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Impact of a ninth-grade transition program on cumulative GPAs and credits, ninth-grade dropout rates, and student satisfaction

B. R. Buhrman
Walden University

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Brita Buhrman

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Review Committee

Dr. Robert McClure, Committee Chairperson, Education Faculty

Dr. Lisa Reason, Committee Member, Education Faculty

Chief Academic Officer

Denise DeZolt, Ph.D.

Walden University

2010

ABSTRACT

Impact of a Ninth-Grade Transition Program on Cumulative GPAs and Credits, Ninth-Grade Dropout Rates, and Student Satisfaction

by

B. R. Buhrman

M.S., Walden University, 2005
B.A., Institute of Linguists, London, 1991

Doctoral Study Submitted in Partial Fulfillment
of the requirements for the Degree of
Doctor of Education
Teacher Leadership

Walden University
February 2010

ABSTRACT

Concerned educators have been implementing ninth-grade transition programs to help freshmen adjust to the demands in high school and to reduce ninth-grade failure rates. The purpose of this quasi-experimental quantitative study was to investigate the impact of a ninth-grade transition program. The research questions addressed impact on cumulative GPAs and credits, ninth-grade dropout rates, and student satisfaction with ninth grade as measured by a survey of 120 ninth-grade transition program participants and 102 nonparticipants. Theoretical foundations were provided by the construction of new knowledge based on different background knowledge, different social conditions, and different life experiences. Another theoretical foundation was social control theory predicting less student delinquency if students have strong bonds with society such as school, family, and peers. After using a posttest-only with nonequivalent control-group design and independent-measures t tests for all hypotheses, results showed that the transition program did not have any effect on dropout rates, student satisfaction, and cumulative credits earned. The program had a negative effect on GPAs, possibly because of an increased margin of error (low return rate of parental consent for participation) and a new math curriculum for the experimental group. Recommendations for future study include conducting a longitudinal study with more participants, adding qualitative aspects, and teaching the same curricula to all study participants. Findings are significant for positive social change because they challenge educators to reexamine transition procedures, implement improved strategies, and review their teaching methods to provide students with the skills required by employers for a successful workforce that will contribute to America's well being and strong economic status in the 21st century.

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DEDICATION

I would like to dedicate this doctoral study to the most loving, most supporting, and most important people in my life: my Lord, Jesus Christ, my husband Art, and my mom and dad in Germany. I could not have done this without you.

Für meine liebe Mutti und meinen lieben Vati in Liebe und mit Dankbarkeit.

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 - Dr. Phyllis Porter, administrator

- Audra Sanders, administrator
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- Carole Wolf, administrator's assistant
- Jacqueline Vienneau, principle's assistant
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SECTION 1: INTRODUCTION TO THE STUDY

General Introduction to This Study

Ninth graders often cannot deal with the social expectations and academic challenges in high school and can find it difficult to adjust (Baker, Copley & Hughes, 2005; Butts & Cruzeiro, 2005; Campbell, 2001; Case, 2006; Chapman & Sawyer, 2001; Duncan, 2004; Haney et al., 2004; Herlihy, 2007; Kennelly & Monrad, 2007; Lampert, 2005; MacKay, 2006; Mizelle, 2005; J. S. Smith, 2006). Additionally, T. J. Smith (2007) explained that

The transition into ninth grade is a critical phase in students' lives and academic careers. The move to a larger environment, the reduction in personal support, and the greater academic challenge posed by high school courses is too often problematic for rising ninth-grade students. (p. 31)

Moreover, Marzano (2003) explained that these students enter high school with a whole range of background knowledge, abilities, interests, and strengths. They also come from different socioeconomic environments. Nevertheless, during their high school career, the teacher must cater to all these students' social and academic needs, while at the same time being responsible for delivering state-mandated curricula and preparing students for state-mandated graduation test requirements. Additionally, teachers also need to prepare their students for national standardized tests, such as SAT and ACT that are required for admission to colleges and universities.

Overall, high school education is expected to provide students with problem-solving and life-long learning skills that are required by employers and colleges. To help prepare students for colleges and careers, the Southern Regional Education Board (SREB) adopted 12 "Challenge to Lead Goals for Education". For example, one of these

goals states “All recent high school graduates have solid academic preparation and are ready for postsecondary education and a career” (2007, p. 1).

However, only a successful transition from middle school to high school can lay the foundations for students’ future endeavors. According to Kennelly and Monrad (2007), the transition from middle to high school is one of the most important events in students’ lives. Cauley and Jovanovich (2006) pointed out that school transitions do not always go smoothly and can cause anxiety in students as well as challenge their coping skills. Additionally, Hertzog (2006) stated “The manner in which students make the transition from middle school to high school is crucial because it is this transition that sets the tone for high school graduation” (p. 60). Herlihy (2007) pointed out that the 1st year in high school represents one of the largest leaks in students’ education. In agreement, Haney et al. (2004) presented data showing an increase in ninth-grade attrition in their report, *The Education Pipeline in the United States 1970 – 2000*. A growing number of students are not ready to move on to the next level and have to repeat their ninth-grade year. As a result, there are larger student populations in ninth grade. The authors reported low grades and high failure rates in ninth grade and they also provided data showing a decreasing high school graduation rate. Furthermore, a report from the National Center for Education Statistics (2007) showed a high school dropout rate of 9.3% in 2006 as well as projected decreasing freshmen graduation rates from 75.2% in 2005-06 to 74.8% in 2006-07 and 74.4% in 2007-08. Neild and Weiss (1999) also focused on ninth grade and found that ninth-grade students had an average grade of 71

out of 100 across all subject areas and that one third of ninth graders had an average of below 65 out of 100.

The major concern of authors who published research about transitioning from middle school to high school was how to ease this transition process, how to help students be successful in ninth grade, and how to prevent students from dropping out of high school (Akos & Galassi, 2004; Baker et al., 2005; Brigman et al., 2007; Butts & Cruzeiro, 2005; Caldwell, 2007; Campbell, 2001; Campbell & Jacobson, 2008; Cauley & Jovanovich, 2006; Case, 2006; Chapman & Sawyer, 2001; Copeland, 2006; Duncan, 2004; Herlihy et al., 2005; Kennelly & Monrad, 2007; Kerr & Legters, 2001; Lampert, 2005; Lan & Lanthier, 2003; MacKay, 2006; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Mizelle, 2005; Neild & Weiss, 1999; Pantleo, 1992; Peasant II, 2006; Potter, 2004; Reents, 2002; J. B. Smith, 1997; Thorne, 2001). Many of these authors underlined the essential role of ninth-grade initiatives for successful transitions and bridging the gap between middle and high school. For example, Lampert (2005) recommended ninth-grade transition programs to help students succeed in high school and stated that with access to such a program, “overall, the freshman failure rate had decreased from 37 percent in the first semester of the 2002-2003 school year to 23 percent in the first semester of 2004-2005” (p. 63).

Because a smooth and successful transition from middle to high school is crucial for students' high school career and beyond (Cauley & Jovanovich, 2006; Herlihy, 2007; Hertzog, 2006; Kennelly & Monrad, 2007), this research focuses on the transition from middle to high school and on the effect of ninth-grade transition programs. This study

contributes to social justice and social change by assisting ninth-grade students become self-motivated and self-directed learners in an exceedingly competitive world.

There will be a full review of the related literature in Section 2.

Problem Statement

The problem is that too many ninth graders receive low grades and are failing their 1st year in high school. According to the National Center of Education Statistics (2007), the average freshmen graduation rate from 2000-01 to 2003-04 for public schools was just over 74%, which means that approximately 25% of all students are failing their 1st year in high school. These students come from different socioeconomic environments and enter high school with a whole range of background knowledge as well as different levels of ability (Marzano, 2003). Many teenagers are also struggling with the psychological and developmental predicaments of adolescence (Cadwallader et al., 2003; Cauffman & Steinberg, 2000; Duncan, 2004; Engels et al., 2005; Foster & Sisk, 2004; Harvard Mental Health Letter, 2005; Herrman, 2005; Park & Wallace, 2004).

Even though the literature points to the success of transition programs to help ninth graders succeed in high school, many authors did not include sufficient data, such as attendance, GPAs, test results, and ninth-grade graduation rates, to support the impact of such programs (Baker et al., 2005; Campbell, 2001; Cauley & Jovanovich, 2006; Chapman & Sawyer, 2001; Dedmond, 2008; Dillon, 2008; Herlihy, 2007; Herlihy et al., 2005; Hertzog, 2006; Lampert, 2005; Pantleo, 1992; Reents, 2002). Other studies (Anderson, Jimerson, & Whipple, 2002, 2005; Haney et al, 2004; National Center for Education Statistics, 2007; Neild & Weiss, 1999) provided extensive data about major

problems and failure rates in ninth grade but did not investigate the impact of transition programs. Finally, a number of studies investigating the impact of transition programs on student achievement targeted only a very small number of students, such as students identified as at-risk, identified underachievers, or small groups of students specifically selected to conduct a study to test a pilot program (Caldwell, 2007; Connolly, 2001; Martin, 2004; Melton III, 2004; Thorne, 2001).

At the urban high school in this study, teachers, administrators, and counselors worked in collaboration to create a ninth-grade transition program, the Ninth Grade Academy [name changed], to help these students be successful in high school. This study evaluated the impact of the Ninth Grade Academy by comparing cumulative GPAs, number of cumulative credits earned, ninth-grade dropout rate, and data from a student satisfaction survey between ninth-grade students who participated in the Ninth Grade Academy and ninth graders who did not participate in the Ninth Grade Academy. This investigation is a contribution of this study to the current literature on the impact of ninth-grade transition programs. In addition, this study attempted to provide an extensive and solid data collection by targeting the widest range of abilities possible (approximately 1340 students) rather than restricting the evaluation of the Ninth Grade Academy to small numbers of participants, such as underachievers or students at-risk.

Purpose of This Study

The purpose of this quasi-experimental, quantitative study was to examine the impact of a ninth-grade high school transition program (independent variable). The impact was determined by comparing cumulative GPAs, the number of cumulative

credits earned, ninth-grade dropout rate, and data from a student satisfaction survey (dependent variables) of two different groups of ninth-grade students at the end of their 1st year in this high school. Using a posttest-only with nonequivalent control-group design, one group of 555 ninth graders (Class of 2012) participated in the Ninth Grade Academy transition program, during the 2008-09 school year. The other group of 530 students (Class of 2011) did not have any access to any type of transition program during their ninth-grade year 2007-08. GPAs, cumulative credits earned, data about ninth-grade dropout rates, and data from a student satisfaction survey (dependent variables) were collected during the second semester of the 2008-09 school year between March and May for both the control group and the experimental group. The data was used for comparison between the two groups of ninth-grade students, one group of Ninth Grade Academy participants (experimental group) and one group of nonparticipants (control group).

The goal of this study was to discover whether or not the Ninth Grade Academy had an impact on ninth-grade student outcomes. The expected result was that students who participated in the Ninth Grade Academy would have higher GPAs, a higher number of cumulative credits, and a lower ninth-grade dropout rate than students who did not participate in this transition program. In addition, it was expected Ninth Grade Academy participants were generally more satisfied with their ninth-grade experience than nonparticipants. These anticipated findings were also expected to concur with the current literature about the impact of transition programs to help ninth-grade students cope with the challenges and high academic demands in high school (Baker et al., 2005; Caldwell, 2007; Campbell, 2001; Case, 2006; Cauley & Jovanovich, 2006; Chapman & Sawyer,

2001; Connolly, 2001; Copeland, 2006; Herlihy et al., 2005; Lampert, 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002; J. B. Smith, 1997; T. J. Smith, 2007).

Nature of This Study

This quasi-experimental quantitative study investigated the impact of the Ninth Grade Academy transition program on cumulative GPAs and credits, ninth-grade dropout rates, and student satisfaction with their ninth-grade experience. The components of this transition program targeted the particular needs of ninth graders. For example, a special orientation before the beginning of the school year allowed new ninth-grade students to meet their teachers, to find out about extracurricular activities, to familiarize themselves with their new school, and to participate in sports and team-building activities to get to know one another. There was also a special ninth-grade class meeting to learn about dress code, expectations, and opportunities such as participation in student leadership organizations, sports, and other extracurricular activities. During the school year, a dedicated team of teachers and administrators instructed all ninth graders in the regular academic curriculum as well as in character building and study skills. For core curriculum classes, ninth graders were taught isolated in a separate wing of the school to improve reading and writing skills, to encourage participation in advanced courses, and to prepare them for state and national standards. Section 3 provides a more detailed description of the Ninth Grade Academy.

Figure 1 shows how this quasi-experimental, quantitative study used a posttest-only with nonequivalent control-group design to evaluate the impact of the Ninth Grade Academy transition program (independent variable). This design allowed the comparison of two groups of students after only one group received treatment (Creswell, 2003). The posttest compared cumulative GPAs, cumulative credits, ninth-grade dropout rate, and data from a student satisfaction survey (dependent variables) of the two groups. Section 3 provides a more detailed description of this research design. This description includes setting and sample, instrumentation and materials, and data analysis.

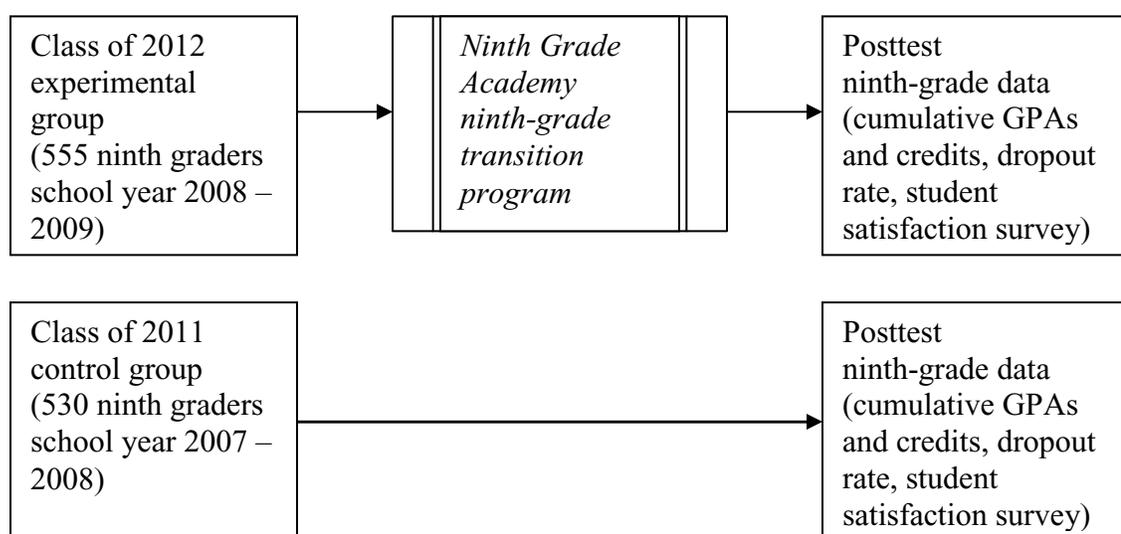


Figure 1. Quasi-experimental design using posttest only with nonequivalent control groups.

Research Questions and Hypotheses

Cumulative GPAs, cumulative credits earned, data about ninth-grade dropout rates, and data from a student satisfaction survey, were collected, recorded, and analyzed to answer the following questions:

Research questions

1. Is there a statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on academic performance as measured by GPA?

2. Is there a statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on cumulative credits earned?

3. Is there a statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on ninth-grade dropout rates?

Null Hypotheses

H₀₁: There is no significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on academic performance measured by GPA.

H_{A1}: There is a significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on academic performance measured by GPA.

H₀₂: There is no significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on cumulative credits earned.

H_{A2}: There is a significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on cumulative credits earned.

H₀₃: There is no significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on ninth-grade dropout rates.

H_{A3}: There is a significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on ninth-grade dropout rates.

4. Is there a statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on student satisfaction with their ninth-grade experience as measured on a satisfaction survey?
- H₀₄: There is no significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on student satisfaction with their ninth-grade experience as measured on a satisfaction survey.
- H_{A4}: There is a significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on student satisfaction with their ninth-grade experience as measured on a satisfaction survey.

Theoretical Framework

The purpose of this study was to investigate the impact of the Ninth Grade Academy transition program on student outcomes because ninth graders find it difficult to adjust to the demands in high school and they have low grades as well as high failure rates (Baker, Copley & Hughes, 2005; Butts & Cruzeiro, 2005; Campbell, 2001; Case, 2006; Chapman & Sawyer, 2001; Duncan, 2004; Haney et al., 2004; Herlihy, 2007; Kennelly & Monrad, 2007; Lampert, 2005; MacKay, 2006; Mizelle, 2005; J. S. Smith, 2006). To provide theoretical foundations for this study, I selected Hirschi's (1969) social bonding theory and the constructivist learning theory. This section provides fundamental details about each theory, explains how these theories are relevant in the literature, and describes how they are related to this study.

Hirschi's (1969) social bonding theory regarding student delinquency presents a theoretical foundation for middle to high school transition problems and also provides a link to the benefits of transition programs. This theory is based on individuals building

connections to society through a *bond*. According to the author, each bond consists of four elements (a) attachment, (b) commitment, (c) involvement, and (d) belief.

Attachment describes how far an individual is attached to others, cares about others, and is sensitive to the opinions of others. Commitment is the ability to consider the consequences of one's actions. This includes calculating any risk of losing investments made in conventional behavior such as friendships, education, careers, and reputation. Involvement refers to the level of an individual's conventional activities, for example working hours, social obligations, and leisure time interests. Finally, belief stands for an individual's moral obligation to respect the rules and laws of society. Hirschi's (1969) theory suggests that "In general, the more closely a person is tied to conventional society in any of these ways, the more closely he is likely to be tied in the other ways" (p. 27). As a result, the strength of each bonding element influences the overall strength of an individual's bond to society. For example, ninth graders' success in high school may depend on the strength of attachment to their families and peers, their ability to consider the consequences of their actions such as behavior and the selection of their peers, their involvement in academics and extracurricular activities, as well as their belief system.

Hirschi's (1969) social bonding theory or also referred to as social control theory has often been used to provide the theoretical foundations for studies of deviance and delinquency such as substance abuse, violent behavior, and criminal victimization (Bauman & Foshee, 1992; Boeri, Elifson, & Sterk, 2006; Brody, Kogan, Luo, & Murry, 2005; Chang, Longshore, & Messina, 2005; Conger, Conger, Lorenz, & Melby, 1993; Fisher, Schreck, & Stewart, 2006; Hoffman, Sussman, Unger, & Valente, 2006; Hollist &

McBroom, 2006; Kaplan, 2003; Vowell, 2007). Evaluating research about social control theory, Kempf (1993) stated that control theory has gained great popularity among researchers and that it has become “perhaps the most heralded theory of delinquency” (p. 167). Even though the author suggested further growth and development of the social control theory, he also pointed out its potential importance regarding relevance for policy and capability to cause program change. Wang (2006) concurred with previous studies about the importance of social bonding as predictor of juvenile delinquency and concluded in addition that commitment to school has the greatest effect on substance abuse such as tobacco, drugs, and alcohol. As a result, if new ninth graders are already strongly committed to school, they may be more likely to make a smooth transition to high school. Subsequently, they may be less likely to receive failing grades, to drop out of school, and to fall victim to substance abuse. This study investigated whether the Ninth Grade Academy contributed to ninth-grade students’ development of stronger bonds with school and examined cumulative GPAs and credits, ninth-grade dropout rate, and satisfaction with their ninth-grade experience.

Several authors included social bonding theory as theoretical framework for research linked to issues in education, for example high school transitions (Chapman & Sawyer, 2001), school achievement and criminality (Ring & Stevansson, 2007), delinquency and high school dropouts (Drennon-Gala, 1995), and student relationships to school (Libbey, 2004). In his study comparing the impact of strain theory and social bonding theory on delinquency, Özbay (2008) concluded that social bonding theory plays a more important role than strain theory. The author found out that “Family supervision,

attachment to teachers and friends, school commitment, and belief almost *fully* mediate the impacts of income, educational and monetary strains, and perceived blocked opportunity to total delinquency” (p. 10). Comparing existing research about relationships to school on the basis of attachment, bonding, connectedness, and engagement, Libbey (2004) concluded that factors such as students’ sense of belonging, the extent to which students like or dislike school, teacher care and support, supportive friends and peers, engagement in learning, fair and effective discipline procedures, as well as participation in extracurricular activities have a great influence on student achievement. These findings are related to this study because caring and committed teachers, engaging students in learning, fair and effective discipline procedures, as well as encouraging students to participate in extracurricular activities are components of the Ninth Grade Academy transition program. The goal of this program and its components is to help students make a successful adjustment to high school. Finally, Andriot (2005) concurred with Libbey (2004) and presented findings that “Hirschi’s social control theory predicts that students who have bonded to society through involvement, attachment, commitment, and belief will be less delinquent than those who have not bonded” (p. 7).

According to Hirschi (1969), adolescents have already formed a bond with society, which is expressed in three major relationships: (a) the relationship with their parents, (b) the relationship with school, and (c) the relationship with their peers. These connections to society may be weak or strong. When ninth graders make the transition from middle to high school, they may already be detached from their work at school, may not be interested in extracurricular activities with their peers, and may face difficulties

with their families at home. These students may already be at risk of failure when entering ninth grade. This study examined whether the Ninth Grade Academy was an effective intervention strategy to help these students succeed. Furthermore both Kerr and Legters (2001) and Cauley and Jovanovich (2006) explained that students have to adjust to different schools, changing class environments, high academic demands, new peers, and new teachers. New ninth graders are used to a protective and nurturing climate in middle school and need to adapt quickly to a more self-motivated and responsibility oriented environment in high school. Baker et al. (2005) added the difficult physical, emotional, and psychological transformations of adolescence. Finally, Reents (2002) summarized, “Entering ninth grade can be one of the most emotionally difficult, most academically challenging times in children’s lives” (p. 14). Therefore, ninth-grade transition programs such as the Ninth Grade Academy in this study may help students not only adjust to the social and academic demands in high school but also support them with conventional behavioral patterns teaching students to form a strong and successful bond with school and their teachers, with supportive peers, and with society in general.

The theoretical framework of transitioning can also be linked to the constructivist learning theory, a theory that has its origin in the works of American philosopher, John Dewey, and in the research of Swiss developmental psychologist, Jean Piaget. A transition can be described as a process of change where students move from one educational level to the next. In this study, students made the transition from middle school to high school. Dewey (1934/1964) also viewed education as a continuous process, constant development, and personal growth. He underlined the significance of

teaching in a human context and setting and pointed out the importance of the whole process rather than just results. Ninth-grade transition programs such as the Ninth Grade Academy also concentrate on the process of school transitions because they provide long-term support to students throughout their 1st year in high school. Additionally, in his philosophy of experience, Dewey (1938/1997) stated that successful education is rooted in the real life experiences of individuals and identified a strong “organic connection between education and personal experience” (p. 25). However, since experiences can have both positive and negative effects, the author also emphasized the importance of quality experiences that are rewarding and productive and that lay the foundation for subsequent positive educational encounters. Dewey’s theory provides theoretical foundations for this study because it is linked to its problem statement about ninth graders having adjustment difficulties in high school and failing their classes. One of the reasons that ninth graders have these problems may be their different life experiences when entering high school that result in different background knowledge as well as positive or negative attitudes toward school.

Piaget (1954/1986) concentrated on the psychological aspect of learning and determined that there are six progressive stages in the cognitive development process from infancy to adulthood. The researcher also focused on the importance of experience and stated that through experience and deduction, a child “proceeds from a sort of initial practical solipsism to the construction of a universe which includes himself as an element” (Piaget, 1954/1986, p. 108). Piaget and Inhelder (1966/1969) discussed the mental development of a child as several reconstructed stages, each time on a new and

higher level. This emphasis on learning and development through experience concurs with Dewey (1938/1997) and is also linked to this study because when ninth graders enter high school, they all have different experiences with school and with learning. Ninth-grade transition programs may help bridge any gaps regarding knowledge and skills as well as provide positive learning experiences for all students. As a result, transition programs such as the Ninth Grade Academy in this study should have a positive impact on student outcomes such as achievement, dropout rates, and student satisfaction.

Bruner (1960/1994) also viewed education as an active process where the learner constructs new knowledge based on past experiences using cognitive structures. The role of the instructor is to provide information appropriate for the learner's developmental level. High school teachers need to understand that their ninth graders have different past experiences and they may also be at different developmental levels. Furthermore, Bruner advocated producing and presenting curricula using a spiral method to allow the learner to continuously build upon existing information and continuously extend their knowledge base. Additionally, Bruner (1966) described four elements of a theory of instruction, three of which are the appropriate pace, sequence, and structure of the material to be learned. According to the author, the very first element of successful instruction consists of previous experiences of the learner including attitudes toward learning and existing relationships with people and things. Consequently, it appears that there may be a link to Hirschi's (1969) social bonding theory that also emphasizes the importance of relationships for the learning process. When creating effective ninth-grade transition programs, educators should consider Bruner's (1966) recommendations about appropriate

pace, sequence, and structure of materials for ninth-grade curricula as well as take into consideration the variety of previous learning experiences of new ninth graders. For example, the Ninth Grade Academy examined in this study incorporated a Freshmen Focus Class where students were grouped into three different ability levels to learn about problem-solving skills and general study skills according to their individual needs.

Modern constructivists Lambert et al. (2001) also explained that the learner constructs his or her own knowledge from previous experiences, personal values, and beliefs. Based on the ideas of constructivist learning, Marzano (2004) pointed out the importance of students' background knowledge: "What students already know about the content is one of the strongest indicators of how well they will learn new information relative to the content" (p. 1). Knowledge derives from personal experiences in external cultural environments. Students come from different backgrounds and bring different experiences at different levels to the classroom. These differences may be particularly severe for ninth graders who transition from different middle schools to a completely new environment in high school as described in this study.

Howard Gardner (1999) used the principles of the constructivist learning theory for his theory of multiple intelligences. Moreover, according to Silver, Strong, and Perrini (2000) Carl Jung also based his theory of learning styles on constructivism. As a result, ninth graders do not only have different background knowledge, they also have different learning styles and come with a whole variety of multiple intelligences. Finally, Brown and Wiggins (2004) discussed the concept of understanding by design and essential questions with the understanding that students construct knowledge from individual

experiences. The understanding of learning and education as a continuous process of change and transition as well as the construction of knowledge based on personal experiences may influence how educators help students ease the transition process from middle to high school and develop successful transition programs. When designing and implementing curricula or creating effective transition programs, teachers need to recognize students' individual experiences, different levels of achievement, and different background knowledge. This study examined the impact of the Ninth Grade Academy on student outcomes which may be linked to the question whether or not this transition program adhered to the principles of constructivism such as different background knowledge and life experiences.

Last but not least, Vygotsky (1978) discussed the relationship between learning and development stating that learning steers development and that both complement each other forming a complete and inseparable unit. Vygotsky's theory is called *the zone of proximal development*. This theory views learning as a social activity and points out the significance of social interaction in cognitive development.

Every function in the child's cultural development appears twice: first on the social level, and later, on the individual level: first, between people (interpsychological) and then inside the child (intrapsychological)...All the higher functions originate as actual relationships between individuals. (Vygotsky, 1978, p. 57)

This social interaction may also be linked to Jung's learning styles because some students prefer learning in pairs and collaborative groups. By encouraging ninth graders to participate in extracurricular activities, the development and refinement of their social skills may carry over into the classroom and may also have a positive effect on their

learning. Furthermore, Vygotsky (1934/2002) discussed the relationship between thought and spoken language as a living process, constant development, and evolution. Children use word and speech to communicate with other individuals thus creating social links and connecting to their environment. Additionally, speech is a key instrument for the learning process and the author advocated that humans learn best together with other human beings. The understanding of learning as a social activity using speech as an invaluable tool for communication may influence how educators help students adjust to the academic and social demands in high school and develop successful transition programs. For example, this study investigated some social interaction in form of extracurricular involvement as part of a survey.

