396-4880 or Dr. Joseph Kush, Chair of the Duquesne University Institutional Review Board 412-396-6326).

________________________________________  
Parent/Guardian Signature  
Date

________________________________________  
Researcher's Signature  
Date
TITLE: Perceptions of School Climate and Connectedness: The Impact of a Cross Age peer Mentoring Program

INVESTIGATOR: Dr. James E. Henderson, Ed.D.
IDPEL Program Director
School of Education
Department of Foundations and Leadership
412-396-4880
Henderson@duq.edu

STUDENT INVESTIGATOR: Kathleen Ann Sites
1928 Elmbrook Lane
Pittsburgh, Pa. 15243
412-398-1843
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Wilson Elementary
100 Bruno Lane
Imperial, Pa. 15126
724-695-5270
KSites@westasd.org

SOURCE OF SUPPORT: This study is being performed as partial fulfillment of the requirements for the doctoral degree in education at Duquesne University.

PURPOSE: You are being asked to participate in a study to see if being in a mentoring program helps to improve your report card grades, test scores or attendance at school. In the study you will be asked to work with another student two or three days a week. You will work together on math or reading skills, educational computer programs and games, board games, reading books together in the library and other activities like these.

Since you are younger than 18 years of age, your parent(s) must give permission for you to participate in the study. Because you are a school age child, you are too young to give legal consent. Your parents have already given us their consent for you to participate in the mentoring
program. However, you still have the right to agree or disagree to participate in the study. When a child your age agrees to be in a study we say they give us their assent.

Remember, if you do not want to participate in the study, no one can make you participate. Even if you decide to participate at first and then change your mind you can tell us you do not want to be in the study anymore and no one will be upset, disappointed or behave any differently toward you.

Listen carefully while I tell you again what we are asking you to do.

*Script (attached) will be read to students. The student will be given the opportunity to ask questions to clarify what will be asked of him/her.*

Right now the only thing we are asking of you is if you would like to be in the study about the mentoring program.

**RISKS AND BENEFITS:** This program will not hurt you in any way. We hope it will help you. We also hope that this study will help us learn how to help students improve their grades, test scores and attendance.

**COMPENSATION:** You will not receive any money or gifts for being in this study. However, if you do decide to participate, it will not cost you any money.

**CONFIDENTIALITY:** All of the information we gather will be kept confidential. That means that no one will know what your grades, test scores, attendance or behavior were at the beginning or the end of the study. We will not use your name or any other identifying information in any papers or reports. Any information collected for this research will be kept for five years, in a locked filing cabinet in the student investigator’s home and then it will be destroyed.

**RIGHT TO WITHDRAW:** You do not have to agree to be in this study. Even if you agree at first, you can change your mind and stop at any time and no one will be upset,
disappointed or treat you any differently. If you change your mind, we will not use any information that we have collected in any of the papers or reports. All of your information, such as grades, attendance and test scores will be removed from the study.

**SUMMARY OF RESULTS:**

If you want to know about the results of this study, we will share the information with you and your parents.

**VOLUNTARY ASSENT:**

I have been told about this study and understand what you want me to do. I also understand that I can choose to be in the study or I can say no and no one will be upset or disappointed. I know that at any time I can say I do not want to participate and I will be allowed to stop being in the study and no one will treat me any differently.

_________________________________________  ______________
Student Signature                          Date

_________________________________________  ______________
Researcher's Signature                   Date

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**Appendix I**

**SCRIPT FOR ASSENT PROCESS**

Participation in Cross Age Peer Mentoring Program

Today we are asking if you agree to participate in a study being done at Wilson School. The purpose of the study is to see if participating in a mentoring program between older students and younger students helps to improve grades, test scores or
For fourth and fifth grade students the following statement will be read:

For this study, you will be asked to be a mentor to a first or second grade student. Being a mentor means being a role model and helping another student. During the mentoring program, you will meet with the younger student two or three times a week in a classroom, library, gym or cafeteria. Your meetings will last about thirty minutes each time. You will have a total of twelve meetings. You will do things like help them with their reading and math, play learning games on the computer, play board games, go to the library to read books and other similar activities. There will always be an adult with you when you are with the younger student. You will never be alone with him/her. At both the beginning and the end of the mentoring program, we will look at your grades, test scores and attendance to see if being a mentor helped you to do better in any of these areas.

For first and second grade students the following statement will be read:

For this study, a fourth or fifth grade student will help you with things like your numbers, letters, and sight words, will play educational games on the computer, read books with you in the library and other similar activities. When an older student helps a younger student like this it is called mentoring. That means he/she is a helper to you. You will meet with the older student about two or three times a week in a classroom, the library, gym or cafeteria. You will have about twelve meetings. There will always be an adult with you. You will never be alone with the older student. At both the beginning and the
end of the mentoring program, we will look at your grades, test scores and attendance to see if being in the mentoring program helped you to do better in any of these areas.

It is important that we know you are going to participate in this study because you want to and not because you think you have to. Remember that no one will be upset, disappointed or angry if you do not want to do this. We want you to be very certain that you want to be in the mentoring program. If at any time during the program you want to stop, you can do that and no one will be upset with you. If you have any problems remember that you can talk to an adult, just like you do for anything else at Wilson School and the adult will help you.

Do you have any questions you would like to ask about doing this? Are you willing to participate in this study? If you agree, we would like you to sign this form that says you want to be in this study and the mentoring program.

NOTE: Additional explanations will be made, as needed, to be certain that students understand what is being asked of them.