Finally, the theoretical foundations of Hirschi's (1969) social bonding theory and the constructivist learning theory are linked to this study because these theories provide possible reasons why ninth graders find it difficult to adjust to high school and why they are failing their classes. Hirschi suggested that the strength of students' bonds with family, school, and society may affect student achievement. Wang (2006) concurred and specifically referred to the importance of students' existing bond with school at the time of the transition to high school. If students are already committed to learning and school, they are less likely to become delinquent later on. Additionally, the constructivist learning theory described the construction of knowledge through personal experiences, which may explain different background knowledge and different levels of skills of new ninth graders. Ninth-grade transition programs such as the Ninth Grade Academy may help ninth graders form stronger bonds with school as well as bridge gaps between

knowledge, skills, and learning. Stronger bonds with school and closed learning gaps should result in improved student achievement. Therefore, this study is linked to this particular theoretical framework because it investigated the impact of the Ninth Grade Academy transition program on student outcomes such as cumulative GPAs and credits, ninth-grade dropout rates, and student satisfaction.

Definitions

Advancement via individual determination (AVID): According to the AVID website (2006), AVID is a program targeting students in the academic middle to prepare them for postsecondary college education. AVID was developed by middle school and high school teachers in collaboration with college professors and focuses on higher-level thinking skills, academic rigor, bringing out the best in students, and closing the achievement gap. AVID is a nationwide and international program including more than 3,500 schools in 45 states and in 15 countries.

Criterion-referenced competency tests (CRCT): According to the Georgia Department of Education website (2005 – 2008), the CRCT measure students' academic skills and knowledge in reading, English / language arts, mathematics, science, and social studies as laid out in the Georgia Performance Standards (GPS) to identify the strengths and weaknesses of individual students.

Dropouts: The Georgia Department of Education (2005 – 2008) defines dropouts as students leaving school without graduating or re-enrolling in another school for the following reasons: (a) marriage, (b) expulsion, (c) financial hardship and / or seeking employment, (d) incarceration under jurisdiction of juvenile or Criminal Justice

Authority, (e) low grades or school failure, (f) military service, (g) adult education and / or post-secondary education, (h) pregnancy and / or parental responsibilities, (i) removal as a result of lack of attendance, (j) serious illness and / or accident, and (k) unknown reasons.

Grade point average (GPA): According to this school district's policy, the Grade Point Average (GPA) is a scale of four numerical grades to calculate students' grades and assess their academic achievement. The numerical grade of one corresponds to the letter grade D, which is below average. The numerical grade of two corresponds to the letter grade C, which is average. The numerical grade of three corresponds to the letter grade B, which is above average while the numerical grade of four is excellent and equals the letter grade A. Student grades are calculated by dividing the sum of all grade points earned plus quality points from Advanced Placement (AP) and Honors classes by the number of attempted credits. Additionally, the researcher will use the numerical grade of zero, which corresponds to failing all classes and zero cumulative credits earned. Any numerical grade below one corresponds to the letter F for failing.

Transition programs: Transition programs are activities, courses, and curricula that support students who are moving from middle school to high school. Transition programs help students cope with the demands, challenges, and expectations in high school and assist with the adjustment process. There are some transition programs that are aimed at eighth graders in middle school who are about to move on to ninth grade in high school. Other transition programs target ninth graders who have just started high school (Akos & Galassi, 2004; Baker et al., 2005; Brigman et al., 2007; Butts &

Cruzeiro, 2005; Caldwell, 2007; Campbell & Jacobson, 2008; Case, 2006; Chapman & Sawyer, 2001; Copeland, 2006; Duncan, 2004; Herlihy et al., 2005; Kerr & Legters, 2001; Lampert, 2005; MacKay, 2006; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Mizelle, 2005; Neild & Weiss, 1999; Pantleo, 1992; Peasant II, 2006; Potter, 2004; Reents, 2002; J. B. Smith, 1997; Thorne, 2001).

Assumptions

This study made the following assumptions:

1. Students will respond truthfully and to the best of their knowledge when asked about their ninth-grade experience in the student satisfaction survey.
2. The findings of this study may only be subject to generalization when applied to schools of a similar demographic setting to this particular high school.
3. The findings of this study may only be subject to generalization under the condition that the parameters of the transition program are similar to the Ninth Grade Academy.
4. Although as the researcher of this study, I was also a teacher at this particular high school as well as a member of the Ninth Grade Academy development team and a member of the subcommittee data team, I took great care and made every effort not to allow personal bias and subjectivity into this study.

Scope and Delimitations

The results of this study are limited to two different ninth-grade classes at this particular urban high school .This study was confined to ninth-grade students of the school years 2007-08 (Class of 2001) who did not participate in the Ninth Grade

Academy and ninth graders of the school year 2008-09 (Class of 2012) who participated in the Ninth Grade Academy during their 1st year at this high school. The Ninth Grade Academy was implemented in the 2008-09 school year. As a result, longitudinal data about student performance and dropout rates of Ninth Grade Academy participants was not available.

Limitations

The limitations of this study are as follows:

1. During their transition from middle school to high school, all students experience a variety of successes, disappointments, and failures ranging from great adjustment difficulties, not making it on a particular sports team and poor academic performance to successful adjustment, active involvement in sports and extracurricular activities, as well as high academic achievement.
2. Background knowledge, previous experiences and relationships, as well as individual circumstances are important factors in the adjustment process and influence students' success rates in high school.
3. Collaboration between all stakeholders (students, parents and families, teachers, administrators, and counselors) is of the utmost importance for a successful transition from middle school to high school.
4. The results of this study were limited by parental permission to participate in this study including completion and return or failure to complete and return parental consent forms.

5. The data of the student satisfaction survey was limited by attendance on the days the surveys were conducted as well as by individual student's completion and return or failure to complete and return this survey.
6. GPA data may be subjective as a result of different teacher expectations and grading procedures. However, overall the GPA data should be considered valid and reliable due to the relatively large sample size of this study.

Significance of This Study

Successful transition from middle to high school is important for students, parents, educators, and the community. Successful adjustment to the demands, challenges, and expectations of high school decreases dropout rates and may lay the foundations for students' further education and future careers. Therefore, this study may be of great interest to several stakeholders. For example, teachers, students, and their families of this high school may be especially interested in the results of this study because they all have a personal interest, a professional interest, or even both in their students' success. This study examined the impact of the Ninth Grade Academy on student achievement and student satisfaction. Subsequently, teachers, students, and families need to know whether or not this transition program is effective and what may have to be done for improvement. Additionally, educators in the feeder middle schools of this particular high school may be interested in this study because their eighth graders will be the new ninth graders. Middle school teachers may want to know about the effectiveness of the Ninth Grade Academy and its components and what they can do to adequately prepare their students for the demands in high school.

In Addition, educators in middle and in high schools in general may be interested in this study because they may be facing similar problems in their school districts. These educators may value this study as an example of what kind of intervention may be effective as well as an important contribution to the current literature. Likewise, higher education professionals and future employers may take an interest in this study because when high school graduates go to college or enter the workplace, they also may encounter transition problems. Colleges and universities may look at the concept of ninth-grade transition programs to design support structures for their incoming freshmen.

Finally, this study is significant for social change because its findings may assist ninth-grade students become self-motivated and self-directed learners in an exceedingly competitive world. Effective ninth-grade transition programs should lay the foundations for all students to learn the necessary skills to be innovative problem solvers and successful life-long learners. These skills are required by employers to be economical and to survive in the extremely competitive global economy of the 21st century.

This study may also contribute to the transformation of high schools to learning communities of the 21st century because it examined a ninth-grade transition program that targeted the whole ninth-grade population regardless of their abilities and socioeconomic background. These learning communities should cater to diverse student populations and provide a skill-based and well rounded high school education for students from all different backgrounds. As a result, graduates from true learning communities of the 21st century may themselves advocate social change and equal education for all, and thus make a difference in their communities.

Contribution to Knowledge and Literature in the Field

Researchers who published studies about the transition from middle school to high school expressed their concerns about how to ease this transitioning process, how to help students cope on academic and social levels, and how to prevent students from dropping out (Akos & Galassi, 2004; Baker et al., 2005; Brigman et al., 2007; Butts & Cruzeiro, 2005; Caldwell, 2007; Campbell, 2001; Campbell & Jacobson, 2008; Cauley & Jovanovich, 2006; Case, 2006; Chapman & Sawyer, 2001; Copeland, 2006; Duncan, 2004; Herlihy et al., 2005; Kennelly & Monrad, 2007; Kerr & Legters, 2001; Lampert, 2005; Lan & Lanthier, 2003; MacKay, 2006; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Mizelle, 2005; Neild & Weiss, 1999; Pantleo, 1992; Peasant II, 2006; Potter, 2004; Reents, 2002; J. B. Smith, 1997; Thorne, 2001). In a study of their Chicago high school, Lampert (2005) found that a substantial number of freshmen were unable to adjust to the demands of high school and students were failing their classes. As a result of such wide-spread ninth-grade failure rates, researchers pointed out the importance of transition programs (Baker et al., 2005; Caldwell, 2007; Case, 2006; Copeland, 2006; Herlihy et al., 2005; Lampert, 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002).

This study contributes to knowledge and the literature in this field because it examined the impact of the Ninth Grade Academy transition program on student achievement and on student satisfaction with their ninth-grade experience. Educators at this high school implemented the Ninth Grade Academy to help students with the transition from middle to high school, to support students' academic and social needs,

and to reduce ninth-grade failure rates. The reasons for the implementation of the Ninth Grade Academy were the same as the concerns expressed by researchers in this field regarding problems with the transition to high school and poor academic performance of ninth graders.

Additionally, this study contributes to the body of several existing evaluations of ninth-grade transition programs (Baker et al., 2005; Caldwell, 2007; Case, 2006; Copeland, 2006; Herlihy et al., 2005; Lampert, 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002) while at the same time providing new insights. For example, this study targeted a very large student population and in comparison to other studies included a relatively large sample size. Furthermore, in addition to investigating the impact of the Ninth Grade Academy on cumulative GPAs and credits like several other studies did, this study also examined ninth-grade dropout rates because the current literature does not seem to have any information about dropout rates in ninth grade. Finally, although some studies examined student satisfaction, this study provides a unique combination of investigating cumulative GPAs, cumulative credits, ninth-grade dropout rates, as well as student satisfaction with their ninth-grade experience.

Contribution to Practice

One of the main reasons for this study was to provide important information about the effect of the Ninth Grade Academy transition program on cumulative GPAs, cumulative credits, ninth-grade dropout rates, and student satisfaction with ninth grade. This information about the impact of transition programs may be particularly useful for

administrators and educators who are considering the implementation of a high school transition program at their school. Administrators and educators may be able to gain new insights from this study and its literature review about the effects of transition programs on students' cumulative GPAs and credits, ninth-grade dropout rate, and satisfaction with their ninth-grade experience. As a result, this study may contribute to practice because ninth-grade transition programs with curricula and courses specifically designed to support ninth-grade students, may become good practice in many high schools.

Contribution to Policy

There is a relationship between policy and practice. Sometimes, good practice is the result of a well-designed and consistently implemented policy. Sometimes, an effective policy is the result of consistently implemented good practice (Allen et al., 2004; Clawson et al., 2004; Dana & Yendol-Silva, 2003). This study may contribute to policy as a result of its possible contribution to practice. For example, if ninth-grade transition programs such as the Ninth Grade Academy become consistently implemented good practice in many high schools, school-wide and district-wide policies about the effective implementation of ninth-grade transition programs may be written.

In addition, this study may contribute to policy because high schools and school districts may either review existing policies in order to support their students with the transition to high school or write and implement new policies. Educators and school district officials may find this study about the impact of the Ninth Grade Academy on student achievement and its literature review about the transition to high school a valuable resource for writing their own new policies.

Contribution to Social Change

The vision of Walden University (2007) emphasizes the importance of social change. Positive social change can occur on an individual basis, within families, communities, and organizations, as well as on national and global levels and it will always lead to the advancement of human and social conditions. This study examined the impact of the Ninth Grade Academy transition program on student achievement. The purpose of the Ninth Grade Academy was to address ninth-grade transition problems, to help ninth graders adjust to the challenges in high school, and to provide the foundations for students' academic success. The results and recommendations of this study are significant for positive social change because successful transition from middle to high school may be important for students, parents, educators, and the community..

For example, according to the SREB report *Opening Doors to the Future: Preparing Low-achieving Middle Grade Students to Succeed in High School* (2002), "The passage of students from the middle grades to high school is the most difficult transition point in education" (p. 24). Cauley and Jovanovich (2006) explained "Typically the move to a new school includes changes in school climate and size, peer relationships, academic expectations, and degree of departmentalization among peers" (p. 15). This study is significant because successful adjustment to the demands in high school is the very first essential step to reduce ninth-grade failure rates, to decrease dropout rates, and subsequently to prepare students for their future careers. In addition, this study may be important for students, parents, educators, and the community because these stakeholders very likely have great interest in students' success.

For example, parents, students, and educators should all be interested in students' smooth transition to high school as well as their academic progress. Neither parents nor educators want to see their students fail ninth grade and possibly drop out of high school. Furthermore, communities may be interested in schools that provide a well rounded education for all students because current high school students are the future workforce and employers are looking for well educated workers with transferable sets of skills.

Moreover, this study may be important for future employers because its findings may contribute to the development of successful ninth-grade transition programs as a solid foundation of high school education. According to issue papers *The Economic Imperative for Improving Education*, High School Leadership Summit (2004), "The well being of the nation increasingly depends upon U.S. high schools rising to the challenge of preparing all students for a new economic reality" (p. 1). In a global environment with a free world-wide exchange of employment, financial capital, technology, and information, the focus is on education, training, and motivation. Additionally, high tech and computer sciences have increased productivity to such an extent that fewer people are needed and that most routine procedures are automated. Employers are looking for critical thinking skills, people skills, flexibility, the ability to multitask, and problem solving skills. High school education is of the utmost importance because the knowledge and the skills of its workforce will shape America's future and will determine America's well being and economic standing in the 21st century.

The transition to ninth grade and the adjustment to the demands in high school are the first step of a successful high school education. However, ninth graders often find it

difficult to adjust to the challenges in high school and many are failing their classes. This study addressed the problems with ninth grade and investigated the impact of the Ninth Grade Academy transition program on student outcomes. Effective ninth-grade transition programs may lead to students' successful high school careers. As a result, future employers may show an interest in this study because its findings and recommendations may contribute to U.S. high school education being able to prepare students with the necessary skills to cope with the realities of the 21st century economy. Gardner and others (1983) of The National Commission on Excellence stated in their report *A Nation at Risk* that

All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgment needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interests but also the progress of society itself. (p. 4)

However, according to issue papers entitled *High School Accountability and Assessment Systems* of the High School Leadership Summit (2004), U.S. high school students have scored consistently lower than students in other countries on international core subject assessments such as math and sciences. "Even generally high performing American high schools have pockets of mediocrity where some students, for a variety of reasons, are not gaining the academic and workforce readiness skills they will need for future success" (*Turning Around Low-Performing High Schools*, High School Leadership Summit, 2004, p. 1). American high schools seem to have reached a crisis point when it comes to college- and career-readiness of their students.

However, as maintained by current research and educational literature, successful middle to high school transition programs play a critical role in reversing this trend (Baker et al., 2005; Caldwell, 2007; Case, 2006; Copeland, 2006; Herlihy et al., 2005; Lampert, 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002). This study is significant for social change because its investigation of the Ninth Grade Academy contributes to the current literature about the importance of ninth-grade transition programs in the educational process. Because ninth-grade transition programs may provide a basic foundation for future educational success in high school and beyond, stakeholders may show great interest in the results and recommendations of this study. Additionally, the present ninth-grade students will be the future workforce entrusted with the challenging task to maintain the well being of the United States of America and to further strengthen America's leadership role when it comes to scientific and technological progress as well as freedom, justice, and social change.

Conclusion and Overview

Because ninth graders find it difficult to adjust to the demands in high school, the purpose of this study was to assess the impact of the Ninth Grade Academy transition program. This study compared cumulative GPAs and credits, ninth-grade dropout rates, and a student satisfaction survey of two different ninth-grade classes at an urban high school. The experimental group and Class of 2012 fully participated in the Ninth Grade Academy and the control group and Class of 2011 did not participate in any transition program in their ninth-grade year.

Hirschi's (1969) social bonding theory and the constructivist learning theory provided theoretical foundations for this study. Social bonding theory states that if students have strong bonds with school, their family and peers, and with society, they will be less likely become delinquent and drop out of school. The constructivist theory states that learners construct new knowledge based on different background knowledge, different social conditions, and different life experiences.

Finally, this study is significant because it contributes to the current literature about ninth-grade transition programs, about easing the transition process, and helping ninth graders adjust to high school expectations. The results of this study may also contribute to social change and the transformation of high schools to learning communities of the 21st century because ninth-grade transition programs may lay the necessary foundation for a successful high school education.

Section 2 of this study discusses related literature about the transition from middle to high school. This review consists of four main areas and a summary:

1. General ninth-grade transitioning problems such as high failure rates, high levels of grade retention, and problems of adolescence, as well as a discussion about students' attitudes and perceptions about their transition to high school.
2. Structural transition problems such as the relationship between school transitions and achievement loss and the effect of multiple school transitions.
3. Intervention strategies to ease the transition to high school such as a review of the role of middle schools, the need for more collaboration between middle and high

schools and several teaching and learning strategies, and an extensive review and critical analysis of different types of transition programs.

4. Methods and methodologies used in current research to determine the impact of transition programs and ninth-grade intervention strategies.

Section 3 is a detailed account of the methodology of this quasi-experimental quantitative study that first portrays the posttest-only with nonequivalent control-group research design, then provides a comprehensive description of the two different ninth-grade populations, and after that explains the sampling procedures for the two groups of ninth-grade students. This section also includes a description of the treatment in this study, the Ninth Grade Academy transition program and its components. The next part of this section gives details about the survey instrument, the establishment of survey reliability and validity, and about the dependant variables cumulative GPAs and credits and ninth-grade dropout rate. Section 3 finishes with a description of the researcher's role in this study and how the data were collected and analyzed.

Section 4 begins with a description of the procedures to obtain parental consent and how parental consent influenced the final sample size of this study. The discussion of survey reliability and validity continues in this section with a report of the establishment of Cronbach's alpha. The major part of this section contains a thorough account of the data collection procedures and extensive data analyses of four research questions and nine survey items as part of research question 4. The final part of this section presents a discussion of findings and a conclusion. The findings of this study suggest that the Ninth Grade Academy transition program did not have any significant impact on students'

cumulative credits, ninth-grade dropout rates, and satisfaction with ninth grade. The academy had a negative treatment effect on cumulative GPAs. However, the introduction of a new math curriculum for the experimental group yet not the control group may have been responsible for this negative outcome.

Section 5 begins with a summary of findings stating that the Ninth Grade Academy transition program did not have the expected treatment effect as well as a summary of the findings of each research question in relationship to the current literature. This section also contains a discussion of the relationship between the results of this study and the theoretical framework, Hirschi's (1969) social bonding theory and the constructivist learning theory. The discussion about implications for social change provides details about how the findings of this study advocate and are important for positive social change. Section 5 concludes with recommendations for action such as an investigation of the impact of the new math curriculum and recommendations for further study such as the use of longitudinal data.

SECTION 2: LITERATURE REVIEW

Introduction

Successful transition from middle to high school is important for students, parents, educators, and the community. Research established that successful adjustment to the demands, challenges, and expectations of high school decreases dropout rates and helps prepare students for their future careers (Abbott et al., 2000; Anderson, Jimerson & Whipple, 2002, 2005; Haney et al., 2004; Herlihy, 2007; Herlihy et al., 2005; Neild & Weiss, 1999; Reents, 2002; Richmond & Williams, 2007; T. J. Smith, 2007).

Furthermore, Allensworth and Easton (2005) stated that “The first year of high school is a critical transition period for students. Those who succeed in their first year are more likely to continue to do well in the following years and eventually graduate” (p. 1).

Because of the fact that the transition from middle to high school involves a variety of highly complex problems, many researchers investigated this topic from a wide range of perspectives. This literature review consists of four main areas and a summary:

1. General problems with ninth grade such as ninth-grade failure rates, grade retention, predicaments of adolescence, and students’ attitudes and perceptions about the transition from middle school to high school.
2. Transition problems related to the structure of school districts such as achievement loss associated with transitions, the effect of multiple transitions on dropout rates, the effect of transition grade level on dropout rates, and the general effect of middle to high school feeder patterns.

3. Ninth-grade transition help, transition programs, and intervention strategies.

The role of middle schools, the need for collaboration between middle and high schools, and teaching and learning strategies will be discussed.

Furthermore, there is an extensive review and critical analysis of the different types of transition programs.

4. Methods and methodologies of related research

For the data collection of this literature review, I used the following databases:

Academic Search Premier, Education Research Complete, ERIC, ProQuest, PsycARTICLES, PsycINFO, SocINDEX, and Teacher Reference Center. I used the following key words to search for relevant material: middle to high school transition, middle school transition, high school transition, transition problems, transition programs, ninth grade, ninth grade problems, and ninth grade failure. For every search, I scanned the titles of all search results with a publication date up to 4 years old, approximately 200-250 titles. When a title appeared to be relevant for this literature review, I first read the abstract of the publication as well as full text availability. Next, I scanned the paper's titles, subtitles, and summaries and saved all relevant material in a file on my computer. Finally, using the same key words, I also conducted a brief Internet search with Google and found a few valuable educational websites where I was able to access several relevant publications free of charge.

During this search and data collection, several themes and subcategories emerged. I arranged my computer files accordingly and organized all publications into three main topics: problems with ninth grade, structural transition problems, and ninth-grade

transition help. Within these main areas, I found several subcategories that prompted me to conduct new searches. For example, for problems with ninth grade, I used the following key words to find more relevant material for specific problems: ninth grade and risk factors, grade retention, and adolescence. For structural transition problems I used the key words achievement loss and feeder patterns. For ninth-grade transition help I used the following key words: middle school collaboration, high school collaboration, teacher collaboration, middle school, middle school problems, teaching strategies, and learning strategies. As before, I read the titles of all publications up to 4 years old or within the first 100-150 results. Several searches only produced about 100 results but they included a few highly relevant publications that were older than 5 years. I saved appropriate material in categories and subcategories and continued to organize the themes. During this organization process, I changed my labeling procedures of the publications and saved all files under the authors' name followed by an abbreviated title of the article instead of just using the title of the paper. Retrospectively, I also should have added the year of publication behind the author's name.

Finally, I began the writing process using the themes and subcategories as an outline for the literature review. During this process, I continued to study the publications and selected the articles according to topic relevance, relationship to this study, and correlation with each other. Out of approximately 140 publications that I saved from my data search and categorized into themes and subcategories, I used 118 papers for this literature review. I described major themes, interpreted, compared and analyzed relationships, and discussed strengths and limitations. As a final part, I also compared the

methods used in the publications of the literature review with the methods and methodologies of this study.

The Trouble With Ninth Grade

Researchers recognized the uniqueness of ninth-grade students and that there is a problem with ninth grade (Allensworth & Easton, 2005; Baker et al., 2005; Cadwallader et al., 2003; Caldwell, 2007; Campbell, 2001; Case, 2006; Cauley & Jovanovich, 2006; Copeland, 2006; Dedmond, 2008; Duncan, 2004; Farley & Neild, 2008; Herlihy, 2007; Herlihy et al., 2005; Lampert, 2005; Kennelly & Monrad, 2007; Kerr & Legters, 2001; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002, Richmond & Williams, 2007; T. J. Smith, 2007). For example, many researchers described the transition to ninth grade in high school as one of the most challenging, one of the most troubled, and one of the most important experiences in students' lives (Allensworth & Easton, 2005; Copeland, 2006; Farley & Neild, 2008; Herlihy, 2007; Kennelly & Monrad, 2007; Martin, 2004; Pedante, 2006; Reents, 2002; T. J. Smith, 2007). Moreover, Copeland (2006), Herlihy (2007), Herlihy et al. (2005), and T. J. Smith (2007) mentioned that the difficulties related to the transition period to ninth grade in high school can also be linked to low achievement, low on-time graduation rates, as well as students dropping out of high school.

The current literature agrees that students who do well in their 1st year in high school are more likely to be successful throughout their high school career and graduate (Allensworth & Easton, 2005; Richmond & Williams, 2007). However, researchers also expressed their concern about high failure rates in ninth grade (Allensworth & Easton,

2005; Cauley & Jovanovich, 2006; Dedmond, 2008; T. J. Smith, 2007) and Richmond and Williams (2007) stated that more students fail their 1st year in high school than they fail any other grade level. In addition, Dedmond (2008) explained that students' graduation plans as well as their plans for postsecondary education are often related to students' attitudes and experiences in eighth and in ninth grade. The author also pointed to a current trend that only 25% of high school graduates will complete the necessary postgraduate education to be successful in a competitive global economy.

Overall, researchers were concerned because ninth-grade students are finding it difficult to cope with the academic demands and social expectations in high school. For example, Pantleo (1992) reported that 48% of ninth graders failed one or more classes in the 1989-90 school year and Campbell (2001) mentioned that educators are alarmed because new ninth graders do not have the necessary skills to succeed in high school. Reents (2002) described the transition to high school as one of the most difficult periods of time in students' lives because of emotional and academic challenges. Researchers also pointed out problems with self-esteem, problems with adolescence, developmental factors, fewer support structures, and change of environment (Cauley & Jovanovich, 2006; Kerr & Legters, 2001; Reents, 2002). Additionally, all ninth-grade students come from diverse socioeconomic settings and enter high school with different background knowledge, abilities, and perceptions. For example, Campbell (2001) mentioned that upon entering ninth grade, several students are already a few years lacking behind their classmates and do not possess the necessary skills to be able to succeed. As a result, ninth-grade students are in danger of failing their 1st year in high school.

In their report, Allensworth and Easton (2005) discussed an on-track indicator as a predictor of high school graduation. This on-track indicator was developed by the Consortium on Chicago School Research in 1999 because of the significance of successful transitions to high school and because 50% of ninth graders were failing at least one of their classes. Having established a link between the high school graduation rate and student factors such as attendance rates, GPAs, total number of credits, and the number of Fs, the on-track indicator was created from credits earned and the number of Fs in core classes in order to characterize students as on or off track.

For this report, Allensworth and Easton (2005) determined that a student on track has five course credits and no more than one F in English, math, science, or social studies. Using data from Chicago Public Schools for entering, first-time freshmen in 1999, the authors found out that 81% of on-track freshmen graduated from high school in 2003 and only 22% of the off-track freshmen graduated within 4 years. Statistical analysis also revealed that the on-track indicator is not simply related to students' background such as prior achievement, race and ethnicity, gender, age entering high school, and economic status. The authors concluded that the on-track indicator equally predicts graduation from high school in all types of schools for all students regardless of their background.

Cadwallader et al. (2003) also discussed ninth grade and the transition to high school but compared adjustment problems of a group of 40 highly aggressive at-risk students and an individually matched control group of 40 nonaggressive students. For this mixed methods study with matched control group design, the researchers used data from

the Carolina Longitudinal Study (CLS) and employed a pattern-oriented also referred to as person-oriented prodigal analysis of Social Cognitive Interviews (SCI) and scores from the Social Interactive Scale (SIS). They concurred with related research and reported that the transition to high school was difficult for all students regardless of their risk status although the at-risk group experienced more severe problems than the control group (Allensworth & Easton, 2005; Campbell, 2001; Copeland, 2006; Farley & Neild, 2008; Herlihy, 2007; Herlihy et al., 2005; Kerr & Legters, 2001; Kennelly & Monrad, 2007; Martin, 2004; Pedante, 2006; Reents, 2002; T. J. Smith, 2007).

However, against popular belief, especially held by parents, that when students transition to high school they have reached a certain level of maturity, responsibility, and independence, Cadwallader et al. (2003) pointed out that “For some youth, age fifteen appears to be a period of particular susceptibility to negative influences and risk for increased deviance or maladaptive conduct” (p. 71). Unfortunately, the authors did not further discuss these findings and did not include any data about academic success and failure rates. However, they recommended further research, particularly to find common characteristics for a group of at-risk students who were able to develop coping strategies and who did graduate from high school.

Duncan (2004) agreed with Cadwallader et al. (2003) on the difficult developmental stage of ninth-grade students and used a qualitative case study approach to investigate possible reasons for the high failure rates in a particular high school. The researcher conducted observation and interviews, and examined documents from the participants of this study, six students and their parents, seven teachers, and one school

administrator. He explained that ninth graders display a certain immaturity because of social insecurity as well as lack of organization and self-discipline. Findings revealed that contributing factors to high ninth-grade failure rates may be high school structure and organization, teacher practices and expectations, parents' attitudes, and the specific characteristics of the individual student. For example, more interest in the opposite sex including worries about hair, clothes, and make-up as well as less regiment and supervision in high school and ninth graders' inability to successfully manage this newly gained freedom often hinder effective learning. In addition, both teachers and parents agreed that ninth graders are lacking in study skills and do not know how to prepare properly for tests and examinations. However, the author also pointed out that teachers of ninth graders did not create learning environments that promoted critical thinking and the construction of knowledge and that the parents are not very much involved anymore in their child's learning in high school.

The literature agrees that there is a serious problem with ninth grade such as high failure rates, low achievement, poor on-time graduation, and even the risk of dropping out of high school (Allensworth & Easton, 2005; Campbell, 2001; Dedmond, 2008; Duncan, 2004; Pantleo, 1992; Richmond & Williams, 2007). Researchers indicated that there are many highly complex causes, for example ninth graders are lacking the skills needed for a successful high school career (Campbell, 2001; Duncan, 2004). Other contributing factors are general developmental problems of adolescence such as low self-esteem, social insecurities, and more interest in the opposite sex (Cadwallader et al., 2003; Duncan, 2004; Reents, 2002) as well as problems with the change in environment

when entering high school such as fewer support structures, higher expectations from teachers, and less supervision (Duncan, 2004; Reents, 2002). In addition, Duncan (2004) made recommendations for improvement and suggested that teachers need to promote critical thinking and the construction of knowledge to decrease ninth-grade failure rates. He also recommended more parental involvement. Ninth-grade support structures and further suggestions for improvement will be discussed in detail later in this section. The following part examines specific numbers and data about ninth-grade failure rates.

Ninth-Grade Failure Rates, Risk Factors, and Grade Retention

The literature suggests that one of the most urgent problems with ninth grade is a high ninth-grade failure rate resulting in grade retention and increasing ninth-grade populations. In their report, *The Education Pipeline in the United States 1970 - 2000*, Haney et al. (2004) presented data showing an increase in ninth-grade attrition by examining enrolment and graduation rates by grade each year. The authors used data from the Digest of Education Statistics (DES), which is a report published by the National Center for Education Statistics, as well as the Common Core of Data (CCD), which is a federal database of education statistics. After cohort progression analysis of the U.S. and all individual 50 states consisting of more than 10,000 calculations, one of the major findings was that a growing number of students have to repeat their ninth-grade year because they have not acquired the necessary skills to move on to the next level. These findings concur with Campbell (2001) and with Duncan (2004) who also pointed out ninth graders' lack of skills needed to succeed.

The current literature agrees that as a result of high retention rates in 9th grade, it appears that students are *disappearing* between 9th grade and 10th grade meaning that fewer students were enrolled in 10th grade than there were enrolled in 9th grade of the previous year. Haney et al. (2004) referred to this phenomenon as “the largest leak in the education pipeline” (p.10) and pointed out that depending on the particular state, this rate of student disappearance between 9th grade and 10th grade has tripled over the past 30 years. For example, the states with the worst attrition rates between 9th grade and 10th grade from 1999-00 to 2000-01 were Florida (23.8%), South Carolina (22.7%), and Georgia (20.3%). New York (13.3%), Maryland (11.3%), and Rhode Island (10.2%) were also on the same worst offenders list. On a national level, the 9th-grade attrition rate increased from less than 5% to more than 11% between the mid-1980s and the year 2000. This increase in 9th-grade attrition caused a growing student population in 9th grade that the authors referred to as a growing *bulge* in 9th-grade enrolment. For example, the 9th-grade enrolment for 1999-00 was 440,000 students more than enrolment in 8th grade and 520,000 students more than in 10th grade for the same year thus showing a distinct *bulge* in 9th-grade enrolment. In the last 30 years, this bulge of 9th-grade students has more than tripled from approximately 4% to about 13%.

Researchers were also concerned about a decreasing high school graduation rate nationwide falling from just above 78% in the early 1990s to less than 75% in 2000-01 (Haney et al., 2004). This means that about 871,000 students did not graduate in 2000-01. States with the lowest graduation rates in 2000-01 were South Carolina (62%), Florida and Tennessee (63%) and Alabama and Arizona (65%). Although specific data was not

available, there may be a link between increasing ninth-grade attrition rates and decreasing high school graduation rates: “Being flunked to repeat a grade is a strong predictor of students dropping out of school prior to graduation” (Haney et al., 2004, p.59). Finally, the authors tried to explain the growing number of ninth-grade students over the past 30 years with the minimum competency movement in the 1970s, the academic standards movement in the 1980s, and high stakes testing in the 1990s.

The national data for freshmen graduation rates for public schools are unsettling because approximately 25% of all ninth-grade students fail their 1st year in high school and have to repeat ninth grade (National Center for Education Statistics, 2007). While the freshmen graduation rate has steadily increased from 71.1% in 1999 to 75.2% in 2006, one report projected a decrease in freshmen graduation rates for the years 2007 (74.8%) and 2008 (74.4%). In concurrence with Haney et al. (2004), these students contribute to the growing *bulge* in ninth-grade enrolment and are at a higher risk of dropping out of high school. In addition, the national high school dropout rate is just over 9% (National Center for Education Statistics, 2007). Although the high school dropout rate has slightly decreased from 10.9% in the year 2000 to 9.3% in 2006, there are still nearly 10% of students who do not complete their high school education. These data are alarming, particularly when compared with Haney et al. (2004) who reported a nationwide high school graduation rate of less than 75% in 2000-01. This means that in addition to the nearly 10% of students who drop out of school there are approximately another 15% of students who continue with high school but are unable to graduate and do not receive their high school diploma.

Some researchers expressed their concern about a possible relationship between grade retention and dropping out of high school. For example, Anderson, Jimerson, and Whipple (2002) conducted a comprehensive and systematic review of 17 studies investigating both dropping out of school as well as grade retention within associative and predictive models. The purpose of this review was to provide insights about the long-term connection between grade level retention and dropping out. The authors used the transactional model of development, a model that focuses on development trajectories over time, and they discovered that grade retention is a potential predictor for dropping out of high school. These findings were particularly worrying in light of information about the growing ninth-grade *bulge*. Both Haney et al. (2004) and the National Center for Education Statistics (2007) released data about an increasing number of ninth-grade students failing their 1st year in high school and having to repeat ninth grade. Although Anderson et al. (2002) pointed out that grade retention is not the only factor for dropping out of high school and that dropping out is a complex process rather than a single event, educators and researchers need to further examine grade retention as a method of intervention and possibly find alternative strategies.

In their extensive longitudinal report about the transition to ninth grade in high school in the School District of Philadelphia, Neild and Weiss (1999) established widespread ninth-grade failure. They found that ninth graders had an average grade of 71 across all subject areas and that one third of the ninth-grade students had an average of below 65. More than half of the ninth graders, 58%, failed at least one core course and one third failed three or more classes. The authors collected performance data from 2938

students from school district records and the other data from students' and parents' self-reports. Approximately 1500 randomly selected families were interviewed by telephone about experiences and perceptions in eighth grade in middle school (Wave 1), and in the middle (Wave 2) and at the end (Wave 3) of the 1st year in high school. The findings of this report concur with Haney et al. (2004) who discussed an increase in ninth-grade attrition rates and with data released by the National Center for Education Statistics (2007) about very low averaged freshmen graduation rates.

Just like Haney et al. (2004) linked increasing ninth-grade attrition with decreasing graduation rates, Neild and Weiss (1999) also discussed predictors of ninth-grade failure such as gender, mother's education, low-income background, prior grades, number of schools attended between sixth grade and eighth grade, as well as future goals. Neild and Weiss (1999) stated:

The likelihood of course failure was greater for students who were male, whose mothers did not have a college degree, whose families were on welfare, and who had repeated a grade before entering high school. Students with multiple risk factors had very high rates of course failure. (p. 7)

Both groups of researchers provided extensive data about ninth-grade attrition rates, high school graduation rates, and ninth-grade failure rates. They were also trying to provide some kind of explanation of the problems such as educational trends over the past 30 years as well as social risk factors and other predictors for possible ninth-grade failure. Additionally, Neild and Weiss made several recommendations for improvement such as early intervention, parental involvement, and treating ninth graders as a separate community. However, neither report included extensive data and detailed investigations

about the effectiveness of ninth-grade transition programs in order to tackle the ninth-grade problem.

As examined earlier, Cadwallader et al. (2003) examined 9th-grade adjustment problems of aggressive at-risk students. Several other researchers also investigated students at risk of dropping out of school, student aggression, delinquency, and multiple risk factors (Abbott et al., 2000; Appleyard, Dulmen van, Egeland, & Sroufe, 2005; Barnow, Freyberger, & Lucht, 2005, Castro, Enders, & Montague, 2005). For example, Abbott et al. (2000) used nested latent variable models to examine five theories to predict dropping out of high school before 10th grade. The authors concluded “poor academic achievement is the strongest predictor of dropping out of school before completing 10th grade” (p. 579). In addition, general deviance, low self-esteem, and relationships with antisocial peers also pose an increased threat of dropping out of high school.

Barnow et al. (2005) surveyed and interviewed 168 adolescents from 121 families to examine a hypothetical model for aggressive and delinquent behavior problems. Findings revealed that significant influential factors on aggressive and delinquent conduct are specific personality traits, family environment, and group influences. These results concur with Abbott et al. (2000) who also reported relationships with antisocial peers as an influential aspect. Furthermore, Castro et al. (2005) used an earlier 4-year study (1994-98) of 628 kindergarten and first-grade students, 206 of which were identified as being at risk for developing emotional and behavioral problems. Out of these original 206 students, 94 consented to participate and the researchers concluded that students identified as at risk at a young age “continue to display problems into adolescence,

placing them at serious risk for school failure and dropping out” (Castro et al., 2005, p. 84). Finally, Appleyard et al. (2005) selected 171 participants from an ongoing longitudinal study of urban children at risk based on available data for multiple periods of time between the ages of 12 months and 16 years. They used multiple methods of data collection such as psychological tests, questionnaires, interviews, and observation. Their findings support the cumulative risk hypothesis and the researchers established a linear relationship between the number of risks present in early childhood and behavior problems during adolescence.

While the transition to high school and a successful ninth-grade year are challenging and difficult for the majority of students (Allensworth & Easton, 2005; Baker et al., 2005; Campbell, 2001; Case, 2006; Chapman & Sawyer, 2001; Cauley & Jovanovich, 2006; Copeland, 2006; Cooper & Liou, 2007; Dedmond, 2008; Duncan, 2004; Farley & Neild, 2008; Herlihy, 2007; Herlihy et al., 2005; Kerr & Legters, 2001; Lampert, 2005; Lan & Lanthier, 2003; Martin, 2004; Mizelle, 2005; Pedante, 2006; Reents, 2002; J. B. Smith, 1997; T. J. Smith, 2007), educators need to pay special attention to students identified as at risk because multiple risk factors can cause severe academic difficulties and dramatically increase failure rates (Abbott et al., 2000; Appleyard, Egeland, Dulmen van, & Sroufe, 2005; Barnow, Freyberger, & Lucht, 2005; Cadwallader et al., 2003; Castro, Enders, & Montague, 2005). Additionally, these researchers recommended comprehensive prevention strategies, early intervention methods, and special programs for at-risk students. Although they did not specifically mention ninth-grade transition programs, their recommendations could be incorporated

into effective programs to help ninth-grade students adjust to high school as well as purposefully target students identified as at risk of academic failure and possibly dropping out of school.

According to the literature, other factors for consideration in the transition to high school may be gender and race. In order to investigate gender and race as variables in the transition process, Akos and Galassi (2004) designed a School Transition Questionnaire using a 4-point Likert type response format to survey 137 sixth graders and 320 ninth graders. The authors found out that girls felt more connected to middle school than boys and that this effect was reversed with the transition to high school. Girls also reported that family other than parents were more helpful with their middle school transition and then reported the opposite for the transition to high school. Boys reported that during the transition to high school other students were more supportive than family. Finally, this study revealed that Latino students perceived the transition to middle school more difficult than African American and Caucasian students yet race did not play a significant role during the transition to high school. The authors suggested peer mentoring programs and developing supportive peer cultures to help female students feel connected to high school as well as raising gender awareness amongst educators and families. Although the authors did not discuss transition programs, their suggestions could be incorporated as effective components of ninth-grade transition programs to help students ease the transition process and successfully adjust to high school.

Other researchers also expressed concern about growing ninth-grade failure rates and included some data. As stated earlier, Pantleo (1992) reported that 48% of all ninth-

grade students failed one or more classes in the 1989-90 school year. From a data collection over 10 years, Campbell (2001) found out that their ninth-grade students had a composite GPA of 2.35 in the first semester that then dropped to a composite GPA of 2.27 in the second semester. McIntosh and White (2006) reported that 29% of ninth-grade students were failing one or more classes and Baker et al. (2005) stated that according to standardized test scores, 42% of ninth graders were reading below the 50th percentile in the 2002-03 school year. Dedmond (2008) stated that 75% of high school students will not complete the necessary postsecondary education to succeed in the current global economy. Although these numbers are not part of extensive data collections, the information concurs with Haney et al. (2004), Neild and Weiss (1999), data released by the National Center for Education Statistics (2007) and with Miao and Wheelock (2005) who reported that ninth graders represent the highest percentage of students within any high school population. Rather than providing detailed data analyses, these authors used their alarming figures to examine ninth-grade support structures such as transition programs and to make recommendations for improvement, all of which will be discussed later in this section.

One major concern of researchers is a possible relationship between grade retention and dropping out of high school. For example, some school districts reported a grade retention level of up to 52% in order to deal with student failure (Hertzog, 2006). Unfortunately, the author did not list any sources and did not refer to any literature for the reported data. It appears that this information was based on personal experiences as middle school assistant principal and principal for 13 years and as professor and dean of

education at Slippery Rock University, PA. However, in contrast to school districts' high level of grade retentions, it appears that researchers strongly recommend early intervention rather than grade retention (Anderson et al., 2002, 2005; Blau, Moller, Potochnick, & Stearns, 2007; Bowman, 2005; Graydon et al., 2006; Griffith & Leckrone, 2006; Haney et al., 2004, Miao & Wheelock, 2005). For example, in their comprehensive review of existing literature, Anderson et al. (2002) established a relationship between grade retention and dropping out of high school and concluded that "early grade retention is one of the most powerful predictors of later school withdrawal" (p. 452). The authors recommended creating alternatives rather than retaining students and making them repeat a grade level. These findings concur with Haney et al. (2004) who described a growing *bulge* of ninth-grade students as a result of ninth-grade failure and grade retention.

In a follow-up study, Anderson et al. (2005) surveyed 237 elementary school children attending five different elementary schools in the same California school district about stressful life experiences. The authors found out that 6th graders reported grade retention as the most stressful life experience and concluded that

The social stigma of being retained is observable by educators during elementary school, and the subsequent dropout rate among students who are retained is likely an outcome resulting from the ineffectiveness of retention to address the academic or adjustment needs of children compounded by the negative social consequence. (Anderson et al., 2005, p. 17)

Finally, Blau et al. (2007) used questionnaire data of a nationally representative sample of 8th graders who were surveyed by the National Center of Education Statistics (NCES) in 1988 and then resurveyed in 9th, 10th, 11th, and 12th grade to establish a positive relationship between grade retention and dropping out of school.

Although evaluating existing literature, several authors agreed with the above findings and suggested early intervention as well as analyzing current school policies, reviewing school retention practices, and investigating typical retention patterns (Bowman, 2005; Graydon et al., 2006; Griffith & Leckrone, 2006; Miao & Wheelock, 2005). These authors also recommended preventative measures such as early identification of students at risk of failing as well as diagnostic procedures such as academic weakness, behavioral problems, or emotional distress. Further suggestions included parental involvement, early reading programs, the use of effective teaching and learning strategies, behavior modification and special programs such as preschool, summer, and after school programs. In addition, Miao and Wheelock (2005) strongly advocated the use of data for school improvement and to openly display the growing ninth-grade bulge. These recommendations for prevention strategies and early intervention concur with researchers who investigated students identified as at risk and the effect of multiple risk factors (Abbott et al., 2000; Appleyard, Egeland, Dulmen van, & Sroufe, 2005; Barnow, Freyberger, & Lucht, 2005; Cadwallader et al., 2003; Castro, Enders, & Montague, 2005). The current literature strongly supports the employment of a whole range of early intervention strategies such as special academic support programs, effective teaching and learning strategies, and parental involvement to prevent both grade retention and increase in the number of ninth graders.

Predicaments of Adolescence

Several researchers discussed predicaments of adolescence such as psychological issues, secrecy from parents, brain development, hormonal influences, entering puberty,

susceptibility to negative influences, level of maturity, and social insecurity as influential factors for the transition to high school and subsequently successes and failures in ninth grade (Cadwallader et al., 2003; Cauffman & Steinberg, 2000; Duncan, 2004; Engels et al., 2005; Foster & Sisk, 2004; Harvard Mental Health Letter, 2005; Herrman, 2005; Park & Wallace, 2004). For example, Cadwallader et al. (2003) stated that many parents have the misconception that when entering high school, their students have reached a maturity level where they are more responsible and independent. On the contrary, the authors pointed out that age 15 can be a very difficult period of time where students are particularly vulnerable to negative and even harmful influences. Additionally they reported that, at age 15, students seem to be at a higher risk for deviant behavior and pushing boundaries. Duncan (2004) agreed with this evaluation and explained that ninth graders display a higher level of immaturity than normally expected in high school, which is precisely the reason that places them at higher risk in this new setting.

Another predicament of adolescence is secrecy from parents. Even though adolescent teenagers are growing more and more independent and are learning to make their own decisions, secrecy from parents has been linked to psychological disadvantages during adolescence. Engels et al. (2005) conducted a two-wave longitudinal survey study of 1173 children between 10 and 14 years of age to investigate the effect of secrecy from parents on psychosocial and behavioral problems in adolescence. The findings showed that keeping secrets from parents was linked to low self-esteem, depression, stress, behavior problems such as aggression and delinquency, and low levels of self-control.

Several authors tried to offer possible explanations for teenage predicaments by examining the adolescent brain (Harvard Mental Health Letter, 2005; Herrman, 2005; Park & Williams, 2004). For example, Park and Wallis (2004) discussed the adolescent brain research of Dr. Jay Giedd at the National Institute of Mental Health. Giedds's long-term studies suggest that late childhood is the beginning of a final and critical brain development process affecting highest mental functions. This process continues through adolescence with the brain becoming faster and more efficient. According to the article, the very last part of the brain to fully shape and develop is the prefrontal cortex, which is responsible for planning, decision making, setting priorities, impulse control, and considering the consequences of one's actions. Therefore, bad decision making among teenagers may be explained by unfinished development of the brain.

Herrman (2005) and Harvard Mental Health Letter (2005) concurred with these findings and referred to existing brain research to summarize complex developmental stages and maturing processes of the human brain. Herrman described the teenage brain as *under construction* and *a work in progress* and contributed adolescent behavior such as sensation seeking, the importance of peer pressure, and significant sleep requirement to developmental processes in the adolescent brain. Additionally, Harvard Mental Health Letter mentioned that due to developmental processes in the brain, adolescents become addicted to drugs faster and at lower doses and that adolescents are "hypersensitive to the value of novel experiences" (p. 2). For adults who are dealing with teenagers such as teachers and parents, it is very important to know that even though adolescents may appear grown up and physically mature, they are still a work in progress, developing and

maturing on many levels. The understanding of the continuous development of teenage brains and the cognitive abilities of adolescents may help educators and parents design effective strategies for ninth-grade transition programs, possible intervention strategies, and age-appropriate support methods.

The Harvard Mental Health Letter (2005) and Herrman (2005) discussed research about adolescent brain development but they also talked about the role of hormones. For example, serotonin, estrogen, and testosterone are responsible for mood changes and mood control while estrogen and testosterone may also influence mental health matters such as schizophrenia, depression, and bipolar disorder. In the bargain, testosterone production is raging with a 10% increase among teenage boys. The neurotransmitter dopamine regulates arousal and mood but may also be linked to teenage thrill and novelty seeking. Additionally, the fluctuation of dopamine levels may contribute to adolescents' vulnerability to addictive substances. Furthermore, adolescent brains produce large quantities of adrenal stress hormones, sex hormones, and growth hormone. Hormones also regulate the inner 24-hour clock of human beings but during adolescence the settings change causing teenagers to stay up late at night and making it difficult for them to get up early in the morning. Finally, Foster and Sisk (2004) reviewed the neural basis of puberty and adolescence. Although the authors concentrated on reproductive maturity, they established a link of brain-driven interaction between hormones and the adolescent nervous system thus confirming that adolescent behaviors may be a result of both raging hormones and a brain that is still under construction.

These findings are an important and relevant contribution to the problem of adolescent ninth graders and their transition process to high school (Cadwallader et al., 2003; Duncan, 2004; Engels et al., 2005; Foster & Sisk, 2004; Harvard Mental Health Letter, 2005; Herrman, 2005; Park & Williams, 2004) because of the increased social and academic demands as well as the expectation that students should be more independent, more responsible, and more mature. However, according to the literature, it appears that the challenges in high school are in direct conflict with ninth-grade students' developmental stage.

Although Cauffman and Steinberg (2000) directed their study at finding effective policies, laws, and guidelines regarding the juvenile court system, their results may also be useful for educators who are concerned about transition problems and ninth-grade failure rates. The researchers investigated the relationship between age, psychosocial maturity, and antisocial decision making of 1,000 adults and adolescents between the ages of 12 and 48. They found out that there is a link between higher maturity of judgment, with its three components of (a) responsibility, (b) perspective, and (c) temperance, and mature decision making regardless of age. Even though adolescents scored considerably lower than adults, there were significant individual differences in judgment within each of the adolescent age groups. This means that when assessing adolescents' ability to make decisions, the age factor alone is not enough and individual differences play an important role and must be considered.

In addition, research suggests that socially responsible decision making is not as common among adolescents as it is among adults and adolescents are not as

psychologically mature as adults (Cauffman & Steinberg, 2000). For example, adolescents have lower self-reliance and personal responsibility scores, they find it difficult to have a long-term perspective or look at issues from the perspective of others, and they are having problems with impulse control. Adolescents are not equally competent as adults are and therefore, according to the authors, juvenile offenders may be subject to special treatment. The researchers suggested that their background, family situation, as well as emotional and developmental stages need to be considered. The authors specifically pointed out that “variability among adolescents of a given chronological age is the rule, not the exception” (Cauffman & Steinberg, 2000, p. 759). It appears that the authors support the concept that it is important to address students’ individual needs and that all students have a whole variety of skills and abilities.

In 2005 the Supreme Court affirmed a Missouri high court decision that the execution of 16 and 17 year olds is “unconstitutionally cruel and unusual punishment” (Harvard Mental Health Letter, 2005, p. 2). As a result, the age for capital punishment was raised to 18 years. The justices based their decision on legal briefs citing brain research that were submitted, among others, by the American Bar Association, American Academy of Child and Adolescent Psychiatry, and the American Psychiatric Association. However, some critics are worried that teenagers may have been given a biological excuse for reckless and malicious conduct. Besides, the problems of adolescents are not solely related to hormones and the brain and may have individual, social, genetic, and environmental reasons. Nevertheless, this high court ruling is extremely important for educators because it concurs with existing educational research about ninth-grade

students and their adjustment problems when making the transition to high school (Allensworth & Easton, 2005; Cadwallader et al., 2003; Caldwell, 2007; Campbell, 2001; Cauley & Jovanovich, 2006; Copeland, 2006; Dedmond, 2008; Duncan, 2004; Farley & Neild, 2008; Herlihy, 2007; Herlihy et al., 2005; Kennelly & Monrad, 2007; Kerr & Legters, 2001; Martin, 2004; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Reents, 2002, Richmond & Williams, 2007; T. J. Smith, 2007). Just as juvenile offenders should receive individual consideration because adolescents are not as mature and not as competent as adults when making decisions, ninth graders also deserve some special treatment, individual support, and recognition of their unique developmental stage. Furthermore, Cauffman and Steinberg (2000) described a standard variability among adolescents that also applies to ninth graders. According to Campbell (2001) and Marzano (2004), these students make the transition to high school with different background knowledge and different sets of skills. In addition, they come from different socioeconomic conditions and family situations. All of these are determining factors when it comes to social and academic achievement as well as future success.

Students' Attitudes and Perceptions About the Transition to High School

Several authors focused their work on student attitudes, their perceptions of self, their perceptions of their relationships to peers and teachers, as well as how students and their parents view the transition to high school and related transitioning problems (Akos & Galassi, 2004; Akos, Lim, Smith & Wiley, 2008; Boman & Yates, 2001; Copeland, 2006; Crombie et al., 2005; DeBacker & Nelson, 2008; Lan & Lanthier, 2003; Letrello, 2002; MacKay, 2006). For example, Akos and Galassi (2004) and Copeland (2006)

reported that the transition to high school involves both challenges and new opportunities. High school students and their parents mentioned choosing classes, making new friends, participating in sports, and more freedom as positive aspects of transition. On the other hand, homework, social and organizational changes, good grades, time management, academics and more challenging classes were reported as difficulties. MacKay (2006) found out that although overall students were not anxious about the transition from middle to high school, they felt unprepared for the new challenges. In addition to the issues described by Akos and Galassi (2004) and Copeland (2006), students in MacKay's (2006) ethnographical study reported difficulties with the comprehension of instructional materials, problems falling behind and catching up, and more difficult access to teacher support. The author obtained these findings during conversations with 26 low performing ninth graders to investigate the transition to high school from their perspective.

According to Akos and Galassi (2004), students, parents, and teachers made numerous recommendations for effective transition programs that as stated by the authors involve three main areas: procedural, academic, and social. While the procedural aspects of the transition (high school tours, scavenger hunt, dry-run walkthrough of student class schedules) are relatively simple short-term interventions, the academic and social aspects require a different focus on a more long-term scale. For example, participants of this study suggested teaching study skills and time management, discussing academic expectations with students, better communication between teachers at the sending and receiving schools, a homework hotline or website for parents, better communication with

parents, academic tutoring, small group activities, team building, and cooperative learning to be included in ninth-grade transition programs.

Akos et al. (2008) concurred with Akos and Galassi (2004) and presented similar findings in their mixed methods longitudinal study about the views of students, parents, and school staff on the transition from middle to high school. The authors surveyed 172 students and 94 parents from one middle school before their transition to high school and then again in ninth grade after their transition to high school using a Likert-type scale. They also interviewed two ninth-grade guidance counselors, three freshmen center teachers, and the principal of the Freshmen Center. In addition to Akos and Galassi (2004), Akos et al. (2008) stated that students generally did not fully comprehend the seriousness of their course choices as predictors of college attendance and completion. The authors pointed out the important role of guidance counselors and teachers to help students prepare and select appropriate level courses. They reported that high-achieving middle school students need to be prepared that they might not get all A's in high school and that they will probably not get leadership positions in extracurricular activities. Findings also revealed that students with supportive parents are more likely to have a smooth transition period to high school.

Several researchers suggested the implementation of support structures such as transition programs to help ninth graders adjust to high school. For example, Copeland (2006) commented that freshman academies were successful experiences for most ninth graders and recommended their implementation in all schools where students transition from middle to high school. The author also suggested improving mentor programs, and

involving all stakeholders in the transition process. MacKay (2006) agreed with this evaluation and concluded that ninth graders need better support structures to help with the transition process. He recommended fully coordinated activities within the framework of eighth- or ninth-grade transition programs. Although several authors advocated transition programs to help ninth graders adjust, their studies do not include any data evaluating the success of such programs (Akos & Galassi, 2004; Akos et al., 2008; Copeland, 2006; MacKay, 2006). However, the suggestions made in these studies focus on students' and parents' needs during the transition period thus providing an important guideline for educators who are looking at creating successful transition programs.

Other studies concentrated on finding reasons that may explain failure in high school and high school dropout rates. Many also investigated the role of optimism and self-esteem in relationship to psychological well-being, adjustment, and academic success (Boman & Yates, 2001; Chipperfield, Haynes, Perry & Ruthig, 2007; Jackson, Pancer & Pratt, 2005; Lan & Lanthier, 2003; Letrello, 2002; Pritchard, Wilson & Yamnitz, 2007). For example, Lan and Lanthier (2003) investigated students' academic achievement and how they perceived themselves and school before dropping out of high school. The authors examined personal attributes and environmental factors such as academic achievement, motivation, general effort, participation in school activities, relationships with teachers and peers, feelings about school, and self-esteem over a period from 8th grade through 12th grade. When the study began in 8th grade, the future dropout students scored at about national average for all of the above variables except from academic performance, which was below national average. In 10th grade, the authors

noticed a significant deterioration for several variables with even more of a decline in 12th grade. Lan and Lanthier (2003) concluded, “We think the most important finding in this study is the general decline in the personal attributes of the dropout students when they transition to high school” (p. 325) and emphasized that the very first sign of potentially dropping out of school is low academic achievement. They also mentioned that the warning signs of poor academics start to occur before students enter 8th grade.

In a similar study, Boman and Yates (2001) investigated the role of optimist and pessimist attitudes associated with successful transitions to high school. The researchers asked 102 students to complete questionnaires at the beginning and at the end of ninth grade. The questionnaires included questions about general feelings of optimism and pessimism and about students’ expectations of negative experiences. Additional questions inquired about levels of depression, feelings toward school, and how well students and their teachers thought they adjusted to high school life. Boman and Yates (2001) found out “that the optimism factor, as measured early in the school year, was strongly implicated in indicating levels of adjustment and hostility in students at the end of the 1st year at high school” (p. 407). They also reported that generally, girls had a more positive adjustment than boys and that adolescents with lower levels of optimism may experience greater difficulty with adjustment to high school especially when facing negative circumstances. These findings appear to be in contradiction with Akos and Galassi (2004) who reported that girls felt more connected to middle school than boys and less connected to high school. However, in his investigation about the effect of grade level when making the transition to high school, Alspaugh (1999) stated that girls have lower

high school dropout rates than boys do. Further study may be necessary to examine gender as a factor in the transition process to high school.

Several researchers examined the role of optimism among college students (Chipperfield, Haynes, Perry & Ruthig, 2007; Jackson, Pancer & Pratt, 2005; Pritchard, Wilson & Yamnitz, 2007). Although these researchers focused on college and not on high school students, their findings concur with Boman and Yates (2001). For example, Pritchard et al. (2007) collected survey data from 242 first-year college students and found out that students with low self-esteem reported more physical health problems and more negative moods. The authors established an inverse relationship between optimism and negative moods and health problems. Students with high optimism scores had lower negative moods and health problem scores. Chipperfield et al. (2007) examined the effect of optimism on academic performance from survey data of 640 first-year students and discovered that students with an optimistic bias at the beginning of the first semester had significantly higher grades in Introductory Psychology, higher cumulative GPAs, and lower course attrition. Additionally, the authors established a link between optimistic bias and greater perceived success and well-being.

In addition to optimism having a positive influence on students' ability to adjust, on their academic achievement, as well as on their general health, some findings revealed that parents may hold the key to their children's success. For example, Jackson et al. (2005) conducted two longitudinal studies, one study with college students and one study with high school students, to investigate the relationship between authoritative parents and adolescents' adjustment and optimism. In Study 1, the researchers surveyed 356

college students and measured personal adjustment and academic adjustment at various times during those 4 years in college. Jackson et al. (2005) concluded that perceived parental authoritative was a predictor for college adjustment and stated that "... optimism is a critical mechanism by which parenting style produces healthy personal adjustment" (p. 287). In Study 2, the authors surveyed 938 high school students and conducted telephone interviews. The results of Study 2 were consistent with the findings of Study 1 regarding optimism as a crucial mechanism for successful adjustment. Results also showed that 17-year old high school students who perceived their parents to be more authoritative, reported higher self-esteem, lower levels of depression, and more years of postsecondary education at age 23 than those 17-year olds who did not perceive their parents as authoritative. These findings are very significant because they support the importance of parental involvement in students' education. Moreover, many researchers highlighted the involvement of parents as part of successful transition programs and intervention methods (Akos & Galassi, 2004; Bowman, 2005; Brough & Maute, 2002, Caldwell, 2007; Campbell, 2001; Campbell & Jacobson, 2008; Chapman & Sawyer, 2001; Graydon et al., 2006; Griffith & Leckrone, 2006; Lampert, 2005; Miao & Wheelock, 2005; Mizelle, 2005; Neild & Weiss, 1999; J. B. Smith, 1997; Yecke, 2006).

Researchers generally agree that optimistic attitudes can help make high school a positive and enjoyable experience and can help students stay in high school to graduate. In a two-phase mixed methods study, Letrello (2002) found out that as students completed ninth grade, their attitudes toward school and learning were overall more positive than negative. Although the author mentioned involvement in extracurricular

activities, this study did not include a full evaluation of any other factors that might ease the transition process to high school or that might have contributed to the mainly positive attitudes of ninth graders.

However, some researchers suggested that academic success in high school can be predicted by earlier middle school personality characteristics and aspects of self (Graziano & Hair, 2003). For example, the authors reported that cognitive and interpersonal characteristics of personality contribute to academic achievement in high school and they are more stable during the transition to high school than self-esteem characteristics. They also found out that agreeableness and even more important, openness to experiences, play a major role during the transition process to high school and are related to students' GPAs.

Finally, a few researchers examined the relationship between self-perception of ability and academic performance in math, science, and English and discovered a remarkably strong association between students' self-perceptions of ability and students' achievement (Crombie, DuBois & Silverthorn, 2005). Although it is difficult to influence and change self-perception and personality traits, these findings may prompt educators to look at adequate advisement courses and peer mediation programs to teach students how to cope with new academic concepts, new friends, and new teachers in high school.

Another critical factor regarding students' success during the transition to high school was the discovery that class belongingness and perceived peer relationships may strongly influence students' motivation to learn (DeBacker & Nelson, 2008). For example, adolescents who felt valued and respected also reported higher self-efficacy,

mastery, performance approach, and responsibility goals. The researchers surveyed 253 middle and high school students and used regression analysis. They found out that good quality friendships and a best friend who valued academics had a positive influence on motivation to learn. In contrast, poor quality friendships and peers with negative attitude toward school and learning had the opposite effect. As previously stated, these findings may prompt educators to incorporate adequate advisement and peer mediation programs into curricula to teach students how to cope with new friends and peer pressure.

In summary, Lan and Lanthier's (2003) investigation of students' academic achievement, personal attributes, and environmental factors from 8th grade through 12th grade showed that personal attributes of dropout students decline considerably during their transition to high school. Poor academic achievement before 8th grade was an important early warning sign. Several researchers investigated how optimism may influence students' adjustment to high school (Boman & Yates, 2001; Chipperfield et al., 2007; Jackson et al., 2005; Letrello, 2002; Pritchard et al., 2007). Findings revealed that optimistic attitudes can have a positive effect on the transition to high school, on students' academic achievement, and on dropout rates. In addition, particular aspects of student personality may affect academic achievement in high school and feelings of class belonging. Furthermore, the relationship to peers and teachers may influence achievement, motivation, and perception of self (DeBacker & Nelson, 2008; Graziano & Hair, 2003). In agreement with these findings, Crombie et al. (2005) discovered a possible link between self-perception and academic achievement.

In conclusion, the findings discussed in this section confirm that the transition from middle school to high school is a very complex process that can create a wide range of challenges and problems. Therefore, when implementing transition programs, these studies may provide invaluable data analyses for administrators and teacher leaders alike. Factors such as previous academic performance, perception of self and school, relationships to peers and teachers, as well as the optimism factor may be taken into consideration when planning, implementing, and evaluating different types of programs within a specific school setting.

Structural Transition Problems

Achievement Loss During Transitions

In the literature, there only seem to be two major studies about achievement loss associated with transitions (Alspaugh, 1998a; J. S. Smith, 2006). In his study, Alspaugh (1998a), concentrated on school transitions and highlighted the apparent achievement loss that is associated with transitions from one school to another. The author examined three groups of 16 school districts, 48 school districts in total. The first group of school districts was organized into K-8 and 9-12 grade levels with one elementary and one high school. The second group of school districts had linear transitions from one elementary school to one middle school to one high school. The third group featured pyramid transitions from two to three elementary schools to one middle school, and then to one high school. To compare achievement, the author used scores from the 1994 and 1995 Missouri Mastery and Achievement Tests (MMAT) for reading, mathematics, science, and social studies and reported that the first achievement loss occurs during the transition

from elementary to middle school. He used the term *pyramid transition* for students transitioning from multiple elementary schools into one single middle school and the term *linear transition* for students transferring from a single elementary school to a middle school. Findings indicate that pyramid transitions result in greater loss of achievement than linear transitions.

The same study showed that K-8 students experience a less dramatic loss of achievement than middle school students do when making the transition to high school. Findings indicate that student achievement is in danger with each transition. As a result, middle school students face a greater achievement loss as well as higher dropout rates in high school, a situation that the author refers to as *double-jeopardy*. The author also discovered that the two major factors of achievement loss in high school transition are instability and adjusting to a completely new environment.

Yecke (2006) and Freeman (2005) concurred with Alspaugh (1998a) regarding greater achievement loss in middle schools than in K-8 schools. For example, Yecke (2006) stated that many school systems are switching to the K-8 model to raise students' academic achievement. The author described three longitudinal studies (The Milwaukee Study, The Baltimore Study, and The Philadelphia Study) in which researchers compared student achievement between the middle school model and the K-8 model. Data from GPAs and standardized test scores of 924 Milwaukee students, 2,871 Baltimore students, as well as approximately 40 Philadelphia middle schools and 40 Philadelphia K-8 schools revealed that K-8 students had higher academic achievement, scored higher on standardized tests, and were more likely to be accepted into the most challenging and

competitive high schools than middle school students. The researcher visited all three school districts where these studies were conducted in order to design ten strategies for a successful shift from the middle school to the K-8 model. Some of these strategies are to include parents into this process, to add higher grades to the elementary schools rather than adding lower grades to middle schools, to develop sixth grade as transition year between elementary and middle grades education, to have high expectations for both academics and behavior, and to provide greater access to advanced courses, electives, and extracurricular activities.

Freeman (2005) investigated grade span configuration (grade levels served by a specific school) in North Carolina's middle grades by comparing academic performance and attendance records of students in middle, junior high, and K-8 schools. For this mixed methods ex post facto study, the researcher obtained student achievement data from North Carolina End-of-Grade achievement test scores in math and reading and student attendance data from North Carolina Department of Public Instruction. Findings based on multiple regression analysis for quantitative data indicate that grade span configuration has a positive effect on achievement and attendance of sixth and seventh graders. Students in K-8 schools performed better in reading in both sixth and seventh grade and they also performed better in math in seventh grade than did students in middle and in junior high schools in the same grade levels. In comparison to middle and junior high school students, K-8 students also had slightly better attendance. In addition, interviews with educators indicated that they favor the K-8 school model because of the absence of school-to-school transitions and therefore greater continuity, greater level of

personal support, and greater sense of community and trust. The interview data also suggest that the smaller K-8 schools are more able to cater to students' individual needs thus leading to increased motivation and achievement. Finally, the nurturing environment of K-8 schools fosters a sense of belonging and the development of relationships.

J. S. Smith (2006) also conducted a study about achievement loss but this researcher focused on achievement loss during the transition to high school and its impact on college attrition. The author used the data of 9,230 students from the National Educational Longitudinal Study of 1988, Fourth Follow-up, 2000 (NELS: 88-2000) conducted by the Department of Education's National Center for Education Statistics. Of these 9,230 study participants, 2,048 students were identified as high achieving middle school students. To determine achievement loss, the author analyzed students' middle school and ninth-grade academic grades and created a difference score from the grade composites. Findings from logistic regression analysis indicate that all middle school students (including high achievers) who experienced achievement loss during the transition to high school were more likely to drop out of their first college than students who did not experience achievement loss in high school. These results revealed a possible link between achievement loss during the transition to ninth grade in high school and attrition rates at a first college.

In conclusion, researchers proposed that there is achievement loss associated with each transition to the next school level. The literature also revealed that pyramid transitions from multiple schools into one larger school result in greater loss of achievement than linear transitions (Alspaugh, 1998a). Findings indicate that during the

transition to high school, middle school students experience a greater achievement loss than K-8 students. Additionally, K-8 students outperformed middle school students at the same grade levels in reading and in math and K-8 students had also better attendance (Freeman, 2005; Yecke, 2006). Finally, researchers found out that achievement loss during the transition to ninth grade in high school may be linked to attrition rates in colleges (J. S. Smith, 2006). This information is important because when investigating support structures for ninth graders, school districts may want to examine and reorganize their school structures and change from middle schools to K-8.

The Effect of Multiple Transitions and Transition Grade Level on Dropout Rates

Some research suggests that the grade level when the transition to high school takes place as well as multiple transitions may have an effect on high school dropout rates. For example, the organization of a school district may influence student achievement (Alspaugh, 1999). The author collected data from a total of 45 schools, 15 schools making the transition to high school in 7th grade, 15 schools in 9th grade, and 15 schools in 10th grade. The author used ANOVA to examine the average percentage of students dropping out of high school from 1993-94 through 1996-97 by gender and grade level, which was the dependant variable for this study. Findings indicate that high school dropout rates are higher when students transition to high school in 10th grade than when the transition takes place in 9th grade Findings also showed that boys have higher dropout rates than girls, that the largest dropout rate occurs in the junior year, and that 7 – 12 high schools have the lowest dropout rates for both boys and girls. As a result, in order

to reduce high school dropout rates, school districts should examine the organization of their schools and grade levels.

The current literature also suggests that the more school-to-school transitions within a school district the higher the high school dropout rate (Alspaugh, 1998b). In addition, the author discovered a relationship between enrollment per attendance center and the number of transitions because school districts with large enrollments tend to create more intermediary schools which subsequently increases the number of school-to-school transitions within the district. Therefore, school districts with large enrollments per attendance center and a high number of school-to-school transitions also have higher high school dropout rates.

The author used ANOVA for data analysis and examined 447 Missouri school districts with high schools from 1990-91 through 1994-95. Of the 447 school districts, 256 districts had only one school-to-school transition and did not have intermediate level schools such as middle schools or junior high schools. The other 148 districts had one intermediate level school and subsequently two school-to-school transitions. School districts with only one transition from a K-6 to a 7-12 school and with small enrollments per attendance center have the lowest high school dropout rates. Findings also revealed that school districts structured to make the transition to high school in 10th grade have the highest dropout rates.

These results concur with Alspaugh (1999) who stated that the higher the grade level of the transition to high school, the higher the dropout rate. In both studies, Alspaugh (1998b) and Alspaugh (1999) findings revealed that 10-12 high schools with

the transition to high school in 10th grade have the highest dropout rates and 7–12 schools have the lowest dropout rates. As a result, when finding strategies to help students successfully adjust to high school, school districts may want to examine their school structure such as different types of schools and grade level organization such as the number of transitions and transition grade level.

The Effect of Middle to High School Feeder Patterns

When a large group of students moves to a new high school, the stratification system generally remains the same, which means that top students remain at the top and low achievers find it difficult to move up (Schiller, 1999). However, this does not apply when small groups of students disperse to several high schools because in this case, low achieving students may find opportunities to move up while at the same time students at the top may experience difficulties and move down. For example, ninth-grade students who received high grades in mathematics in middle school also received high grades in high school if they made the transition to this high school with the larger proportion of their middle school classmates. On the contrary, students who received low grades in Mathematics in middle school received high grades in high school if they made the transition with a smaller proportion of their middle school classmates.

This study also focused on the structural aspect of the transition process by looking at middle to high school feeder patterns. Schiller (1999) used data from the National Education Longitudinal Study of 1988 (NELS:88) to examine differences in students' transition process depending on geographic regions and organizational structures. The sample of NELS:88 consisted of approximately 25,000 eighth graders in

1,000 schools in the base year in spring 1988. Two years later, in 1990, a follow-up data collection from the original sample was conducted by the National Center for Education Statistics and included about 17,500 students in 1,500 high schools. However, the author used a sample of 12,000 students from the 1990 data collection and obtained math grades from students' transcripts to measure academic success (dependent variable).

To explain the findings of this study, Schiller (1999) clarified that middle school information about students' academic success in form of grades, test scores, and teacher recommendations is often used by high schools to make decisions about course placement and ability grouping. Within a strong feeder pattern of a large group of students that have formed stable relationships and social links, it may be difficult for individual ninth graders to break away and move up the ladder. On the other hand, within smaller groups of students, the stratification system seems to weaken and there may be opportunities for new relationships and academic reevaluation. However, the prospect of meeting new peers and making a fresh start may work in favor for some students and may cause others to slip.

An earlier paper by Gamoran (1990) that examined processes and selection criteria for the allocation of honors English classes for ninth graders concurred with Schiller's (1999) findings. Gamoran (1990) investigated four public school districts and one Catholic diocese in the Midwest and collected data from the junior high schools in 1987-88 and from the senior high schools in 1988-89 in form of interviews with school staff, student questionnaires, and through school records. Of the 1,102 eighth graders, 826 students (75%) were followed to ninth grade. Results show that placement in honors

English classes in high school heavily depended on ability grouping in middle school thus restricting student mobility as well as opportunities to move up the ladder. Even though the transition from middle to high school may be seen as a likely point in time for the reevaluation of students' needs, skills, and talents, "the data show that such reconsideration is seriously limited by judgments made in earlier years" (Gamoran, 1990, p. 28). As a result, educators in middle and high schools may need to reconsider in how far incoming ninth graders are labeled with existing records of achievement as well as how flexible these assessment boundaries are to give students an opportunity to succeed.

Several researchers examined the relationship of students with their peers and the effect of peer pressure on student outcomes (Abbott et al., 2000; Barnow et al., 2005; Crombie et al., 2005; DeBacker & Nelson, 2008; Graziano & Hair, 2003; Lan & Lanthier, 2003, Libbey, 2004; Herrmann, 2005). Langenkamp (2005) investigated the effects of relationships in middle school on student achievement in ninth grade when students are making this transition away from their middle school classmates. The author utilized Add Health data from a survey of 90,118 students between 7th and 12th grade and two waves of interviews with 14,738 students participating in both waves. Additionally, the author used data from the AHAA transcript study with information about high school transcripts and the last school attended of 14,003 participants. Results indicate that students that were socially more isolated in middle school and had problems with their friends had higher predicted ninth-grade GPA when making the transition to high school away from their middle school classmates. On the other hand, students who reported having many friends in middle school had lower predicted ninth-grade GPA

when making the transition to high school without their middle school friends.

Concurring with Schiller (1999) and Gamoran (1990), Langenkamp (2005) established that the impact of transitioning alone on academic achievement in high school depends on students' relationships with their classmates in middle school.

In agreement with these findings, Bottoms and Cooney (2008) recommended the appointment of a committee of teachers to reevaluate placement practices to allow more ninth graders to enroll in college-preparatory classes. The authors stated "Ninth-graders who are placed in higher-level courses have a lower failure rate than students with similar characteristics who are placed in lower-level courses" (Bottoms & Cooney, 2008, p. 1). The researchers utilized data collected by the Southern Regional Education Board (SREB) in the spring of 2000 from surveys as well as reading, math, and science assessments of eighth graders. Follow-up data was collected in the 2000-01 school year from 3,100 ninth graders, approximately 60% of the original sample of eighth graders of the SREB data collection. The authors used course-assignment and performance information and then examined students' grades in college-prep courses to measure students' readiness for high school. The authors considered students with a grade C or above as ready and prepared for the demands in high school and concluded that enrolling ninth graders in higher-level classes does not lead to increased failure rates. On the contrary, allowing ninth-graders placement in challenging higher-level classes improves student achievement. These findings concur with Yecke (2006) who recommended greater access to advanced courses and high expectations for academic classes at an earlier level in K-8 schools.

Summary

Researchers found out that there is achievement loss associated with each school transition. The higher the number of school transitions and the higher the grade level of the transition, the more serious is the impact on student achievement. In addition, achievement loss during the transition to high school is also associated with first college attrition rates. As a result, school districts need to review their school structure and their feeder patterns. For example, research suggests for middle schools to shift to the K-8 model because of better student achievement and attendance in K-8 schools. In addition, the placement of ninth graders in advanced classes also leads to improved student achievement (Alspaugh, 1998a, 1998b, 1999; Bottoms & Cooney, 2008; Freeman, 2005; Gamoran, 1990; Langenkamp, 2005; Schiller, 1999; J. S. Smith, 2006; Yecke, 2006). These findings present valuable insights into structural differences and student evaluation procedures between school districts and their effects on student achievement and high school dropout rates. This research may prompt school districts to investigate the organization of their schools regarding the number of school-to-school transitions, transitioning grade levels, and middle to high school feeder patterns. Educators may also examine their placement procedures regarding the allocation of higher-level classes to ninth graders. Finally, these findings could serve to help ninth graders be more successful in high school.

Ninth-Grade Transition Help, Transition Programs, and Intervention

Research suggests that there is a problem with ninth-grade failure in high school. The majority of authors who discussed research about the transition from middle to high

school were concerned with how to help students adjust to the demands in high school and many suggested transition programs to help students succeed (Allensworth & Easton, 2005; Baker et al., 2005; Cadwallader et al. 2003; Caldwell, 2007; Campbell, 2001; Case, 2006; Cauley & Jovanovich, 2006; Copeland, 2006; Dedmond, 2008; Duncan, 2004; Farley & Neild, 2008; Herlihy, 2007; Herlihy et al., 2005; Lampert, 2005; Kennelly & Monrad, 2007; Kerr & Legters, 2001; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002, Richmond & Williams, 2007; T. J. Smith, 2007). Duncan (2004) expressed the urgency of the ninth-grade problem and stated that “Just as medical doctors search for and identify cures for disease, so must education professionals search for and find the cure for the ‘disease’ called ninth grade failure” (p. 138). According to the literature, part of an effective cure for failing ninth graders are more academic rigor in middle schools, collaboration between middle and high schools, as well as transition programs. These recommendations will be addressed later in this section.

Some propositions to remedy the problem with ninth-grade failure are smaller learning communities for ninth graders and reorganization into a school-within-a-school (Duncan, 2004; Herlihy, 2007). For example, Herlihy (2007) used existing research to discuss state and district-level support structures for successful transitions to high school. The author referred to Haney et al. (2004), Herlihy et al. (2005), data from the Department of Education, as well as to already established, effective procedures in several schools and school districts in order to recommend important steps for a successful transition to high school. These five recommendations are monitoring and

accountability systems, diverse instructional needs of ninth graders, personalization of the learning environment, building capacity in low-performing schools, as well as involving the community, employers, and higher education.

These recommendations are in agreement with Case (2006) who reported that more than two thirds of ninth-grade students in a small rural high school experienced an increase in GPA between eighth grade and ninth grade. On the contrary, nearly 90% of ninth-grade students in a large suburban high school experienced a decrease in GPA between eighth grade and ninth grade. Kerr and Legters (2001) suggested more research on the quality and effects of the implementation of school-within-a-school programs. They reported that high schools in Maryland who adopted this type of small community ninth-grade transition program, showed considerable improvements on promotion, dropout rates, and achievement outcomes between the 1993-94 and 1999-00 school years. The author used quantitative data from public high schools in the state of Maryland and additionally surveyed 174 schools with a 79% response rate. Finally, Martin (2004) described a ninth-grade transition program featuring interdisciplinary team organization, schools-within-schools, heterogeneous grouping, flexible scheduling, teacher-based advisory programs, integrated curriculum, and differentiated instruction.

A further consideration to help ninth graders with their transition to high school is middle school counselor looping with middle school students to ninth grade in high school (Pedante, 2006). The researcher collected archival data from the first semester in ninth grade as well as survey data from student, parent, and teacher questionnaires to compare a group of ninth graders who transferred to high school together with their

middle school counselor with a group of ninth graders who changed school counselor in high school. Findings indicate that the students who were looping with their school counselor from middle school failed fewer classes in mathematics, had better attendance, and had fewer discipline and student assistance program referrals.

Other researchers also underlined the importance of school counselors in students' transition process from middle to high school to identify students at risk, help with high school course selections, support students emotionally, provide a clear academic focus, assist with future career choices, and develop effective counseling programs (Baker et al., 2005; Bottoms & Cooney, 2008; Brigman, Campbell, & Webb, 2007; Case, 2006; Cauley & Jovanovich, 2006; Cooper & Liou, 2007; Copeland, 2006; Dedmond, 2008; Lampert, 2005; McIntosh & White, 2006; Mizelle, 2005). Research suggests that school counselors play an important role in the support of ninth graders during their 1st year in high school. "With administrative backing, school counselors can provide entering students with the academic, social and emotional support needed to make the transition from early adolescent to college-ready young adult" (Cooper & Liou, 2007, p. 54). Counselor led initiatives may positively impact student achievement and social adjustment. For example, the counselor led Student Success Skills program (SSS) improved both students' academic achievement and classroom behavior (Brigman et al., 2007). The purpose of this program was to teach skills such as goal setting, progress monitoring, memory training, interpersonal and social problem solving skills, listening, teamwork, as well as attention, motivation, and anger management.

The Center for Mental Health in Schools of the University of California in Los Angeles (2003) published an introductory packet for transition and transition programs. This paper consists of existing research to provide specific steps in creating transition programs, to point out that change has positive as well as negative effects on learning, and to emphasize the importance of transition programs, after school programs, and summer programs. This publication also includes a collection of existing research describing transition problems and intervention strategies and it addressed how to plan, implement, evaluate, and sustain successful programs. Furthermore, the author provided detailed advice for parents, teachers, and school leaders with references to useful Internet sites, agencies, and organizations. Although this introductory packet did not include any original research, it may serve as a valuable practical resource for the development and implementation of effective transition programs that help teacher leaders to develop a transition program at their school or in their district.

In the discussion about helping ninth graders adjust to the academic and social challenges of high school, it is significant to point out that school districts need to employ well qualified teachers to improve academic achievement (Dedmond, 2008; Farley & Neild, 2008). Using regression analysis, Farley and Neild (2008) investigated this problem in detail and focused on teacher quality in ninth grade in a large urban school district using report card data from 47,034 students and Human Resources data from 2,701 teachers. Teacher variables were certification and teachers new to the school building. Student variables were demographic data, achievement, and attendance and a

school-level variable of percent of low income students was established from data published by the National Center for Education Statistics.

Farley and Neild (2008) presented the following findings: (a) students taking math, science, and foreign language are more likely to have a teacher new to the school and even higher odds of an uncertified teacher than students taking elective classes without core academic requirements, (b) in comparison to White students, African American students are more likely to have a certified teacher, a teacher new to the school, or a combination of both, (c) in comparison to White students, Latino students are more likely to have an uncertified teacher, a teacher new to the school, or a combination of both, and (d) in comparison to seniors, underclassmen are more likely to have an uncertified teacher, a teacher new to the school, or a combination of both. The authors also found out that ninth-grade students have the highest odds of getting uncertified teachers, teachers new to the school, or a combination of both. Ninth graders' odds of having an uncertified or new teacher are approximately one third greater than seniors and their odds of getting a teacher who is both new and uncertified are approximately 40% higher. Many students also have several new teachers, uncertified teachers, or a combination of both for their classes and again the odds are higher for ninth graders.

In light of the current problems with 9th grade failure rates, these findings provide cause for concern. Even though Farley and Neild (2008) were unable to comment on the impact of teacher quality on academic student outcomes due to standardized tests being administered only in 11th grade, the authors did establish a link between teacher quality and attendance. The results of this study suggest that higher percentages of uncertified

and new teachers are linked to lower attendance and that this impact is more severe for underclassmen and most severe for 9th graders, especially for repeating 9th-grade students. In conclusion, these findings are extremely important for schools and school districts that are investigating the implementation of 9th-grade transition programs because teacher quality is of the utmost importance for 9th graders. School administrators may want to create 9th-grade transition teams with highly experienced educators who are masters in their content areas, who have developed solid classroom and discipline procedures, and who are familiar with both the school building and the school culture.

Other support strategies for ninth-grade students recommended by researchers are a peer leader program and portfolio system, (Pantleo, 1992), a data and monitoring system for early identification and to improve school and school district accountability (Herlihy, 2007), as well as reevaluating placement practices, enrolling students in higher-level classes, and high expectations for all students (Bottoms & Cooney, 2008). In addition, to create successful transition programs there are three essential elements: (a) safety at school, (b) information about classes, rules, and opportunities, and (c) developing a sense of connection (Campbell & Jacobson, 2008). The authors also suggested orientation for parents and students, older student mentoring, peer mediation, communication with parents, and consistent transition practices.

Because school transition is as a multifaceted process and not just an event, some researchers suggested ninth-grade advisors, peer mentoring, ninth-grade teaming, orientation, and question – answer sessions to ease the transition process (Brough & Maute, 2002). Successful transition programs should also include effective teachers using

a variety of strategies to make learning interesting, mentoring programs, a school-within-a-school, block scheduling to spend more time with teachers, family orientation nights, student identification badges, and a closed campus policy (Butts & Cruzeiro, 2005). Finally, as mentioned previously during the discussion about high ninth-grade failure rates and the effects of grade retention, researchers strongly recommended early intervention rather than retaining students in the same grade level (Anderson et al., 2002, 2005; Blau et al., 2007; Bowman, 2005; Graydon et al., 2006; Griffith & Leckrone, 2006; Haney et al., 2004, Miao & Wheelock, 2005).

The following sections will discuss in more detail recommendations, specific strategies, and effective procedures to ease the transition process to high school. The role of middle schools, collaboration between middle and high schools, different types of transition programs and their grade levels, as well as teaching and learning strategies will be addressed.

The Role of Middle Schools

Several researchers discussed the significance of school district structures, feeder patterns, and middle school relationships as influential factors for ninth-grade success (Alspaugh, 1998b, 1999; Bottoms & Cooney, 2008; Freeman, 2005; Langenkamp, 2005; Schiller, 1999; J. S. Smith, 2006; Yecke, 2006). Other researchers underlined the importance of involving middle schools to prepare for successful transition to high school (Akos & Galassi, 2004; Boller, 2008; Dillon, 2008; Mizelle, 2005; Yecke, 2006). It is therefore essential to take a closer look at the role of middle schools, particularly since middle schools have often been accused of not placing enough emphasis on high

academic standards and on high expectations of behavioral conduct (Cauley & Jovanovich, 2006; Dillon, 2008; Mizelle, 2005; Yecke, 2006). For example, at a time when adolescents' higher-level thinking skills are further developing in the brain, schools have low academic expectations and do not foster that development (Cauley & Jovanovich, 2006). Some researchers also criticized middle schools for low expectations and neither providing enough academic challenges nor teaching students how to study on their own (Boller, 2008; Dillon, 2008; Mizelle, 2005; Yecke, 2006). "A challenging and supportive middle school experience is crucial in helping students make a smooth transition to high school" (Mizelle, 2005, p.56). The author also advocated the involvement of middle and high school administrators, teachers, students, and parents as in middle school education and recommended the creation of support programs and programs specifically addressing the transition period.

An alarming trend is that that student achievement begins to nosedive and eventually dies in U.S. middle schools (Yecke, 2006). Too many middle school educators have low expectations when it comes to students' academics and behavior with the excuse to allow the hormone-driven storms of early adolescence to pass. However, Yecke (2006) then asked the pivotal question "But if surging hormones truly drive middle school students' supposed lack of capacity to focus on academics, why does this phenomenon strike only in the United States?" (p. 20). The author argued that other countries do not suffer a similar deterioration in academic performance and accused middle schools of being havens of socialization and providing an antiintellectual

environment. The author referred to international comparisons such as Trends in International Mathematics and Science Study (TIMSS).

Moreover, when Yecke (2006) analyzed three studies comparing the performance of middle school students with the performance of K-8 students, all three studies concluded that K-8 students have a higher achievement as measured by GPA and standardized test results than students attending traditional middle schools. These findings concur with Freeman (2005) who reported in his mixed methods study that students in K-8 schools performed better in math and reading and had better attendance than students in middle schools and junior high schools. Interview data revealed possible reasons such as the absence of disruptive school-to-school transitions, greater continuity, greater level of personal support, and greater sense of community and trust.

Researchers generally agreed that education in the middle grades is in need of improvement (Boller, 2008; Dillon, 2008; Mizelle, 2005; Yecke, 2006). For example, Dillon (2008) talked to several educators whose expertise is education in the middle grades and found out that “Middle schools have been criticized for not balancing a nurturing environment with academic rigor” (p. 17). The author also noted that education experts recommend boundaries, expectations, structure, organization, and procedures for younger sixth-graders. However, in seventh and eighth grade the emphasis should be on taking ownership of one’s learning, self-directed learning, responsibility, and the development of deeper as well as broader thinking skills in order to bridge the gap between middle and high school education.

However, before educators are able to require that students take responsibility for their own learning, first they need to help students develop adequate organizational skills (Boller, 2008). The author used her expertise as a school psychologist to raise awareness about organizational skills and stated that teachers often assume that middle school students know how long ahead of the deadline to begin a homework project; that they can figure out how long each assignment will take, and that they are able to prioritize and appropriately allocate their time. The author suggested that teachers spend more time on the process of learning such as planning skills, designing a timeline, and how to find information. In agreement with these recommendations, Brough and Maute (2002) examined how to help eighth graders transition out of middle school by investigating these students' concerns. Since many of the issues were related to self-esteem and self-actualization, the authors suggested teaching students how to learn and how to study to be academically successful. For example, students could gain more confidence through learning how to organize and manage their time, learning how to be responsible and accountable, how to recognize their strengths and weaknesses, how to solve problems and make decisions, and how to set realistic goals.

Research suggests that academic standards need to be raised in middle school and that all middle-grade students should take challenging courses that accelerate learning (Bottoms, Cooney & Moore, 2002; Cauley & Jovanovich, 2006; Dillon, 2008; Mizelle, 2005; Yecke, 2006). Middle schools should "Provide an academic core aligned with rigorous content and performance standards" (Bottoms et al., 2002, p. 46). They should also be encouraged to set high expectations and to believe that all students are able to

succeed. More specific recommendations include the introduction of prealgebra or algebra 1 in the middle school curriculum as well as reading at least 25 books across the curriculum each year (Bottoms & Cooney, 2008). Other suggestions involve early identification and support in form of accelerated curriculum for students who may experience difficulties in ninth grade.

A final consideration must be given to Bottoms and Cooney (2008) who indicated the necessity to employ highly qualified teachers in the middle grades and to Calderon, Heller, and Medrick (2003) who reviewed existing research and linked certified teachers with B.A. or M.A. degrees in their subject area to higher test scores. Calderon et al. (2003) stated that the data to assess teacher quality was drawn from the National Educational Longitudinal Study of 1988 (NELS). Unfortunately, no further mentioning about the qualifications of middle school teachers was found in any other literature. However, the employment of highly qualified teachers was proposed twice in the context of best practices in middle school and improving middle school academics. Further research might be necessary to determine the significance of this observation.

In summary, the importance of education in the middle grades is undeniable. Researchers agreed that high expectations regarding academic achievement and behavioral conduct should be an integrated part of the middle school experience (Boller, 2008; Bottoms & Cooney, 2008; Bottoms et al., 2002; Calderon et al., 2003; Cauley & Jovanovich, 2006; Dillon, 2008; Mizelle, 2005; Yecke, 2006). Raising achievement and having high expectations regarding conduct may help ease the transition process to ninth grade and close the gap between middle school and high school expectations.

The Need for Collaboration Between Middle Schools and High Schools

Several researchers discussed in previous sections mentioned the importance of better collaboration, planning, and communication between middle and high schools (Akos & Galassi, 2004; Akos et al., 2008; Bottoms and Cooney, 2008; Brough & Maute, 2002; Cauley & Jovanovich, 2006; Cooper & Liou, 2007; Copeland, 2006; Herlihy, 2007; Hertzog, 2006; Letrello, 2002; Mizelle, 2005; Pantleo, 1992). Additionally, the Center for Mental Health in Schools (2007) released a report advocating the creation of Supports Resource Councils to bring together representatives from high schools and their feeder middle and elementary schools. These multilevel teams of representatives from all schools "... can help (a) coordinate and integrate programs serving multiple schools, (b) identify and meet common needs with respect to guidelines and staff development, and (c) create linkages and collaborations among schools and with community agencies" (Center for Mental Health in Schools, 2007, p. 10). Furthermore, Supports Resource Councils could be responsible for providing clear leadership, effective communication between all parties, program development, recommendations for restructuring and reforms, and for allowing all participating schools access to valuable resources. This report also incorporates the various phases for the creation of effective Supports Resource Councils such as the organization of resource teams at school sites in phase one, the development of a programmatic focus and infrastructure to support education in phase two, the maintenance and further improvement of appropriate changes in phase three, as well as the inclusion of these changes in district policies and practices in phase four.

Middle and high schools need to work together and align high school expectations with their feeder middle schools in order to ease the transition process (Bunting, 2004; Collins, 2005). One-time experiences such as a visit to the high school or guest speakers visiting the middle school are simply not enough to prepare middle school students for the challenges in high school. Continuous experiences and reinforcement are necessary and should be integrated into eighth grade. Communication and collaboration between middle and high school teachers also plays a very important role. The author suggested involving middle school teachers with subject and content matters taught in the high school to align curricula and to connect material between middle and high schools. In addition, middle and high school teachers should periodically exchange classes to gain new perspectives and make comparisons between the two levels. Finally, the establishment of transitional centers in the middle schools could help students deal with high school truths and myths and inform them about high school academics, ninth-grade course offerings, extracurricular activities, and high school events.

Unfortunately, even within school districts, schools still have a tendency to operate in isolation from each other and without much communication. For example, while middle school teachers felt that their students were ready and prepared for high school, high school teachers felt that the new ninth graders were not equipped with the necessary skills to be able to cope in high school (Collins, 2005). The author used comparative analysis of quantitative and qualitative data to examine the views of approximately 650 middle school and high school teachers on schooling in nine Connecticut school districts. All the teachers had approximately 13 years of teaching

experience and the researcher selected the sample schools from 2003-04 Strategic School Profile information collected by the Connecticut State Department of Education. Based on information from teacher and administrator focus groups, the researcher designed an online survey with Likert-type questions on a 5-point agreement scale, open-ended questions, and the opportunity to provide additional comments. Since middle and high school teachers seemed to have a different understanding of challenging courses and high expectations, the author recommended building a bridge between middle and high school philosophies and improving communication as well as collaboration between middle and high school teachers.

Many researchers agreed that improved collaboration such as horizontal and vertical articulation may help students with a smooth transition to high school (Bottoms & Cooney, 2008; Brough & Maute, 2002; Bunting, 2004; Center for Mental Health in Schools, 2007; Collins, 2005; DeMott, 1999). Horizontal articulation is the creation of teams of teachers of the same grade level in elementary and middle schools and teams of teachers within the same department in high school (DeMott, 1999). To be consistent with students, team members agree on common procedures for retention, acceleration, promotion, grading, honors classes, ability grouping, and educational objectives. On the other hand, vertical articulation involves liaison between different schools, middle and high school for example. Vertical articulation committees may help determine common goals such as middle school exit objectives, skills and competencies required by the high school, and the development of courses and programs. These recommendations may

provide a valid basis for the creation of ninth-grade transition programs because successful implementation should include liaison between all stakeholders.

Similar to DeMott's (1999) proposal for horizontal and vertical articulation and the Center of Mental Health in Schools' (2007) Support Resource Councils, Brough and Maute (2002) suggested the creation of a district transition team involving administrators, teachers, and parents of the sending and receiving schools to oversee the complex process and ongoing experience of transitioning from middle to high school. The authors also recommended an assessment of needs and concerns based on a questionnaire for students, parents, and teachers as well as articulation programs and policies to improve communication between sending and receiving schools. Last but not least, Bottoms and Cooney (2008) also proposed vertical teams of middle and high school teachers to align curricula and performance standards. In addition, the authors recommended family orientations about graduation requirements and future employers' expectations, as well as vertical teacher teams to identify skills needed to be successful in ninth grade and college-preparatory classes.

In conclusion, many researchers recognized the importance of collaboration between middle and high schools in order to help adequately prepare eighth-grade students for the transition to high school (Akos & Galassi, 2004; Akos et al., 2008; Bottoms and Cooney, 2008; Brough & Maute, 2002; Bunting, 2004; Cauley & Jovanovich, 2006; Center for Mental Health in Schools, 2007; Chapman & Sawyer, 2001; Collins, 2005; Cooper & Liou, 2007; Copeland, 2006; DeMott, 1999; Duncan, 2004; Herlihy, 2007; Hertzog, 2006; Letrello, 2002; Mizelle, 2005; Pantleo, 1992). Their

numerous recommendations may be incorporated as common practice of effective transition programs to help ninth graders adjust to the demands in high school.

For example, elementary, middle, and high schools often work in separation and there is a need for relationships between middle and high schools. To improve this situation, researchers recommended articulation meetings between middle and high school staff to improve curriculum planning. In addition, eighth graders need support mechanisms such as a shadow day in high school, an extracurricular fair, and assistance with course selection for the 1st year in high school (Chapman & Sawyer, 2001; Duncan, 2004; Letrello, 2002; Pantleo, 1992). Additional recommendations include an exchange day for middle school and high school teachers, middle and high school teachers team teaching in both middle and high schools, transition teams at both middle and high schools, pairing up middle school students with high school students and student exchange visits between the two schools, as well as inviting eighth-grade students and their parents to high school activities (Letrello, 2002).

Transition Programs

A large number of researchers suggested transition programs to help 9th-grade students cope with the challenges and expectations in high school (Akos & Galassi, 2004; Baker et al., 2005; Brigman et al., 2007; Butts & Cruzeiro, 2005; Caldwell, 2007; Campbell & Jacobson, 2008; Case, 2006; Chapman & Sawyer, 2001; Copeland, 2006; Duncan, 2004; Herlihy et al., 2005; Kerr & Legters, 2001; Lampert, 2005; MacKay, 2006; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Mizelle, 2005; Neild & Weiss, 1999; Pantleo, 1992; Peasant II, 2006; Potter, 2004; Reents, 2002; J. B. Smith,

1997; Thorne, 2001). The previous section addressed activities, strategies, and possible components of effective transition programs to help 9th-grade students with the adjustment and transition process in high school. This section concentrates on the various types of transition programs including effective and successful components of such programs. For example, researchers investigated 8th-grade transition programs in middle school (Brigman et al., 2007; Chapman & Sawyer, 2001; Mizelle, 2005; J. B. Smith, 1997; Thorne, 2001) as well as 9th-grade transition programs in high school (Baker et al., 2005; Caldwell, 2007; Case, 2006; Copeland, 2006; Lampert, 2005; Herlihy et al., 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2005; Pedante, 2006; Potter, 2004; Reents, 2002). There is also literature about one follow-up transition program in 10th grade (Campbell, 2001).

Middle School Transition Programs

The previous sections discussed the role of middle schools and a necessary focus on collaboration between middle and high schools. Many researchers emphasized the significance of the middle grades regarding adequate preparation of students for their transition to ninth grade and the inevitable high demands and challenges of high school (Akos & Galassi, 2004; Akos et al., 2008; Boller, 2008; Bottoms and Cooney, 2008; Bottoms et al., 2002; Brough & Maute, 2002; Bunting, 2004; Calderon et al., 2003; Cauley & Jovanovich, 2006; Center for Mental Health in Schools, 2007; Chapman & Sawyer, 2001; Collins, 2005; Cooper & Liou, 2007; Copeland, 2006; DeMott, 1999; Dillon, 2008; Duncan, 2004; Herlihy, 2007; Hertzog, 2006; Letrello, 2002; Mizelle, 2005; Pantleo, 1992; Yecke, 2006). In light of this considerable interest in middle school

education and middle school responsibilities, it is surprising to discover that only a few researchers investigated middle school programs that prepare students for a successful transition to high school (Brigman et al., 2007; Chapman & Sawyer, 2001; Mizelle, 2005; J. B. Smith, 1997; Thorne, 2001).

One of the middle school programs, the counselor led Student Success Skills program (SSS), had a positive impact on students' achievement and behavior (Brigman et al., 2007). The 220 participating students in grades five, six, seven, eight, and nine from six treatment and six comparison schools were selected at random and matched for main demographics. The school counselors of the treatment schools participated in several days of training with a focus on raising student achievement as well as improving social and self-management skills. The training included demonstration of lessons, group sessions, practice, and peer coaching sessions.

Next, these school counselors implemented the SSS curriculum in three 45-minute classroom guidance lessons. After that, several students with FCAT (Florida Comprehensive Assessment Test) reading test scores between the 25th and 50th percentile were selected from these guidance classrooms at random to attend smaller SSS intervention groups for 8 weekly 45-minute meetings followed by four monthly booster meetings also lasting 45 minutes each. Brigman et al. (2007) used state-mandated achievement tests as well as a measure for social competence (School Social Behavior Scale) to evaluate treatment results. The findings of this study indicate that the counselor led SSS program improved both students' academic achievement and classroom behavior. The researchers reported a moderate size effect for math scores ($d = .45$) and

that 60% of students had improved behavior. Although this study does not evaluate the effectiveness of a middle to high school transition program, the SSS intervention strategies occurred in both the middle grades and in ninth-grade in high school and they could be integrated into effective transition programs at either level.

Many researchers advocated transition programs to help students cope with the demands in high school but only a few drew attention to an earlier intervention in middle school (Chapman & Sawyer, 2001; Mizelle, 2005; J. B. Smith, 1997; Thorne, 2001). For example, Mizelle (2005) emphasized that “Educators need to understand that a smooth and successful transition into high school begins in the middle grades” (p. 59) and criticized middle school teachers for often being too lenient with students “neither challenging them to meet high standards nor teaching them how to study on their own” (p. 57). Middle schools need to pay more attention to study skills, students’ ability to handle more choices within a broader curriculum, and the increased demands on students’ time for studying and completion of homework once they attend high school.

Effective middle school transition programs can have a positive impact on high school retention and students’ academic achievement (J. B. Smith, 1997). Students with full access to a comprehensive transition program in their middle school had higher grades in high school and were less likely to drop out than students who had only a partial program or no program at all. This study used data from the National Educational Longitudinal Survey (NELS) that was collected by the National Center for Education Statistics in 1988, 1990, and 1992 and that consisted of 26,200 randomly selected eighth graders from 1,035 public, Catholic, and private schools. However, the author limited the

data to public schools only and to students making the transition to ninth grade to separate high schools resulting in 7,924 eighth graders from 702 middle schools.

Participants of a transition to high school initiative within the context of Communities-In-Schools (CIS), a nationwide stay-in-school program, expressed their satisfaction with this program (Chapman & Sawyer, 2001). Activities included tutoring, supportive counseling, and enrichment activities such as visiting the high school, ninth-grade mentors, and meeting the ninth-grade principal and ninth-grade guidance counselor. Additionally, this program put emphasis on the role of the social worker to provide students and parents with a support system: “School social workers have the training to build the collaborative relationships among members of different parts of a system. They know that building trust between parents and school personnel can enhance a student’s educational experience significantly” (Chapman & Sawyer, 2001, p. 238). However, this report did not include any data analysis about the effect on student outcomes. The authors reported satisfaction with this program based on students’ willingness to contribute to the planning process, students’ active participation, and their attendance. There is no specific data available connected to these conclusions.

Researchers also agreed that any type of transition program needs to be collaborative between students, parents, and staff who all need to be fully committed to easing the transition process (Chapman & Sawyer, 2001; Mizelle, 2005; J. B. Smith, 1997). For example, J. B. Smith (1997) pointed out that high school transition programs are beneficial when schools provide comprehensive support and highlighted that “Programs that target only one population – students, parent, or staff – might be

considered wasted because they show no independent impact on improved student outcomes” (p. 150). Mizelle (2005) underlined the importance of parental involvement and suggested that administrators, counselors, and teachers from both middle and high schools should collaborate and exchange information about programs. Finally, Chapman and Sawyer (2001) emphasized “The transition program is an out-growth of an on-going collaboration between a school of social work and a school district interested in meeting the needs of at-risk students” (Chapman & Sawyer, 2001, p. 239). The concept of involving school social workers in the transition process to high school is particularly significant because social workers are not generally linked to improving students’ academic achievement. Often social workers intervene as a last resort in a crisis situation. Such emergency intervention could possibly be prevented with the involvement of social workers at an earlier stage in the transition process.

Thorne (2001) examined the experiences and perceptions of 36 at-risk eighth graders of a middle school intervention program aimed at easing the transition to high school. In this qualitative phenomenological study, the researcher used formal individual interviews, informal conversational interviews, focus groups, and journaling for phase one of the data collection, prior to the transition activities in eighth grade. The researcher was then able to refine the data collection procedure and used focus groups and in-depth interviews for phase two which occurred in eighth grade after the transition activities. Phases three consisted of in-depth interviews, focus groups, and informal conversational interviews after the first six weeks in ninth grade in high school and then again during phase four after students were in ninth grade for 5 months. Finally, phase five included

informal conversational interviews with four ninth-grade teachers. The author used specifically prescribed steps for phenomenological data analysis such as bracketing, note taking and data organization to create significant statements, formulating meanings, clustering themes, and describing the essence of the experience.

The results of Thorne's (2001) afterschool initiative indicate that students enjoyed the program and that participation in this program gave them the opportunity to make decisions and choices. Students also reported that they felt valued, respected, and included in the high school setting. They enjoyed working in teams with their friends and learning from each other during the program. Furthermore, students reported that they felt at ease with the transition to ninth grade and that with the help of this program students were looking forward to ninth grade. Once in ninth grade, students reported that they fit in well and that they were able to make new friends as well as concentrate on their studies. Although the author was able to report the overall success of this middle school transition program, this study had only a very small number of participants and included exclusively students identified as at risk. However, there is no doubt that several components of this transition program may potentially be very useful and effective for a general eighth-grade student population.

The few researchers who did investigate support structures in middle school to ease the transition to high school were able to establish a solid basis for intervention in the middle grades (Brigman et al., 2007; Chapman & Sawyer, 2001; Mizelle, 2005; J. B. Smith, 1997; Thorne, 2001). Important recommendations were the commitment and collaboration between all stakeholders as well as the involvement of both school

counselors and social workers. However, only two researchers were able to provide specific data (Brigman et al., 2007; J. B. Smith, 1997), one of whom stated that transition programs in middle school may help students perform better in high school and may prevent students from dropping out (J. B. Smith, 1997). In summary, although all researchers provided detailed descriptions about their specific programs and reported positive outcomes, there was a clear lack of supporting data to evaluate results. Several authors pointed out that their transition programs will continue to grow and expand while at the same time making the necessary adjustments to improve individual components (Chapman & Sawyer, 2001; Mizelle, 2005; J. B. Smith, 1997; Thorne, 2001).

Ninth-Grade Transition Programs

The vast majority of researchers who investigated transition programs to help students be successful in high school, discussed ninth-grade transition programs (Baker et al., 2005; Caldwell, 2007; Case, 2006; Copeland, 2006; Herlihy et al., 2005; Lampert, 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002). This does not come surprising since researchers identified ninth grade as a large leak in the education pipeline (Haney et al., 2004) and a particularly difficult period of time for students who are facing transition problems to high school as well as developmental problems of adolescence (Cadwallader et al., 2003; Cauffman & Steinberg, 2000; Duncan, 2004; Engels et al., 2005; Foster & Sisk, 2004; Harvard Mental Health Letter, 2005; Herrman, 2005; Kerr & Legters, 2001; National Center for Education Statistics, 2007; Neild & Weiss, 1999; Park & Wallace, 2004; Reents, 2002). Because the problems occur in ninth grade, the majority of the

literature deals with intervention strategies in form of transition programs for ninth-grade students. According to Reents (2002), high schools with fully developed ninth-grade transition programs experienced a dropout rate of 8% in comparison to schools without transition programs where the average dropout rate is 24%. Additionally, Allensworth and Easton (2005) established a positive relationship between a successful ninth-grade year and on-time graduation from high school, which further emphasizes the importance of a successful 1st year in high school.

Some of the recommendations for successful transition programs in middle school included collaboration between all stakeholders and the involvement of school counselors and social workers (Brigman et al., 2007; Chapman & Sawyer, 2001; Mizelle, 2005; J. B. Smith, 1997; Thorne, 2001). In addition, some researchers advocated engaging students as mentors (Copeland, 2006; Lampert, 2005). For example, in a study of their Chicago high school, Lampert (2005), a school social worker, reported that a substantial number of ninth graders were unable to adjust to the demands and challenges of high school and that many students were failing their classes. This realization prompted the principal to take a proactive approach by creating and implementing a Freshman Advisory Program. The planning process took 2 years and involved planning teams of students, parents, teachers, counselors, and administrators. Concurring with the research of middle school transition programs (Brigman et al., 2007; Chapman & Sawyer, 2001; Mizelle, 2005; J. B. Smith, 1997), the author concluded that to develop a successful program, collaboration between students, parents, teachers, administrators, guidance counselors, social workers, and the whole school district is of the utmost importance. Cooperation and teamwork led

to the success of the Freshman Advisory with a decrease in ninth-grade failure from 37% in the first semester of 2002-03 to just 23% in the first semester of 2004-05. However, although the author provided a detailed description of the Freshman Advisory transition program and reported positive outcomes, the article did neither include any longitudinal data nor in-depth data analysis to evaluate the effectiveness of the program.

Another significant recommendation of researchers who discussed ninth-grade transition programs was separating ninth graders from the rest of the school (Baker et al., 2005; Case, 2006; Copeland, 2006; Duncan, 2004; Kerr & Legters, 2001; Lampert, 2005; McIntosh & White, 2006; Pantleo, 1992; Pedante, 2006; Potter, 2004; Reents, 2002). For instance, Reents (2002) focused on isolating ninth graders and treating them as a separate community. For example, Aldine Independent School District and Alief Independent School District (both in Houston, Texas) built separate ninth-grade campuses to help raise student achievement. As a result, more students successfully move on to the next grade level, fewer students are dropping out, and overall attendance has improved. However, it is also important for ninth-grade centers to overlap with the high school to allow ninth graders to have some exposure to high school life and to participate in extra curricular activities. This report does not include any original data but the author referred to existing data, described personal experiences, and included quotations to describe how existing ninth-grade transition programs work in two school districts. Therefore, this article serves as an example for educators that investigate the implementation of such programs in their own school or school district and it provides a basis for further inquiry into ninth-grade transition programs.

Throughout the literature, researchers emphasized collaboration between middle and high schools to ease the transition process (Akos & Galassi, 2004; Akos et al., 2008; Bottoms and Cooney, 2008; Brough & Maute, 2002; Cauley & Jovanovich, 2006; Cooper & Liou, 2007; Copeland, 2006; Herlihy, 2007; Hertzog, 2006; Letrello, 2002; Mizelle, 2005). Such collaboration may include in-service training for middle and high school teachers to improve curriculum articulation and ninth-grade study skills, shadow experiences with extracurricular fair for eighth graders in high school, and the involvement of high school counselors in middle school to help with the selection of classes (Pantleo, 1992). The importance of involving school guidance counselors in the transition process has been a common theme throughout the literature (Baker et al., 2005; Bottoms & Cooney, 2008; Brigman, Campbell, & Webb, 2007; Case, 2006; Cauley & Jovanovich, 2006; Cooper & Liou; 2007; Copeland, 2006; Dedmond, 2008; Lampert, 2005; McIntosh & White, 2006; Mizelle, 2005). In addition, the author described a peer leader mentor program in ninth grade for academic and social support, which concurs with Lampert (2005).

Pantleo (1992) collected data from the middle schools and the high school to create a data matrix reporting absences and grade failures of eighth graders and ninth graders before the implementation of the program. These numbers show that 48% of ninth-grade students were failing one or more classes before implementation of the program. In the 2nd year after implementation the number of students earning failing credits decreased to 44.5%. The data was only available in form of a summarized table with the number of students, first semester failure rate, second semester failure rate, and

average failure rate for the 1989-90 school year before implementation and the 1991-92 school year, the 2nd year after implementation.

Although the highly ambitious goal to reduce failure rates from 48% to just 15% was not reached, Pantleo (1992) stated that this student-centered program was successful because its implementation was based on the needs of ninth graders as reported in a ninth-grade survey. The report states that articulation activities and study skill instruction between middle and high school teachers will continue and that the peer mentor leader program has become a distinctive and integrated feature of the high school. This report provides a foundation for educators who are investigating the creation of ninth-grade transition programs at their school because it includes important information such as a ninth-grade survey to find out about their needs, a full description of transition activities, and a step-by-step timeline of implementation. Educators may also find the description of problems and constructs during implementation such as school district policies, problems with staff and contracts, as well as monetary considerations extremely useful.

Throughout the literature, many researchers described successful transition programs and their effective components in great detail yet they did not include sufficient data on student outcomes (Baker et al., 2005; Chapman & Sawyer, 2001; Lampert, 2005; Mizelle, 2005; Reents, 2002). For example, Baker et al. (2005) described an initiative called Capital High Academy for Ninth Graders Exceeding Standards (CHANGES) to help struggling ninth graders succeed. The academy was a separate school within the high school with staff specifically assigned to the CHANGES program. Students who participated in this program had a different bell schedule, alternating A and B schedules,

and they attended three classes in the regular high school and five classes in the academy on a daily basis. To make valid comparisons, staff selected a group of Academy students and then matched a group of control students as closely as possible to the Academy students on relevant attributes. For evaluation purposes, teachers kept implementation logs for daily reflection. Evaluators also used classroom observation, surveys, and interviews.

The researchers examined students' learning experiences, perceptions, and attitudes and reported that CHANGES students felt about the same as their peers in regular classrooms. CHANGES students also had similar perceptions and attitudes about themselves and their learning experiences at the end of ninth grade as students in the control group. Even though this study did not refer to any student academic outcomes, Baker et al. (2005) concluded, "... findings suggest that the CHANGES initiative was successful in promoting a positive ninth-grade classroom experience for the students involved in the program" (p. 59). However, it appears that there is not enough data to fully support this statement because the authors did not explore academic achievement such as GPAs, number of classes passed and failed, and high school credits earned.

Within the context of her study about perceptions of middle and high school transitions as viewed by students, parents, teachers, counselors, and administrators, Copeland (2006) concluded that since the implementation of the Freshman Academy there has been an improvement of academic achievement and a decrease in suspensions and expulsions. However, the author did not include any specific data evaluating the effect of the academy on student outcomes probably because it was not the purpose of

that study to evaluate success. Nevertheless, the author concurred with current research and strongly recommended ninth-grade transition programs featuring orientation, team building, leadership classes, cooperative learning, afterschool tutoring, mentoring programs, summer enrichment programs, intensive counseling, as well as smaller class sizes and smaller learning communities.

Several researchers advocated smaller class sizes, smaller ninth-grade communities, and separating ninth-grade students to be taught in their own buildings or parts of buildings (Baker et al., 2005; Copeland, 2006; Duncan, 2004; Herlihy et al., 2005; Kerr & Legters, 2001; McIntosh & White, 2006; Peasant II, 2006; Reents, 2002). In a mixed methods study, Case (2006) compared a ninth-grade class of a large suburban high school with a ninth-grade class in a smaller rural but demographically similar high school. Two thirds of the ninth graders in the smaller rural school experienced higher GPAs in ninth grade than in eighth grade and nearly 90% of ninth graders in the larger suburban high school experienced lower GPAs. This data appears to be contradictory when it comes to the effectiveness of ninth-grade transition programs because the large suburban high school where a large number of students experienced a decrease of their GPA has had a ninth-grade transition program in place for 3 years. On the other hand, the smaller rural high school where the majority of students experienced an increase in their GPA provides only few transition activities and does not offer a transition program.

However, this data supports researchers who recommended smaller ninth-grade communities and isolating ninth graders from the general high school population (Baker et al., 2005; Copeland, 2006; Duncan, 2004; Herlihy et al., 2005; Kerr & Legters, 2001;

McIntosh & White, 2006; Peasant II, 2006; Reents, 2002). It appears that the smaller setting of the rural high school functions like such a small and supportive community.

Nevertheless, Case (2006) stated:

One could argue that the suburban high school has the right approach because they have high expectations, teach responsibility, the grades at the middle school were inflated, and that their students will rebound from the decline in GPA and still succeed. (p. 147)

On the other hand, the rural high school may have the right approach by teaching students how to be responsible, by closely monitoring their homework, and not using grades to teach students accountability.

Next, Case (2006) interviewed the students with the largest increases and decreases in their GPA between eighth grade and ninth grade. The author was not able to report a significant statistical difference between successful and unsuccessful students regarding participation in a transition program and transition activities, participation in extracurricular activities, and parental support. Nevertheless, students reported the 1st day in high school for ninth-grade students only and ninth-grade students visiting eighth graders in middle school as their favorite activities. The author described such transition activities as useful but only temporal and reported that the two key factors of successful transitions to ninth grade are homework policies and teacher behavior.

Finally, Case (2006) recommended closing the gap between 8th grade and 9th grade and stated that 8th grade should not resemble 6th grade and 9th grade should not resemble 12th grade. The author suggested investigating the looping of middle and high school teachers as well as a change in leadership by administrative teams from middle and high schools splitting their time between schools. These recommendations concur

with the current literature about collaboration between middle and high schools to close the gap between 8th-grade education and 9th-grade expectations (Bottoms & Cooney, 2008; Bunting, 2004; DeMott, 1999; Dillon, 2008; Duncan, 2004; Letrello, 2004; Martin, 2004). However, only Pedante (2006) examined the effects of school counselor looping from middle to high school and stated that parents, students, and teachers had mixed perceptions about school counselor looping with a generally positive trend. Students who looped with their counselor from middle to high school also had generally positive experiences.

Research about the experiences and perceptions of students, educators, and parents regarding ninth-grade transition programs suggests generally positive outcomes. For example, after the 1st year of the introduction of a ninth-grade transition program, Ninth-Grade Academy participants reported more opportunities for class participation, were able to build stronger relationships with their peers, and were more successful in state-wide testing (Potter, 2004). In addition, teachers reported greater collaboration with their colleagues and closer relationships with their students. Administrators reported more parental involvement and a better school climate.

Although Potter's (2004) findings suggest successful implementation of a ninth-grade transition program based on extensive quantitative and qualitative data analyses, the results of this study derive from the attitudes, experiences, and perceptions of the individual participants. For example, the report of greater success on state tests is not based on actual percentages and test results. Furthermore, there is no comparison between

an experimental group, participants of the Ninth-Grade Academy, and a control group, nonparticipants of the Ninth-Grade Academy.

For this study, approximately 25 Ninth-Grade Academy teachers responded to a school climate survey and a ninth-grade specific survey. Approximately 350 ninth graders responded to a survey on their ninth-grade experience. Additionally, 6 teachers and 10 students participated in a focus group and 4 principals participated in interviews about their Ninth-Grade Academy experience.

The current literature provides evidence that ninth-grade transition programs have a positive impact on student achievement. For example, longitudinal data from a Freshman Wing program suggests that for the participating Classes of 2004-2007 the number of ninth graders who were failing classes decreased during that period of time (McIntosh & White, 2006). The number of students failing more than five classes was 5% in 2003 and then it decreased for the Classes of 2004-2007. The number of students failing four or five classes fell from 16% to 7.1%. The number of students failing two or three classes fell from 37% for the Class of 2003 to 27.5% for the Class of 2007. Interestingly enough, the number of students failing one class increased for the Classes of 2004-2007 because as the number of students who were failing multiple classes decreased, the number of students failing just one class increased.

The Freshman Wing program helped reduce failure rates and all stakeholders reported positive experiences. Apart from general transition program components recommended previously such as dedicated ninth-grade teams of teachers, visits to the middle schools, and eighth-grade orientation, this program also featured an intervention

specialist for at-risk students, an annual freshmen teacher retreat to build relationships, and collaboration with the Alcohol Drug Addiction and Mental Health Services Board, Family Resource Centers, the Juvenile Court, and other agencies for resources, support, and funding. Unfortunately, due to lack of funding, the program had to be stopped before it had a chance to become an integrated part of the transition to ninth grade.

Small ninth-grade communities and isolating ninth graders to be taught separately from the general high school population has been a reemerging theme throughout the literature (Baker et al., 2005; Case, 2006; Copeland, 2006; Duncan, 2004; Herlihy et al., 2005; Kerr & Legters, 2001; McIntosh & White, 2006; Peasant II, 2006; Reents, 2002). Research suggests that treating ninth graders as a separate community has a positive effect on student achievement. For example, in a quantitative study, Peasant II (2006) investigated the effectiveness of ninth-grade schools by comparing the achievement of first-time ninth graders enrolled in three ninth-grade schools with the achievement of first-time ninth graders enrolled in three traditional high schools. All schools had similar demographics. Achievement was measured by the Mississippi Subject Area Testing Program (SAPT) in algebra I and biology I for the 2005-06 school year and all study participants were enrolled in algebra I or biology I or both during their ninth-grade year. From each participating school, 100 students, 50 students for each SAPT, were randomly selected totaling 600 participants. The researcher used SPSS and independent measures *t* tests for data analysis.

Results indicated that there was a significant statistical difference in both the algebra I and the biology I SAPT scores between participants of the ninth-grade schools

and nonparticipants. Students enrolled in the ninth-grade schools outperformed students enrolled in traditional high schools by more than 15 points in the algebra I SAPT and by nearly 25 points in the biology I SAPT. Peasant II (2006) concluded that ninth-grade schools are very effective and could potentially decrease high school dropout rates. These findings clearly support the trend in the current literature to isolate ninth graders and to teach them in separate school locations.

The Talent Development High School model was initiated in 1994 in partnership between the Center for Research on the Education of Students Placed At Risk (CRESPAR), based at Howard University and The Johns Hopkins University, and Patterson High School in Baltimore, MD. This program is a comprehensive school reform program focusing particularly on ninth graders to address high dropout rates, to increase academic achievement, and to prepare all students for postsecondary education and future careers (Herlihy et al., 2005). This model consists of (a) small learning communities such as ninth-grade academies and twilight schools, (b) standards-based, college-preparatory, and career-oriented curricula and instructional materials, (c) increased learning time such as block schedule, double English and math classes, twilight school, and opportunities for recovery, (d) ongoing professional development for teachers, and (e) partnerships with families, the community, and other schools. These components concur with current research about ninth-grade transition programs and ninth-grade intervention strategies (Baker et al., 2005; Caldwell, 2007; Campbell, 2001; Case, 2006; Chapman & Sawyer, 2001; Cauley & Jovanovich, 2006; Copeland, 2006; Cooper & Liou, 2007; Dedmond, 2008; Duncan, 2004; Farley & Neild, 2008; Herlihy,

2007; Herlihy et al., 2005; Kerr & Legters, 2001; Lampert, 2005; Lan & Lanthier, 2003; Martin, 2004; McIntosh & White, 2006; Melton, 2004; Mizelle, 2005; Peasant II, 2006; Pantleo, 1992; Pedante, 2006; Potter, 2004; Reents, 2002; J. B. Smith, 1997; T. J. Smith, 2007). As of the 2003-04 school year, nationwide, 83 high schools in 32 school districts in 20 states have been participating in the Talent Development program.

For a report about this program, MDRC (Manpower Demonstration Research Corporation, a nonprofit organization specializing in educational and social policy research) examined five high schools in the School District of Philadelphia that had the Talent Development High School model in place and six high schools that did not participate in this program in the same school district (Herlihy et al., 2005). Researchers used a comparative interrupted time series design to track 20 cohorts of 9th graders for up to 4 years in high school in order to perform a rigorous, independent, third-party evaluation of the Talent Development program. Major findings indicate that the Talent Development model improved 9th graders' attendance by an average of 5 percentage points, increased the total credits earned by 0.69 credits, and increased the percentage of students meeting promotion requirements to 10th grade between 7 to 8 percentage points. Additionally, this program had a significant effect on the percentage of first-time 9th graders earning credit for English and algebra with an increase of 10, 9, and 14 percentage points for successive cohorts of 9th graders. In contrast, nonparticipating schools reported an increase of only 1, 1, and 5 percentage points. Findings also revealed improved student performance on 11th grade standardized assessment tests as well as higher graduation rates.

In summary, the Talent Development High School model has long-lasting effects on student performance and its benefits extend beyond 9th grade. Additionally, educators may want to consider the implementation of a successful, nationwide, and comprehensive school reform program with all its support structures rather than create their own program in isolation and with little help.

Several other researchers investigated smaller groups of students and students identified as at risk (Caldwell, 2007; Martin, 2004; Melton III, 2004).

For example, Martin (2004) used a qualitative case study approach to develop, implement, and evaluate a ninth-grade transition program with three teachers, interdisciplinary teams, schools-within-schools, heterogeneous grouping, flexible scheduling, advisory programs, and differentiation strategies. The researcher employed portraiture techniques, observations, internal documents, surveys, and ethnographic interviews with one student participant, one guidance counselor, and the principal, as well as quantitative data for triangulation purposes.

Results indicate that several components of the ninth-grade transition program helped participants to be successful in high school. For example, one participant accredited his high school success including early graduation to this program. In addition, Martin (2004) stated that “A review of the data of this case study suggests that continuation of the program with modifications would have been optimal for this high school. The quantitative data suggests the students were experiencing some success” (p. 90). Even though successful and even though this program did not target the whole ninth-

grade population, a leadership change at the high school led to the abandonment of this ninth-grade transition program.

A few researchers concentrated on transition programs that targeted students identified as at risk (Caldwell, 2007; Melton III, 2004). For example, the Bearcat “Pride” program at Virginia High School in Bristol, VA, is a ninth-grade transition program for approximately 30-40 at-risk students every school year (Caldwell, 2007). The program began in 2003 to cater to students’ educational, social, and behavioral needs through focus on language arts, algebra, study and organizational skills, character education, and technology integration. The program also places emphasis on extracurricular activities and on involvement of families to improve attendance, increase academic achievement, and reduce discipline referrals.

Caldwell (2007) used a quantitative methods case study approach conducted his study over a period of 3 years. Participants included three groups of ninth-grade at-risk students: 26 students in 2003-04, 26 students in 2004-05, and 43 students in 2005-06. Student participants for the transition program were selected by a transition team from both the middle and the high school. Selection criteria included standardized test results, discipline referrals and suspensions, attendance and tardy records, course grades and GPA, and individual referrals from middle school teachers. In addition, parental agreement to meet with school academic staff and parental involvement in school activities were necessary to be able to participate in this program.

The researcher collected pretreatment data in eighth grade and post-treatment data in ninth grade (GPA, Stanford 9 Reading Achievement Test scores, number of courses

failed, attendance and tardy records, number of extracurricular activities). Additional ninth-grade post-treatment data included number of discipline referrals, number of in-school suspensions, number of long-term suspensions, and information about promotion to the next grade level. The researcher used SPSS to perform the *t* test for independent samples and two-way ANOVAs for data analysis.

The findings of this study indicate that students who participated in the Bearcat “Pride” ninth-grade transition program showed improved academic performance, an increased participation in extracurricular activities, and a decrease in disciplinary measures in comparison to their eighth-grade year. For example, a one-way ANOVA for GPAs was significant with $F(2,90) = 7.81, p < .01$ and a large size effect of .15. Although Caldwell (2007) reported considerable differences between the three groups of students, the researcher established significant improvement regarding GPAs, core courses passes, and extracurricular participation. The differences for Stanford 9 Reading scores and attendance and tardy records were either minimal or statistically not significant. The author concluded that the Bearcat “Pride” ninth-grade transition program was effective and had a positive impact on students.

In a similar quantitative, cause-and-effect, time-delayed study, Melton III (2004) investigated the impact of the ACE Academy at Griffin High School, GA (a transition program for incoming 9th graders identified as at risk) on the number of courses passed and readiness for promotion to 10th grade. This program included an advisor-advisee program, extra reading and math instruction, a lower student-teacher ratio, individualized instruction, and comprehensive course scheduling, and collaboration with ninth-grade

counselors, administrators, and parents. The participants, first-time ninth graders in the 2003-04 school year, teachers, high school administrators, counselors, and parents, were surveyed before the 2003-04 school year to find out about needs and expectations to create a transition open house, and to implement and organize an existing transition program. The author also obtained data from the school system's computerized information program and Georgia standardized test scores for the 70 student participants.

In the first semester of 2003-04, ACE Academy students passed more courses (5.02) than the first semester overall ninth-grade population of 2003-04 (4.35). They also passed more courses than the previous ACE Academy students of 2002-03 (4.19) whose transition program was less organized and had fewer support structures. Additionally, 70% of the 2003-04 ACE Academy students passed five or more courses and were on track for promotion to the next grade level in comparison to 62.5% of the overall ninth-grade population in the same school year. Melton III (2004) concluded that an organized ninth-grade transition program has a positive effect on student outcomes and prepares students for the demands in high school.

The findings of ACE Academy transition program concur with studies that reported a positive impact of ninth-grade transition programs on student achievement (Caldwell, 2007; Martin, 2004). All three authors made valuable contributions to current research about ninth-grade transition programs because they examined their effectiveness, presented in-depth data analysis, and identified benefits. However, the authors' focus on small groups of students or on students identified as at risk may somewhat limit these findings.

In summary, the majority of researchers who were concerned about easing the transition process to high school investigated the impact of ninth-grade transition programs on student outcomes (Baker et al., 2005; Caldwell, 2007; Case, 2006; Copeland, 2006; Herlihy et al., 2005; Lampert, 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002). Subsequently, the current literature provides a whole variety of different types of programs. However, researchers recommended similar support structures for most of these programs for example, isolating ninth graders, collaboration between middle and high schools, the involvement of school counselors and social workers, small group instruction, and student mentoring. The findings for all studies indicate that ninth-grade transition programs generally have a positive impact on student outcomes and help students better adjust to the challenges in high school.

Tenth-Grade Transition Programs

It appears that the current literature concentrates on ninth-grade transition programs to help ease the transition process and on some preparation for high school in the middle grades. In general, Campbell (2001), Principal of the Tirrell Building at Norwich Free Academy (NFA), agreed with the research of the previous section about ninth-grade transition programs and stressed that ninth graders have insufficient study and organizational skills and that they are lacking fundamental knowledge to be able to cope with a rigorous high school curriculum. Although the author expressed confidence in NFA's Ninth-Grade House, a ninth-grade transition program helping students adjust to the high school community, educators at NFA implemented a follow-up program for

sophomores that targets specific at-risk students who still needed help and support. The author acknowledged that many schools try to address transition problems in ninth grade yet he also asked the key question about what happens to these students when they move on to the next grade level.

Although NFA created the Ninth-Grade House transition program to help students ease the transition process, NFA research data collected over a period of 10 years showed that 9th graders had a composite GPA of 2.35 in the first semester, which decreased to 2.27 in the second semester. Subsequently, NFA staff investigated the implementation of a 10th-grade program, reviewed current research, and examined successful Ninth-Grade House strategies. They also determined selection criteria to target and provide continued support for underachievers, for students with weaknesses in one or more subject areas, and for students with maturity and motivational issues.

Campbell (2001) explained in detail how NFA involved teachers, students, and parents to develop a 10th-grade unit that shared a team of teachers who designed special teaching units for these students in need of continued support. The program also included orientation sessions, parent and student questionnaires, regular parent contact, and regular team teacher meetings, all very similar to the support structures of 9th-grade transition programs in the literature. As a result, NFA reported success: “Comparing second-semester grades from ninth and tenth grades, 61% improved in science, 62% in math, 61% in English, and 66% in history” (Campbell, 2001, p. 18). The author pointed out the significance of continued efforts after 9th grade to help students who otherwise might have failed classes repeatedly and eventually dropped out of high school.

Although this paper did not provide an extensive data analysis, it did mention that GPA data was collected over a period of 10 years and it included percentages of levels of performance before and after the implementation of the programs. Furthermore, findings highlight the importance of continued efforts to support students throughout their high school career. Finally, the findings also sustain the trend in the literature to view the transition to high school as a long-term process (Brough & Maute, 2002).

Teaching and Learning Strategies

Although an evaluation of the specific teaching and learning strategies of ninth-grade transition programs are not part of this study, many authors underlined the significance of such strategies as part of the successful implementation of transition programs (Baker et al., 2005; Bottoms & Cooney, 2008; Bottoms et al., 2002; Bunting, 2004; Butts & Cruzeiro, 2005; Calderon et al., 2003; Caldwell, 2007; Case, 2006; Cauley & Jovanovich, 2006; Collins, 2005; Copeland, 2006; Dedmond, 2008; Dillon, 2008; Duncan, 2004; Farley & Neild, 2008; Freeman, 2005; Herlihy, 2007; Herlihy et al., 2005; Hmelo-Silver, 2004; Mizelle, 2005; Pantleo, 1992; Potter, 2004; Smith, 2007; Yecke, 2006). For example, researchers emphasized the importance of engaging lessons, a whole variety of strategies and methods to deliver the curriculum, teacher professional development, and peer coaching as part of successful transition programs (Butts & Cruzeiro, 2005). In addition, teachers may display a lack of consideration or awareness or both of their students' different learning styles and of the shorter attention span of ninth graders (Duncan, 2004). Furthermore, many students prefer variety, hands-on activities, and they are often visual learners.

Several researchers suggested team teaching (Caldwell, 2007; Cauley & Jovanovich, 2006; Duncan, 2004; Herlihy, 2007; Herlihy et al., 2005; Smith, 2007) and Duncan (2004) additionally recommended delivering curriculum so that it is relevant, and catering to students' different learning styles. Some researchers also recommended collaboration and common planning between teachers to improve their instructional teaching practice (Copeland, 2006; Duncan, 2004; Potter, 2004) and some recommended collaboration between middle and high school teachers to align curricula and to develop common practices (Bunting, 2004; Collins, 2005). Another important issue is teacher training for effective strategies to teach study skills, how to develop a comprehensive study skills program for ninth graders, how to integrate study skills into the existing curriculum, how to develop integrated curricula, and how to use differentiation strategies (Martin, 2004; Pantleo, 1992). Finally, several authors underlined the importance of well qualified teachers in middle school as well as ninth-grade classrooms, which also goes hand in hand with teacher training (Bottoms & Cooney, 2008; Calderon et al., 2003; Dedmond, 2008; Farley & Neild, 2008).

Baker et al. (2005) described professional development activities for the CHANGES intervention program such as Reading Across the Curriculum, Writing to Learn Across the Curriculum, Culturally Relevant Instructional Strategies (CRIS), Embedded Study Skills, and Marzano (1998, 2000, 2003) strategies such as activating prior and background knowledge, specific vocabulary learning strategies, graphic organizers, and cooperative learning. CHANGES teachers stated that they found these

activities useful and effective, that the acquired skills had a direct influence on their daily instruction, and that the training program helped them to grow professionally.

A few researchers advocated project-based learning (PBL). For example, Hmelo-Silver (2004) explained that PBL facilitates learning content as well as thinking strategies. To solve a problem that often does not have just one single correct answer, students work in collaborative groups, engage in self-directed learning, apply their knowledge, and reflect on the effectiveness of their selected methods and strategies. The teacher, rather than presenting knowledge, takes on the role of a facilitator during this learning process. In addition to PBL, Mizelle (2005) strongly recommended an emphasis on reading and writing skills in middle school.

The current literature also agrees on the importance of teaching students in smaller learning communities, small groups, and small class sizes to be able to provide individualized instruction depending on students' needs (Butts & Cruzeiro, 2005; Caldwell, 2007; Case, 2006; Cauley & Jovanovich, 2006; Dedmond, 2008; Dillon, 2008; Duncan, 2004; Freeman, 2005; Herlihy, 2007; Herlihy et al., 2005). In addition, numerous researchers strongly advocated high expectations and high academic standards for all students (Bottoms & Cooney, 2008; Bottoms et al., 2002; Cauley & Jovanovich, 2006; Dillon, 2008; Herlihy et al., 2005; Mizelle, 2005; Yecke, 2006). Finally, although not a specific teaching or learning strategy, the majority of researchers emphasized parental involvement as part of any successful transition program and effective intervention method (Akos & Galassi, 2004; Bowman, 2005; Brough & Maute, 2002, Caldwell, 2007; Campbell, 2001; Campbell & Jacobson, 2008; Chapman & Sawyer,

2001; Graydon et al., 2006; Griffith & Leckrone, 2006; Lampert, 2005; Miao & Wheelock, 2005; Mizelle, 2005; Neild & Weiss, 1999; J. B. Smith, 1997; Yecke, 2006). For example, researchers suggested communication and regular contact with parents, collaboration with parents and their inclusion in the decision-making process, as well as not just inviting parents for orientation meetings but also directly involving them in school-related activities.

In summary, when designing and implementing ninth-grade transition programs, teachers and administrators may want to incorporate successful teaching strategies into their program, provide effective teacher training opportunities, as well as involve and communicate with parents.

Methods and Methodologies

The literature about transition problems from middle to high school and about transition programs to help ninth graders succeed provides a wide range of methods and methodologies. The majority of studies are quantitative studies with variables such as GPA and attendance data, standardized test scores, the number of courses passed or failed in ninth grade, and the number of disciplinary referrals (Allensworth & Easton, 2005; Butts & Cruzeiro, 2005; Farley & Neild, 2008; Herlihy et al., 2005; Kerr & Legters, 2001; McIntosh & White, 2006; Melton III, 2004; Peasant II, 2006; Pedante, 2006; J. B. Smith, 1997). In their quantitative studies, several researchers utilized survey instruments to investigate participants' attitudes, experiences and motivation, reform and transition practices, conditions under which students improve performance, school climate, as well as participants' perceptions about transition programs. Some quantitative researchers

measured only numerical data (Farley & Neild, 2008, Herlihy et al., 2005; McIntosh & White, 2006; Melton III, 2004; Peasant II, 2006), a few quantitative researchers used only survey instruments and questionnaires (Butts & Cruzeiro, 2005), and some researchers of quantitative studies utilized both numerical data and surveys (Kerr & Legters, 2001; Pedante, 2006; J. B. Smith, 1997). Furthermore, several quasi-experimental studies included experimental and control groups (Herlihy et al., 2005; Melton, III, 2004; Peasant II, 2006; Pedante, 2006). Additionally, Herlihy et al. (2005) used a comparative interrupted time series design and Melton III (2004) employed a cause-and-effect time-delayed design.

A number of authors used a mixed methods design with both quantitative and qualitative data (Baker et al., 2005; Cadwallader et al., 2003; Case, 2006; Copeland, 2006; Letrello, 2002; Pantleo, 1992; Potter, 2004). For example, Baker et al. (2005) conducted a quasi-experimental study using a posttest-only control group design for quantitative data but additionally collected and analyzed qualitative data in form of interviews, observations, and implementation logs. Cadwallader et al. (2003) employed a matched control group design to analyze scores from the Social Interactive Scale (SIS) and Social Cognitive Interviews (SCI) and utilized pattern-oriented prodigal analysis.

Furthermore, Case (2006) first collected quantitative data to evaluate student performance and then collected qualitative data in form of one-on-one interviews. Similarly, Pantleo (1992) collected quantitative data in form achievement and attendance records as well as surveys while also collecting qualitative data in form of teacher interviews. Copeland (2006) conducted a case study using surveys for quantitative and

interviews for qualitative data. For the quantitative phase, Letrello (2002) used the School Attitude Measure (SAM) to obtain equal interview scores (EIS) and then performed independent t tests to compare student attitudes in middle school with their attitudes in ninth grade. For the qualitative phase, the author conducted individual interviews. Finally, Potter (2004) used the survey method to obtain quantitative data, and focus groups and interviews to obtain qualitative data.

A few researchers completed qualitative design only studies (Duncan, 2004; MacKay, 2006; Martin, 2004; Thorne, 2001). They collected qualitative data in form of observations, field notes, informal personal conversations, formal individual and group interviews, document searches, and focus group discussions. Additionally, Martin (2004) employed portraiture techniques for detailed descriptions and conducted ethnographic interviews. Researchers collected this data to evaluate the effectiveness of transition programs, report participants' experiences and perceptions about transition programs, and find out about students' needs during the transition period.

Other qualitative studies included an ethnographical study (MacKay, 2006) and a phenomenological study (Thorne, 2001). A few authors completed case studies (Caldwell, 2007; Copeland, 2006; Duncan, 2004). While Caldwell (2007) used both a pretest and a posttest for this case study, Copeland (2006) collected qualitative and quantitative data in form of surveys and interviews. Duncan (2004) conducted a qualitative case study based on document searches, observations, and interviews.

This study is a quasi-experimental quantitative study to examine the impact of a ninth-grade transition program. The impact of this program (independent variable) was

determined by comparing cumulative GPAs and credits, ninth-grade dropout rate, and data from a student satisfaction survey (dependent variables) of two groups of ninth graders at the end of their 1st year in a urban high school. Using a posttest-only with nonequivalent control-group design, one group of 578 ninth graders (Class of 2012) participated in the Ninth Grade Academy transition program during the 2008-09 school year. The other group of 762 students (Class of 2011) did not participate in any type of transition program during their 1st year in high school in the 2007-08 school year. Compared with existing research, the methods and methodology of this study were appropriate.

Summary

Numerous studies discussed in this literature review investigated the transition process to high school, the problem with ninth grade, difficulties during adolescence, organizational and structural issues, as well as intervention strategies in form of transition programs to help ninth graders succeed in high school (Akos & Galassi, 2004; Akos et al., 2008; Allensworth & Easton, 2005; Alspaugh, 1998b, 1999; Baker et al., 2005; Boman & Yates, 2001; Bottoms & Cooney, 2008; Cadwallader et al., 2003; Caldwell, 2007; Campbell, 2001; Case, 2006; Cauffman & Steinberg, 2000; Cauley & Jovanovich, 2006; Copeland, 2006; Crombie et al., 2005; DeBacker & Nelson, 2008; Dedmond, 2008; Duncan, 2004; Engels et al., 2005; Farley & Neild, 2008; Gamoran, 1990; Haney et al., 2004; Herlihy, 2007; Herlihy et al., 2005; Herrman, 2005; Lampert, 2005; Langenkamp, 2005; Kennelly & Monrad, 2007; Kerr & Legters, 2001; Lan & Lanthier, 2003; Letrello, 2002; MacKay, 2006; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Neild &

Weiss, 1999; Pantleo, 1992; Park & Wallace, 2004; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002, Richmond & Williams, 2007; Schiller, 1999; T. J. Smith, 2007). This enormous attention and deep focus on ninth grade confirms that there is a widespread problem with the transition to high school and that this problem is highly complex in nature. For example, Baker et al. (2005) pointed out:

Although transitioning from school to school can be challenging at any level, the transition to high school may be particularly fraught with challenge because students are experiencing a change in schools as well as the physical, emotional, and psychological changes inherent to adolescence. (p.1)

Researchers agreed that there is a serious problem with ninth grade, that too many ninth graders are failing their 1st year in high school, and that ninth graders are lacking the necessary skills to succeed.

In order to tackle this problem and find feasible solutions, research makes highly valuable recommendations such as the implementation of transition programs to help 9th-grade students succeed in high school. Within the framework of these programs or as general intervention strategies, researchers recommended collaboration between all stakeholders, the investigation of the organizational procedures of school districts, the investigation of placement policies for 9th graders, and more collaboration between middle and high schools. Other suggestions included learner friendly teaching methods such as problem-based learning, the involvement of social workers and guidance counselors, communication with and involvement of parents, early intervention in middle school, and supplementary support programs in 10th grade. Additionally, the majority of researchers advised teaching 9th graders separately from the general high school

population while at the same time giving them access to the usual high school activities as well as providing a sense of belonging.

Nevertheless, there appears to be a somewhat patchy approach to solving the ninth-grade dilemma. Even though the problem of adjusting to high school is extensive nationwide, schools and school districts seem to work in isolation and have generally different ways of dealing with this matter. For example, some schools and school districts have isolated transition programs and intervention methods in middle schools (Brigman et al., 2007; Chapman & Sawyer, 2001; Mizelle, 2005; J. B. Smith, 1997; Thorne, 2001) while the majority focus on individual ninth-grade transition programs in high school (Baker et al., 2005; Caldwell, 2007; Case, 2006; Copeland, 2006; Lampert, 2005; 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2005; Pedante, 2006; Potter, 2004; Reents, 2002). On the other hand, Herlihy et al. (2005) described the nationwide Talent Development High School model as a comprehensive school reform program with 83 participating schools in 32 school districts in 20 states in 2003-04.

Additionally, there are several transition programs with emphasis on the involvement of school guidance counselors (Baker et al., 2005; Bottoms & Cooney, 2008; Brigman, Campbell, & Webb, 2007; Case, 2006; Cauley & Jovanovich, 2006; Cooper & Liou, 2007; Copeland, 2006; Dedmond, 2008; Lampert, 2005; McIntosh & White, 2006; Mizelle, 2005). Other programs advocate the isolation of ninth graders from the rest of the high school and their instruction in separate ninth-grade communities (Baker et al., 2005; Duncan, 2004; Herlihy et al., 2005; Kerr & Legters, 2001; McIntosh

& White, 2006; Peasant II, 2006; Reents, 2002). Some high school transition programs target all incoming ninth-grade students while others target only a specific student population (Caldwell, 2007; Martin, 2004; Melton III, 2004).

Research suggests that the investigation of the organizational structure of school districts such as feeder patterns and grade level transitions are highly significant for ninth-grade success. In addition, ninth-grade class allocation and the placement of ninth graders in higher-level courses have a positive impact on student achievement (Alspaugh, 1998b, 1999; Bottoms & Cooney, 2008; Freeman, 2005; Gamoran, 1990; Langenkamp, 2005; Schiller, 1999; Yecke, 2006). Even though these findings seem to involve procedures and policies at school district level, too many individual schools, mostly high schools, seem to feel solely responsible for the ninth-grade problem and are struggling on their own to find solutions. And it is not at all surprising that high schools feel under tremendous pressure to do just that. With the ninth-grade transition problem having reached crisis point and with all the financial and legal implications of AYP (Adequate Yearly Progress) and NCLB (No Child Left Behind), it appears that high schools have no choice but address this issue as best as they possibly can. High schools do not have the option to pass on students to the next level with or without the necessary skills needed.

Several researchers stressed the importance of middle school responsibilities to successfully prepare students for their transition to high school (Akos & Galassi, 2004; Boller, 2008; Bottoms & Cooney, 2008; Bottoms et al., 2002; Calderon et al., 2003; Cauley & Jovanovich, 2006; Dillon, 2008; Mizelle, 2005; J. B. Smith, 1997; Yecke, 2006) and many researchers also placed emphasis on collaboration between middle

schools and high schools (Bottoms & Cooney, 2008; Bunting, 2004; DeMott, 1999; Dillon, 2008; Duncan, 2004; Letrello, 2004; Martin, 2004). Just as it is high school teachers' responsibility to prepare students for their future careers, it should be middle school teachers' responsibility to prepare students adequately for the challenges and expectations in high school. In a study about the effectiveness of middle school transition programs, J. B. Smith (1997) concluded:

Among a national sample of public school students, those who had full transition programs available to them in their middle school were less likely to drop out of high school and performed better in high school (as measured by student grades) than did students who had either a partial program or none at all. (p. 150)

Subsequently, rather than playing catch-up in high school, there should be more emphasis on a rigorous, academic, and skill-centered curriculum as well as effective preparatory programs in middle school.

Whether in middle school or in high school, research suggests that transition programs can be highly beneficial for students' success in their 1st year in high school and can help reduce ninth-grade failure rates as well as high school dropout rates (Allensworth & Easton, 2005; Baker et al., 2005; Cadwallader et al., 2003; Caldwell, 2007; Campbell, 2001; Case, 2006; Cauley & Jovanovich, 2006; Copeland, 2006; Dedmond, 2008; Duncan, 2004; Farley & Neild, 2008; Herlihy, 2007; Herlihy et al., 2005; Lampert, 2005; Kennelly & Monrad, 2007; Kerr & Legters, 2001; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Pedante, 2006; Potter, 2004; Reents, 2002, Richmond & Williams, 2007; T. J. Smith, 2007). As a contribution to existing research, this study continued to investigate ninth-grade

achievement and adjustment issues by evaluating the impact of the Ninth Grade Academy transition program and its parameters. It was the overall goal of this study to seek effective solutions for all students to help them ease the transition process and be successful in high school.

Section 3 of this study provides a detailed account of the methods and methodology of this quasi-experimental quantitative study. It consists of a general overview, seven main areas, and a brief summary:

1. Research design and approach of this posttest-only with nonequivalent control-group study including dependent and independent variables.
2. Description of the two different ninth-grade populations at this particular high school, enrolment and ethnicity information, and Adequate Yearly Progress (AYP) data.
3. Sampling procedures for the two groups of ninth-grade students.
4. Description of the treatment in this study, the Ninth Grade Academy transition program and its components.
5. Instrumentation and materials such as survey instrument, the establishment of survey reliability and validity, the dependant variables cumulative GPAs and credits and ninth-grade dropout rate.
6. Data collection procedures for GPAs, credits, and ninth-grade dropout data as well as information about survey procedures and data analysis plan.
7. Description of the researcher's role and the protection of the participants of this study.

Section 4 begins with the procedures for parental consent, the final sample size for this study, and the calculation of Cronbach's alpha for survey reliability and validity. The main part of this section consists of data collection procedures and data analyses of four research questions and nine survey items. The final part of this section is a presentation of findings and a conclusion. Findings suggest that the Ninth Grade Academy did not have a significant impact on students' credits, ninth-grade dropout rate, and satisfaction with their ninth-grade experience and had a negative treatment effect on cumulative GPAs.

Section 5 begins with a summary of findings such as the unexpected treatment effect of the Ninth Grade Academy and the relationship of these results to current research. The next part of this section addresses the relationship between the findings of this study and the theoretical framework and is then followed by a discussion of in how far this study advocates positive social change. This section concludes with recommendations for action such as an inquiry of the effect of the new math curriculum and suggestions for further longitudinal analyses.

SECTION 3: RESEARCH METHOD

Introduction

Ninth graders are failing too many classes and almost 25% also fail their 1st year in high school because they are lacking the skills necessary to succeed (Haney et al., 2004; National Center of Education Statistics, 2007). The purpose of this study was to examine the impact of the Ninth Grade Academy transition program by comparing cumulative GPAs and credits, ninth-grade dropout rate, and student satisfaction with their ninth-grade experience between participants and nonparticipants of this program.

Section 3 provides a detailed description of the methods of this quasi-experimental quantitative study. The first part presents the posttest-only with nonequivalent control-group research design, describes the two different ninth-grade populations, and explains the sampling procedures for both the experimental and the control group. The next part consists of an account of the treatment in this study, the Ninth Grade Academy transition program and its elements, and addresses both the survey instrument and the establishment of survey reliability and validity. After that, this section gives details about the dependant variables cumulative GPAs and credits as well as ninth-grade dropout rate. Section 3 concludes with an explanation how the data were collected and analyzed, a report about the researcher's role, and a brief summary.

Research Design and Approach

This quasi-experimental quantitative study utilized a posttest-only with nonequivalent control-group design to evaluate the effect of a ninth-grade transition program, the Ninth Grade Academy (independent variable). I selected this particular

design because researchers employ posttest-only with nonequivalent control-group designs to compare two groups after only one group received treatment (Creswell, 2003). In this study, the two comparison groups are the participants and nonparticipants of the Ninth Grade Academy. The posttest was the specific design of the Ninth Grade Academy transition program and will be described in greater detail later in this section.

The posttest compared cumulative GPAs, the number of cumulative credits, ninth-grade dropout rate, and data from a student satisfaction survey (dependent variables) of two different groups of ninth graders. The experimental group of approximately 555 ninth graders (Class of 2012) participated in the Ninth Grade Academy during the 2008-09 school year. The control group of approximately 530 students (Class of 2011) did not have any access to any type of transition program during their ninth-grade year 2007-08 (Figure 2).

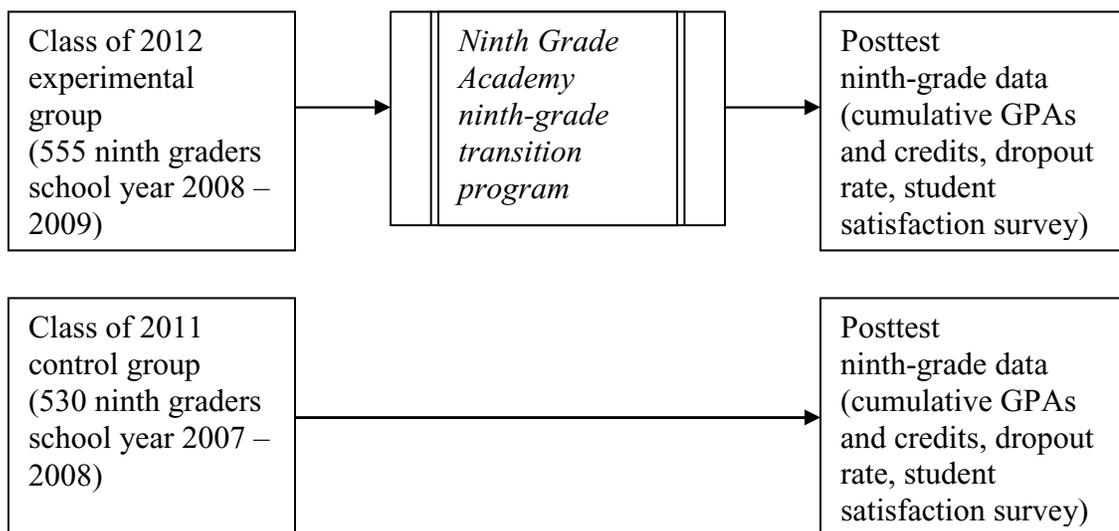


Figure 2. Quasi-experimental design using posttest only with nonequivalent control group design.

To investigate the effect of the Ninth Grade Academy, I selected a quasi-experimental, quantitative design. I opted for a quantitative versus a qualitative study because of the data-driven, decision-making policies of this particular school and school system, because of relatively easy access to the necessary performance data such as GPAs, cumulated credits, and ninth-grade dropout rates, and because of a personal preference for unbiased approaches as well as the employment of statistical procedures in quantitative studies (Creswell, 2003).

Furthermore, to evaluate the treatment effect of the Ninth Grade Academy, this study needed to include a control and an experimental group with only the experimental group receiving treatment. In this study, the treatment is the Ninth Grade Academy. As described by Creswell (2003) for quasi-experimental designs, I did not randomly assign participants to these groups but instead used already existing groups. The experimental group consisted of the participants of the Ninth Grade Academy and Class of 2012 and the control group consisted of the nonparticipants of the academy and Class of 2011

Additionally, to examine the effect of the Ninth Grade Academy, I decided that both a pretest and a posttest were not necessary because all the participants in this study made the transition to this particular high school from the same two middle schools. This means that the students from both the control and the experimental group had similar middle school experiences and similar socioeconomic backgrounds, which subsequently generated reasonably comparable groups. Because I selected the comparison groups without random assignment, I opted for a posttest-only with nonequivalent control-group design (Creswell, 2003).

Finally, compared with existing research, the research design of this study was appropriate because the majority of studies that investigated transition programs are quantitative studies that used variables such as GPA and attendance data, standardized test scores, the number of courses passed or failed in ninth grade and the number of disciplinary referrals. These studies also employed survey instruments to investigate participants' attitudes, experiences, and perceptions about transition programs (Allensworth & Easton, 2005; Butts & Cruzeiro, 2005; Farley & Neild, 2008; Herlihy et al., 2005; Kerr & Legters, 2001; McIntosh & White, 2006; Melton III, 2004; Peasant II, 2006; Pedante, 2006; J. B. Smith, 1997). Additionally, several quasi-experimental studies also used an experimental control group design (Herlihy et al., 2005; Melton, III, 2004; Peasant II, 2006; Pedante, 2006). Therefore, this study was in line with existing research about the effectiveness of ninth-grade transition programs.

Setting and Sample

Population

The population of this study was found at an urban high school in the greater Atlanta area. This study investigated the impact of the Ninth Grade Academy transition program on student achievement and student satisfaction with their 9th-grade experience. The population consisted of the Class of 2011 and the Class of 2012. The Class of 2011 consisted of 10th graders who did not participate in the Ninth Grade Academy and who did not have any transition help during their 9th-grade year. The Class of 2012 consisted of 9th graders who all participated in the Ninth Grade Academy. The experimental group contained the Class of 2012 and Ninth Grade Academy participants and the control group

consisted of the Class of 2011 and nonparticipants of the academy. Juniors (Class of 2010) and seniors (Class of 2009) were not included in this study because their experience with 9th grade lies too far back in the past.

At the time of this study during the 2008-09 school year, this high school had a 9th-grade population of approximately 555 students and a 10th-grade population of approximately 530 students. The 9th-grade population consisted of students who made the transition from middle to high school in the school year 2008-09 and who all participated in the Ninth Grade Academy during that time. This population did not include any repeating 9th graders who failed their 1st year in high school.

The 10th-grade population consisted of students who made the transition from middle to high school the previous school year 2007-08 and who did not have access to any type of transition program during their 9th-grade year. All of these students moved up to 10th grade regardless of the number of credits earned during 9th grade. This means that all 9th graders of the 2007-08 school year were promoted to 10th grade even if they earned less than five out of eight available credits and did not pass their 1st year in high school. The reasoning behind this decision was to avoid having repeating 9th graders mixed with new 9th-grade students in the newly introduced Ninth Grade Academy transition program. Educators wanted to prevent repeating 9th graders from possibly passing on bad habits and having a negative influence on the new freshmen. Teaching repeating 9th graders as a separate group was logistically not possible for this particular high school.

This greater Atlanta area urban high school experienced considerable growth over the last 13 years, which was clearly reflected in the dynamic and highly diverse nature of this particular student population. According to the Georgia Department of Education web site (2008), during the 2007-08 school year, there were 2107 students enrolled at this school with enrolment by ethnicity as follows: 4.4% Asian, 48.2% Black, 22% Hispanic, 0.4% American-Indian, 3.3% Multiracial, and 21.7% White.

The Georgia Department of Education web site (2008) also provided information about Adequate Yearly Progress (AYP). Although this high school met the AYP criteria in 12 out of 13 categories, overall, the school did not meet AYP for the 2007-08 school year. The school did meet the AYP criteria for test participation and for the second indicator, graduation rate, with 70.7% of all students graduating from high school in 2007-08. However, although this school also met the AYP criteria for academic performance for all students in general, it did not meet the AYP criteria for English language arts in the Hispanic and economically disadvantaged subgroups and for math in the Black, Hispanic, and economically disadvantaged subgroups. This high school has been in the needs improvement category since July 2007.

Furthermore, this high school has been a school district magnet school for the International Baccalaureate Program (IB) since 1997. The IB Diploma Program is an intensive college preparatory course of study with a rigorous core curriculum in math, science, and the humanities. At the same time, this program places emphasis on international perspectives and addresses a wide range of subjects to cater for a whole variety of student interests and intentions. The IB Diploma Program provides a

challenging academic environment in combination with highest expectations. Finally, this high school also offers 15 Advanced Placement (AP) classes in math, science, foreign language, social studies, music, and visual arts.

Sampling Procedures

The target of this study was to include all or as many students as possible from each group (Class of 2011 and Class of 2012) to be able to compare achievement and student satisfaction of the two different groups of ninth graders at the end of their 1st year in high school. The experimental group was the Class of 2012 who were ninth graders at the time of this study and who participated in the Ninth Grade Academy. The control group was the Class of 2011, sophomores at the time of this study and ninth graders who did not have access to a transition program during their ninth-grade year the school year before. Targeting as many students as possible from each group was to help obtain a wide spread of abilities and backgrounds typical for the student population at this high school. The rationale of this decision was that according to Gravetter and Wallnau (2005), a sample should be an accurate representation of the population from which it comes. The authors also explained that an increase in sample size usually leads to a decrease of the error between sample mean and population mean: "The law of large numbers states that the larger the sample size (n), the more probable it is that the sample mean will be close to the population mean" (Gravetter & Wallnau, 2005, p. 160).

Additionally, the final number of participants of this study depended on the return of parental consent forms. Therefore, I targeted as many students as possible from each group (Class of 2011 and Class of 2012) to reach the largest possible sample size and at

least the minimum sample size of 254 students from each class. I determined the minimum sample size of 254 students for each group for 5% error and a 95% confidence level using a sample size calculator from the Pearson Education Website (1995 – 2007).

As a result, the target sample was the entire 9th-grade population of 555 students and the entire 10th-grade population of 530 students at this high school. The 9th-grade sample consisted of students who made the transition from middle to high school in the school year 2008-09 and who participated in the Ninth Grade Academy during that time. It did not include any repeating 9th graders. The 10th-grade sample consisted of students who made the transition from middle to high school the previous school year 2007-08 and who did not participate in any 9th-grade transition program. All of these students moved up to 10th grade regardless of the number of credits earned during 9th-grade.

I selected these two groups of students to compare the impact of the Ninth Grade Academy on student outcomes. I classified students as participants of the Ninth Grade Academy (experimental group and Class of 2012), or as nonparticipants of this program (control group and Class of 2011).

Treatment

To ease the transition process from middle to high school and to help students better adjust to the expectations and challenges of their ninth-grade year, teachers, administrators, and counselors at this high school implemented a ninth-grade transition program called the Ninth Grade Academy (name changed to protect the identity of both this particular high school and the school district). The Ninth Grade Academy was first established in the 2008–09 school year and this study examined its effectiveness after the

very 1st year of implementation. The Ninth Grade Academy faculty consisted of a dedicated team of two administrators, one academy coordinator, 11 English teachers, 3 ESOL (English as a Second Language) and foreign language teachers, 10 math teachers, 5 science teachers, 5 social studies teachers, and 9 elective teachers in subject areas such as band, art, orchestra, drama, and sports.

Before the beginning of the 2008-09 school year, all students, including incoming ninth graders, were invited to a special orientation for the new school year called Cruise to Success. In addition, there was a particular focus on new ninth graders who were invited to meet their high school teachers, administrators, and counselors, to find out about clubs and sports activities, to familiarize themselves with their new school, and to take part in activities to get to know each other. The new ninth graders also participated in a special class meeting to learn about dress code, expectations, and opportunities.

During the school year, all ninth graders were instructed regular academic curricula as well as character building and study skills in a separate wing of the school building to improve reading and writing skills, to encourage participation in advanced courses, and to prepare them for state and national standards. All ninth graders also had their lunch together but they did join the rest of the school for electives and afterschool activities. Other components of the Ninth Grade Academy were a strict behavior and conduct policy, a firm dress code, and a time-out room in the administrator's office for a period of cool-down rather than immediate disciplinary referrals.

In order to improve social skills, peer mediation skills, general study skills, and problem-solving skills, all ninth graders participated in the Freshmen Focus Class. For

differentiated instruction based on students' individual needs, ninth graders received Freshmen Focus Class education in three different groups: (a) leadership group, (b) general group, and (c) group with specifically targeted needs. Group allocation was based on test scores of the Criterion-Referenced Competency Tests (CRCT) administered in middle school, a state-mandated test to assess academic skills and knowledge in reading, English language arts, mathematics, science, and social studies as laid out in the Georgia Performance Standards (GPS).

One of the major goals of the Ninth Grade Academy was the development of study skills to encourage enrolment in higher-level classes and to promote postsecondary education. For that reason, as integrated part of the Freshmen Focus Class, students also received AVID instruction (Advancement Via Individual Determination), a nationwide and international program to prepare students in the academic middle for postsecondary college education. AVID focuses on higher-level thinking skills, academic rigor, bringing out the best in students, and closing the achievement gap.

Furthermore, the Ninth Grade Academy emphasized individual students' needs as well as collaboration and communication with parents. For example, during advisement, ninth graders completed goal sheets to identify problem areas and to assess academic achievement. Students who were failing one or more classes met with their teachers to discuss difficulties and to develop strategies for improvement. In addition, Ninth Grade Academy teachers initiated parental contact for each individual student who was failing one or more classes. Moreover, the Ninth Grade Academy administrators called the parents of all students who were failing two or more classes. Finally, students who were

failing all four classes were referred to the Ninth Grade Academy counselor to set up an academic program that targeted the individual student's needs. In addition, the counselor facilitated a conference with the student, the parents, and all the student's teachers to discuss problems and define support strategies.

A further component of the Ninth Grade Academy was an incentive program for students who were spotted doing something very positive or something out of the ordinary. Students were recognized for doing the right thing in weekly and monthly draws and they received prizes such as free tickets to high school sporting events. Furthermore, based on academic achievement, attendance records, as well as conduct, 250 ninth graders were invited to a special ninth-grade Prom. In addition, all ninth graders participated in a fun and activity-filled field day as a general reward for a successful 1st year in high school. Finally, to assess the effectiveness of the Ninth Grade Academy, students were asked to complete surveys during advisement to point out which components they liked and which elements did not work well for them.

Instrumentation and Materials

Student Satisfaction Survey

Using Fink (2006) as a guide, I created a student satisfaction survey that examined students' opinions and perceptions about their ninth-grade experience in high school. Although this survey was one survey instrument asking students to provide the same information about their ninth-grade experience, there were two different survey forms, one form for the Class of 2012 (experimental group) and one form for the Class of 2011 (control group). The two forms used a slightly different wording and time frame.

For example, control group students were asked how many classes they successfully passed in ninth-grade while experimental group students were asked how many classes they expect to have successfully passed by the end of their ninth-grade year. Another example is that experimental group students were asked whether they are feeling confident to move on to the next grade level (present tense) and control group students were asked whether they felt confident that they were ready to move on to the next grade level (past tense). The two different versions of the student satisfaction survey are included in the appendices (Class of 2012 Appendix A, Class of 2011 Appendix B).

The Class of 2011 (control group) and the Class of 2012 (experimental group) were asked to complete this survey during advisement between April and May in the second semester of the 2008-09 school year. Survey completion required 15 to 20 minutes including instructions for students, handing out, and collecting the materials.

The survey began with general student information such as gender, ethnic background, and whether or not the survey respondent participated in the Ninth Grade Academy. Students were asked to check the appropriate boxes with the correct information. Next, there were two closed questions where students were asked to provide information about their GPA and how many classes they successfully passed in their ninth-grade year. Again, students were asked to check the appropriate boxes.

Finally, students were asked to evaluate their school experiences using a 6-point differential scale from strongly *disagree* to strongly *agree*. There were three general questions about whether or not students enjoyed their experiences in elementary, middle, and high school as well as eight specific questions about student satisfaction with their

9th-grade experience. These specific 9th-grade questions asked about (a) general satisfaction with 9th-grade experience, (b) readiness for 10th grade, (c) necessary skills to be successful in high school, (d) helpfulness of teachers, administrators, and guidance counselors, (e) general satisfaction with grades and progress, and (f) extracurricular activities. I decided to use closed questions for easy scoring and to avoid interpretation issues of students' answers. For example, open-ended questions prompt responses that draw on respondents' own words. These replies may be difficult to interpret and may need further investigation for clarification such as additional surveys or qualitative methods in form of focus group discussions and structured interviews (Fink, 2006). However, at the end of the survey, students were invited to make additional comments about their satisfaction with ninth grade if they wished to do so. The raw data of this student satisfaction survey is available in form of tables in Section 4 of this study.

Survey Reliability and Validity

To establish reliability and validity, I selected internal consistency reliability estimation because a single measurement instrument (student satisfaction survey) was given to a group of 9th graders and to a group of 10th graders on one occasion. First, I established content validity by asking a team of experts to evaluate this survey with the help of a survey evaluation rubric (Appendix D). According to Fink (2006) a researcher can establish content validity "... by asking a team of experts whether the items are representative samples of the attitudes and traits you want to survey" (p. 39). A detailed description and evaluation of this process follows later in this section.

Next, after URR and IRB approval of this study (IRB approval number 03-25-09-0281722) as well as after obtaining parental consent yet before the beginning of the actual study, I established validity with the help of a pilot survey. According to the number of survey items, I determined to include 25 to 30 students. Within this pilot survey, students should have responded consistently to the questions. For example, students with good grades who were passing their classes should have responded in a positive way regarding student satisfaction (Fink, 2006). Using Cronbach's alpha, I was then able to judge the reliability of the survey items by estimating how well items of similar construct produced similar results (Gravetter & Wallnau, 2005; Trochim 2006). To indicate a reliable instrument, I determined Cronbach's alpha at .75 or above.

Since I conducted a very detailed expert evaluation of this survey instrument, I did not expect Cronbach's alpha to fall below .75. However, should a Cronbach's alpha below .75 have indicated a less reliable survey instrument, I planned to review the individual survey items with the help of the panel of experts and then to make the necessary adjustments. Next, I planned to follow up with a second pilot study with 35-40 students to determine Cronbach's alpha to establish reliability of the revised survey.

Finally, I selected external validity because all the participants of this study were selected from one particular high school. This selection from just one high school may pose a threat to quality in relationship to the ninth-grade population of other high schools, the ninth-grade population in this particular school district, and the ninth-grade population nationwide. However, Trochim (2006) explained this type of validity as in how far generalization to other persons, places, or times will be possible.

First, I established content validity by asking a team of experts to evaluate the survey instrument using a survey evaluation rubric (Appendix D). The survey evaluation rubric included 10 criteria on a 4-point scale. With the help of Fink (2006), I used the following rubric criteria:

1. Accurate representation of student satisfaction.
2. Content related to student satisfaction.
3. Survey items as representative samples to evaluate student satisfaction.
4. General survey characteristics such as format, clarity of questions, mutual exclusiveness of forced-choice questions, clarity and bias of language, survey directions and transitions, appropriate order of questions, and appropriate length of survey.

After I developed the survey evaluation rubric, I invited 12 experts to evaluate the student satisfaction survey. I selected these experts because of their PhD and EdD degrees as well as their involvement in the Ninth Grade Academy transition program. I initiated contact to the experts with an introductory e-mail, explained this particular study, and asked for their help with establishing content validity of the student satisfaction survey. I attached the survey and the survey evaluation rubric to the e-mail. Additionally, I sent a package including a cover letter similar to the e-mail invitation, a yellow copy of the student satisfaction survey for the 9th-grade experimental group, a blue copy of the survey for the 10th-grade control group, and a copy of the survey evaluation rubric to all 12 experts. After two reminder e-mails asking for the experts' advice and support, I received responses from 9 of the 12 experts (Appendix E).

Tables 1 and 2 indicate how the responding experts evaluated the student satisfaction survey. Table 1 shows a summary of how they evaluated each rubric criterion and how many experts evaluated each individual criterion as poor, fair, satisfactory, or good. Table 2 shows how each expert responded to each of the rubric criteria.

Table 1

Summary of How Many Experts Evaluated Each Individual Rubric Criterion

Criteria	Poor	Fair	Satisfactory	Good
Accurate representation			4	5
Content related to satisfaction		2	3	4
Representative samples		1	3	5
Clarity of questions			4	5
General format		2	1	6
Forced-choice questions ^a			2	6
Clarity and bias of language		1	3	5
Directions and transitions		1	2	6
Order of the questions			3	6
Length of survey			3	6

^a One expert did not evaluate forced-choice questions.

Table 2

Individual Expert Responses to Each Evaluation Criterion

Criteria	Expert number indicating individual expert evaluation								
	1	2	3	4	5	6	7	8	9
Accurate representation	G	G	S	G	G	S	S	S	G
Content related to satisfaction	G	G	S	G	S	S	F	F	G
Representative samples	G	G	S	G	G	S	S	F	G
Clarity of questions	G	G	S	S	S	S	G	G	G
General format	G	G	S	G	G	F	G	F	G
Forced-choice questions ^a	G	G	S	G	G	S	G	-	G
Clarity and bias of language	G	G	S	G	S	S	G	F	G
Directions and transitions	G	G	S	G	G	S	G	F	G
Order of the questions	G	G	S	G	G	S	G	S	G
Length of survey	G	G	S	G	S	G	G	S	G

Note. P = Poor, F = Fair, S = Satisfactory, G = Good

Table 1 indicates that the experts evaluated the vast majority of criteria as satisfactory and as good. None of the experts evaluated any of the criteria as poor and five criteria received an evaluation of fair. However, Table 2 indicates that the majority of the fair evaluations come from only one expert, expert 8. Unfortunately, expert 8 did not provide any feedback, comments, or suggestions for improvement.

Expert 6 also included a fair evaluation for the general format of the survey. The expert commented that students' responses in pencil would be difficult to read on the relatively dark color blue background of the 10th-grade control group survey. In addition,

the expert suggested placing lines on the back of the survey paper to encourage students to provide additional comments. I followed the expert's advice and adjusted the survey by adding lines on the back of the survey paper and producing paper copies in a lighter pale blue color.

Expert 7 rated content related to student satisfaction as fair and accurate representation and representative samples as satisfactory. The expert suggested to include questions about the effectiveness of individual tools in the Ninth Grade Academy such as a separate ninth-grade floor and a combined ninth-grade lunch period. However, the expert also commented that to investigate these individual components of the ninth-grade transition program would be subject to an additional survey. In a follow-up e-mail discussion, I explained again the purpose of this particular study, which is to evaluate the impact of the Ninth Grade Academy on cumulative GPAs and credits, ninth-grade dropout rates, and students' general satisfaction with ninth grade. We came to the agreement that the content of the survey sufficiently addressed the research questions of this study and discussed possible follow-up research in the future to investigate the impact of individual Ninth Grade Academy components.

Experts 1, 2, and 9 rated all criteria as good and did not provide any suggestions for improvement. Expert 3 rated all criteria as satisfactory but also did not provide any comments and did not make any suggestions for improvement.

Experts 4 and 5 provided not only suggestions for improvement but also took the time to meet with me in person. Both experts noticed a necessary change in wording for the ninth-grade experimental group survey. I changed the answer choice for question 2 "I

passed all my classes” to ”I expect to pass all my classes” because the survey was administered before the end of the 2008-09 school year. For clarification I also changed question 2 from asking students how many classes they will have successfully passed by the end of ninth grade to how many classes they expect to successfully pass by the end of ninth grade.

Moreover, expert 5 suggested deleting answer choice ”don’t know” for question 1 about GPA. The expert stated that this answer choice may skew results and explained that students usually have a good idea about their GPA and should be forced to provide an answer. The expert also recommended a few improvements regarding clarity of questions. For example, question 3 (Do you like being a high school student?) should be aligned with questions 4 and 5 (Did you enjoy middle school? Did you enjoy elementary school?) to avoid confusion and to provide clarity. Regarding clarity and bias of language, expert 5 suggested to avoid the word satisfaction and to rephrase the survey accordingly. I made all the changes as recommended by the expert.

In agreement with expert 6, expert 5 also suggested to provide structure in form of a chart on the back of the survey to encourage students to make additional comments. As a result, I adjusted the survey accordingly and added four categories in the additional comment section: (a) I enjoyed or found helpful, (b) I did not enjoy or did not find helpful, (c) suggestions and recommendations, and (d) any other comments.

Finally, expert 5 commented that two Likert scale categories (not really sure but tend to disagree and not really sure but tend to agree) may skew results in so far that most students would check either one or the other. The expert suggested combining these two

categories into one (no opinion). However, I opted for an even number of answer categories to avoid students select the golden middle. I decided to leave the Likert scale categories as they were and to pay special attention to this matter during the pilot survey. If necessary, I decided to conduct two pilot surveys. One survey would be using the current format with the original six Likert scale categories (strongly disagree, disagree, not really sure but tend to disagree, not really sure but tend to agree, agree, and strongly agree). The other survey would be using a second format combining the two categories about not being really sure into one category (neither agree nor disagree). This particular wording would also assure measurement on a continuous interval scale. Finally, I selected six Likert scale categories rather than just four options to allow for greater variance of responses.

Cumulative GPAs, Cumulative Credits Earned, and Ninth-Grade Dropout Rate

To be able to make comparisons between participants and nonparticipants of the Ninth Grade Academy, I examined cumulative GPAs, cumulative credits, and data about the ninth-grade dropout rate. I collected the data for cumulative GPAs and credits from official school district transcripts with the help of assistant principals and the guidance counseling division chair of this high school. Information about ninth-grade dropout rates was collected from records in the guidance counseling office of this high school. Data collection for the Class of 2011 (comparison group) and for the Class of 2012 (experimental group) took place during the second semester of the 2008-09 school year between March 2009 and May 2009. The raw data for GPAs, credits, and ninth-grade dropout rates is available in form of tables and figures in Section 4 of this study.

Data about GPAs, cumulative credits, and ninth-grade dropout rates may pose a threat to internal validity and interobserver reliability. For example, GPA data and subsequently cumulative credits earned and ninth-grade dropout rates may be subjective because of different teacher expectations and grading procedures. Ninth-grade dropout rates also depend on the personal and individual circumstances of a particular student which may or may not be related to participation in the Ninth Grade Academy transition program. However, this particular school district has explicit, clear-cut grading policies. Furthermore, grading and GPAs should be in line with and at the level of standardized, state-mandated tests in core subjects. Additionally, there is a threat to external validity that Gravetter and Wallnau (2005) and Trochim (2006) described as the generalization of the results of a study to the general population. In this case, the general population would be ninth-grade students.

Data Collection and Analysis

Data Collection Procedures

I collected data from all the study participants (10th-grade control group and Class of 2011, 9th-grade experimental group and Class of 2012) during the second semester of the 2008-09 school year between March 2009 and May 2009. I collected data about cumulative GPAs and cumulative credits from official school district transcripts with the help of assistant principals and the guidance counseling division chair of the target high school. I collected information about 9th-grade dropout rates from records in the guidance counseling office of this high school. During the same time period, all participating students were asked to complete a survey about their satisfaction with their

9th-grade experience. I coordinated with 9th-grade and 10th-grade advisement teachers in advance, explained survey procedures, and provided information about the survey and this study via e-mail. I also provided advisement teachers with written instructions and procedures for the completion of this survey on the day before the survey was administered. I placed the instruction sheet, survey forms, and a large envelope in each advisement teacher's mail box on the day before survey completion. Assuring confidentiality and anonymity, advisement teachers distributed the survey to participating students, supervised survey completion, collected all responses and placed them in a sealed envelope. Advisement teachers then returned the completed and sealed surveys to my mailbox or to my classroom. I asked advisement teachers to keep a record of study participants who were absent on the day of the completion of the survey and, following the same procedures, to administer the survey to these students during the next one or two advisement periods.

Research Questions and Hypotheses

I collected, recorded, and analyzed the above data to answer the question whether or not there is a statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on academic performance as measured by cumulative GPA, cumulative credits, ninth-grade dropout rate, and based on student satisfaction with their ninth-grade experience as measured on a satisfaction survey. The null hypotheses state that there is no significant statistical difference between the participants and the nonparticipants of the Ninth Grade Academy.

Data Analysis Plan

For this study, I selected the independent-measures t test to test all four null hypotheses that there is no significant statistical difference between participants and nonparticipants of the Ninth Grade Academy based on performance measured by (a) cumulative GPA, (b) cumulative credits, (c) ninth-grade dropout rate, and (d) based on student satisfaction with ninth grade as measured on a satisfaction survey.

I used the independent-measures t test to compare numerical data in form of two independent sets of GPA scores, two independent sets of cumulative credits, and two independent sets of ninth-grade dropout rates. I also employed the independent-measures t test to compare independent samples of survey data in form of a categorical or nominal rating scale and continuous data on a scale. Additionally, I utilized the comprehensive computer software program SPSS to analyze the data, to perform the independent-measures t tests, to get information about descriptive statistics, and to produce reports in form of charts and tables.

Participant Protection and Researcher's Role

To fully protect the rights of the student participants in this study, all data collection took place after approval by the Institutional Review Board (IRB). The IRB approval number for this study is 03-25-09-0281722. After IRB approval, I obtained parental consent from all parents or guardians of participating students (Appendix C). Additionally, I protected students' identities through use of anonymous and confidential student surveys, as well as confidential treatment of GPAs, cumulative credits earned during ninth grade, and ninth-grade dropout rates. Survey data included categorical rating

scales and continuous data on a scale while GPAs, cumulative credits, and ninth-grade dropout rates were collected in form of numerical data. I collected and analyzed all data without any references to the individual participants and without identification of the students. Finally, I informed parents and guardians that they could withdraw their permission for participation at any time including after the beginning of this study. In addition, I provided information to both parents and students that participation in this study was voluntary and would not affect students' grades or placement decisions.

I have been teaching French and German for 7 years in the target school district and for 3 years at the target high school. I was a 10th-grade advisement teacher during the 2008-09 school year. With the help of the guidance counseling division chair, two assistant principals, as well as 9th- and 10th-grade advisement teachers of the target high school, I collected the data as described in this section under data collection procedures. I then performed statistical analyses as described in the data analysis plan. The quantitative nature of this study involved the use of numerical and scale data in a completely anonymous and confidential manner. Therefore, I decided not to exclude any students from this study with whom I was having daily contact through foreign language instruction and weekly contact through 10th-grade advisement. My professional relationship with foreign language and advisement students did not influence or affect the data collection and analyses in any way or vice versa.

Summary

Section 3 provided a detailed account of the methods used in this study such as research design and approach, the 9th- and 10th-grade populations and sampling

procedures, as well as the Ninth Grade Academy treatment used for the posttest. In addition, this section described the dependant variables GPA, cumulative credits, 9th-grade dropout rate, and student satisfaction and explained procedures to ensure the validity and reliability of the survey instrument. For example, a panel of experts evaluated the content and the structure of the satisfaction survey. This section also provided a description and the timeline of the data collection procedures, gave information about data analysis plan, and concluded with details about how the researcher protected study participants.

Section 4 of this study is a comprehensive discussion of the data analysis of this study. The data analysis consists of three main areas and a concluding summary:

1. Introduction including a description of the procedures for parental consent, how parental consent impacted the final sample size and research design, an explanation of the different number of study participants for research question 3, and survey reliability and validity using Cronbach's alpha.
2. Report of the data collection procedures and data analyses of four research questions. Data analyses of nine survey items for research question 4.
3. Discussion of findings and results of four research questions and survey questions 4, 7, and 8-14 as part of research question 4.

Section 5 provides a summary of findings from the data analyses in section 4 and briefly relates the results of each research question to current research as well as to the theoretical foundations of this study, Hirschi's (1969) social bonding theory and the constructivist learning theory. This section also addresses implications for positive social

change and concludes with recommendations for action such as a closer investigation of the new math curriculum and with recommendations for further longitudinal study.

SECTION 4: DATA ANALYSIS

Introduction

This section consists of a detailed presentation of the data analyses of this study and begins with an introduction that includes a brief summary of the purpose of this study, the research questions, the population, and sampling procedures. The introduction then provides a detailed account of the procedures to receive parental consent and how a lack of parental permission affected the final sample size and final research design. Another part of the introduction provides the reason for a different number of student participants for research question 3 and then concludes with describing survey reliability and validity with a pilot study and using Cronbach's alpha.

The major part of this section is a detailed account of the data collection procedures and analyses for the four research questions that also includes data analyses of nine survey questions as part of research question 4. This section concludes with a discussion of the findings of this study for all research questions and survey items.

Purpose of This Study, Research Questions, and Hypotheses

The purpose of this quasi-experimental quantitative study was to examine the impact of the Ninth Grade Academy transition program (independent variable) on cumulative GPAs and credits, ninth-grade dropout rate, and student satisfaction (dependent variables) using a posttest-only with nonequivalent control-group design. The treatment impact was tested on two different groups of ninth graders at the end of their 1st year in the target high school. One group participated in the Ninth Grade Academy and one group did not participate in this program.

The above data were collected, recorded, and analyzed to answer the question whether there is a significant difference between ninth graders who participated in the Ninth Grade Academy and ninth graders who did not participate based on student achievement as measured by GPA and cumulative credits, ninth-grade dropout rate, and based on student satisfaction with ninth grade as measured by a survey. Finally, the null hypotheses state that there is no significant statistical difference between the two groups.

Population

The population at the target high school consisted of approximately 555 ninth graders who participated in the Ninth Grade Academy and approximately 530 tenth graders who did not participate in a transition program during their ninth-grade year. The ninth-grade student population made the transition from middle to high school in the school year 2008-09 and did not include any repeating ninth-graders who failed their 1st year in high school.

The 10th-grade student population made the transition from middle to high school the previous school year 2007-08. They did not participate in a transition program in 9th grade and all of these students were promoted to 10th grade regardless of the number of credits earned. However, these 530 students did not include any repeating 10th graders who failed 10th grade and were not promoted to 11th grade. Repeating 10th graders did not participate in this study because they did not make the transition from middle to high school in 2007-08 but the year before. Therefore, these students belong to the Class of

2010 rather than the Class of 2011. In addition, these 530 students did not include any 10th graders who did not attend the target high school during their 9th grade year.

Sampling Procedures

It was my goal to include the whole population of 1085 students in this study or at least as many students as possible to be able to compare achievement and student satisfaction of the two different groups of ninth graders at the end of their 1st year in high school. For a population of 1085 students, the minimum sample size of 284 students was determined for 5% error and a 95% confidence level using a sample size calculator from the Raosoft Website (2004). Using the same sample size calculator and dividing this population into two groups to be compared, for the experimental group of 555 ninth graders, the minimum sample size of 228 students was determined for 5% error and a 95% confidence level. For the same error and confidence level, the minimum sample size of 223 students was determined for the control group of 530 tenth graders.

Parental Consent

This school district requires parental consent for the use of students' data such as GPAs, credits earned, and survey participation. Therefore, the final number of participants in this study depended on the return of parental consent forms.

After IRB approval, (IRB approval number 03-25-09-0281722), I targeted 555 ninth and 530 tenth graders in three waves to obtain parental consent from the whole population of 1085 students. The first wave was at the end of March 2009. I informed first-block teachers via e-mail about the study and the necessity of parental permission. I then placed parental consent forms and detailed instructions in first-block teachers' mail

boxes and asked them to hand out the consent forms to their 9th and 10th graders, explain the importance of this research, and ask students to return the signed forms to be able to participate. First-block teachers also collected and then returned the signed consent forms to me. Additionally, there were daily announcements to encourage students to participate in this research and to return the signed forms. I also sent several e-mails to teachers asking them to remind students to return signed consent forms.

Due to a low return rate of parental consent forms (45 ninth- and 38 tenth-graders), 2 weeks later in mid April 2009, I organized a second wave. Using the same procedures as before, this time advisement teachers distributed parental consent forms during advisement. I also made a special announcement during this particular advisement to explain the purpose and the importance of this study and asked students to participate. In addition, there were further daily announcements to encourage students to return signed parental consent forms and I sent regular e-mails to teachers asking for their help to remind students and to collect the consent forms.

After the first two waves and 4 weeks of trying to obtain parental consent, only 146 out of 1085 students returned parental consent forms, only 13.46% of the total population. In order to reach at least the calculated minimum sample size of 284 students for the whole population of 1085 students, I decided to have a third wave. Two weeks after the second wave, at the end of April 2009, I mailed letters to 929 students and their parents who had not returned the parental consent form and who had a working address in the school's data base. The letters included information for parents about the study and

the parental consent form. As a result, I received an additional 76 signed parental consent forms out of 929 possible. Forty-nine letters were returned to me as undeliverable.

After 6 weeks and three waves of trying to obtain parental permission from 1085 students, 222 students returned signed parental consent forms, 20.46%. Of these 222 students, there were 120 ninth graders and 102 tenth graders.

Final Sample Size

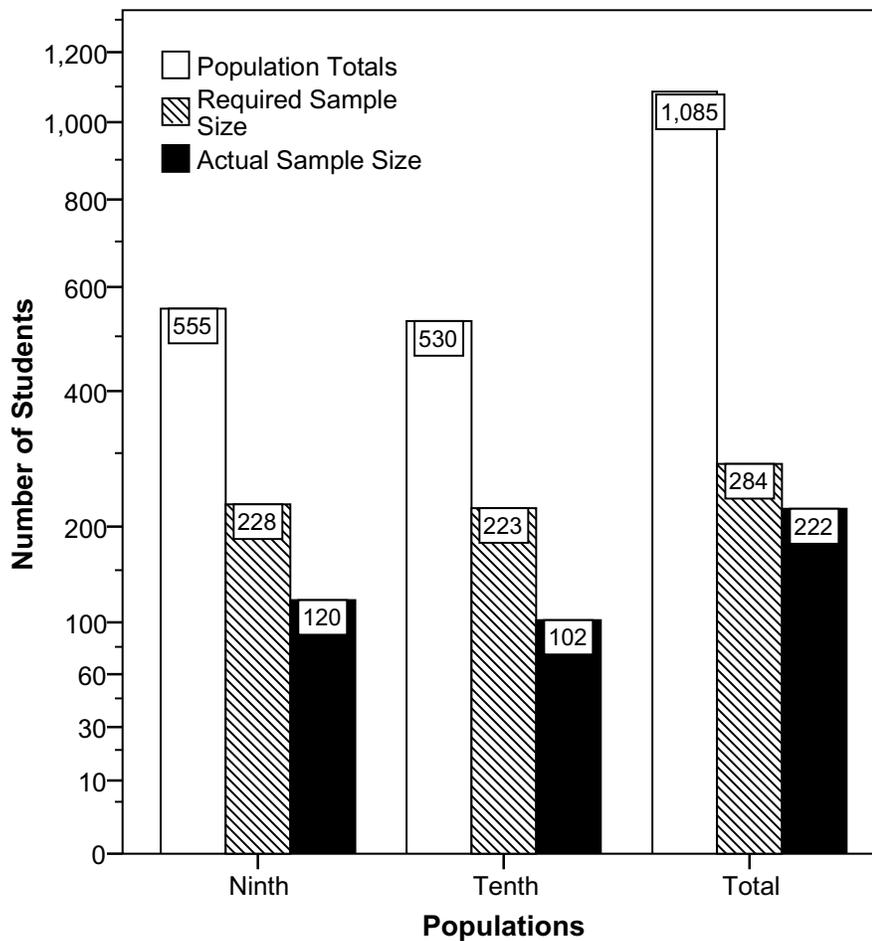


Figure 3. Populations, required and actual sample sizes.

Figure 3 shows population, required sample size, and actual sample size.

For a total of 1085 students, 555 ninth graders and 530 tenth graders, the final sample size of this study was 222 participants, 120 ninth graders (experimental group and Class of 2012) and 102 tenth graders (control group and Class of 2011). I selected these two groups of students to compare the effect of the Ninth Grade Academy transition program. Students were classified as 9th-grade participants of the transition program (experimental group and Class of 2012), or as 10th-grade nonparticipants of the transition program (comparison group and Class of 2011).

For a population of 1085 students, I determined the minimum sample size of 284 students for 5% error and a 95% confidence level using a sample size calculator from the Raosoft website (2004). I was unable to obtain parental consent from 284 students and, using the same sample size calculator, I determined that for a population of 1085 students, a sample size of 222 increased the margin of error from 5% to just 5.87% at a 95% confidence level. Figure 3 shows the total population of 1085, the required sample size of 284 students for this population, and the actual sample size of 222 students.

Figure 3 also shows the total 9th- and 10th-grade populations with the required and actual samples size for both. Using the Raosoft sample size calculator (2004), I determined that for the experimental group of 555 ninth graders the minimum sample size was 228 at a 95% confidence level. However, the actual sample size of 120 students increased the margin of error from 5% to 7.93%. For the control group of 530 tenth graders the minimum sample size was 223 students. The actual sample size of 102 students increased the margin of error from 5% to 8.73%.

Final Research Design

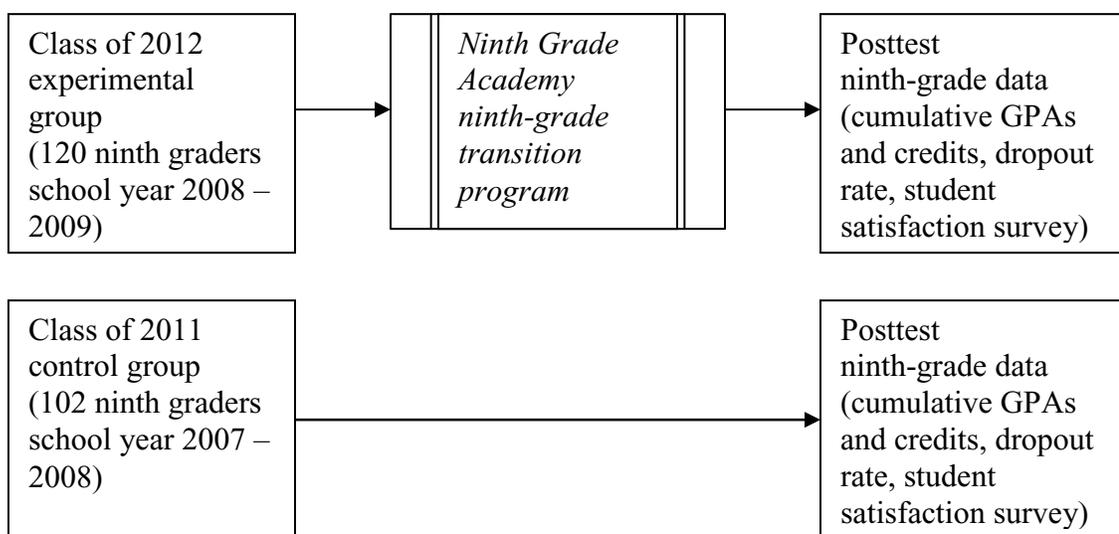


Figure 4. Finalized quasi-experimental design using posttest only with nonequivalent control groups.

As shown in Figure 4, this quasi-experimental quantitative study used a posttest-only with nonequivalent control-group design to evaluate the effect of a ninth-grade transition program, the Ninth Grade Academy (independent variable). The treatment in this study was the specific design of the Ninth Grade Academy transition program as described in detail in Section 3. The posttest in this study compared cumulative GPAs, the number of cumulative credits, ninth-grade dropout rate, and data from a student satisfaction survey (dependent variables). The treatment effect was examined on two different groups of ninth-grade students. The experimental group (120 ninth graders and Class of 2012) participated in the Ninth Grade Academy during the 2008-09 school year, whereas the comparison group (102 tenth graders and Class of 2011) did not have any access to any type of transition program during their ninth-grade year 2007-08.

Study Participants for Research Question 3: Ninth-Grade Dropout Rates

To be able to accurately calculate ninth-grade dropout rates, this particular school district waved the need for parental consent for this specific part of the study because individual student data such as GPA and cumulative credits was not used for this research question. Additionally, none of the student participants who returned their signed parental consent forms had dropped out of ninth grade; otherwise they would not have been in attendance of the target high school. Therefore, it would have been impossible to collect any valid data about ninth-grade dropout rates.

With parental consent waived, I was able to use the whole student population of 1085 students for comparison, 555 ninth-grade experimental group students (Ninth Grade Academy Participants) and 530 tenth-grade control group students (nonparticipants of the Ninth Grade Academy) to conduct a census rather than sampling a specific population. As a result, using the Raosoft sample size calculator (2004), I was able to determine that the margin of error decreased to 0%.

Survey Reliability and Validity

As described in Section 3, to establish reliability and validity, I selected internal consistency reliability estimation because a single measurement instrument (the student satisfaction survey) was given to a group of 9th graders and to a group of 10th graders on one occasion. In Section 3, first I established content validity by asking a team of experts to evaluate this survey with the help of a survey evaluation rubric (Appendix D). Then, I discussed external validity because all the participants of this study were selected from one particular high school.

After IRB approval and obtaining parental consent, I established validity of this study's student satisfaction survey with the help of a pilot survey in April 2009.

According to the number of survey items, I used a nonstratified convenience sample of 30 students in this pilot study. I selected 15 ninth graders (experimental group and Ninth Grade Academy participants) and 15 tenth graders (control group and nonparticipants of the Ninth Grade Academy) without random assignment. Each group of 15 participants was a convenience sample of students who returned parental consent forms in a timely manner and who were easily accessible. For example, I selected a few students from my own classes and advisement. Several other students were easily accessible because they had foreign language classes with colleagues in my department. Some students were selected because their third-block class coincided with my planning period and finally, several students were selected from classes of trusted and reliable colleagues.

I asked these 30 students in person or with the help of informed colleagues to complete a pilot study survey for testing purposes and to sign an assent form. The pilot study did not include the additional comments section on the back of the survey since this part was not necessary to establish Cronbach's alpha. I provided the 15 participants of the Ninth Grade Academy with a yellow copy of the survey (Appendix A) and the 15 tenth grade nonparticipants of the Ninth Grade Academy received a blue copy of the survey instrument (Appendix B). I decided to color code the survey instrument to easily distinguish between the experimental and control group. This procedure was particularly important because even though the survey questions asked about the same content, they were worded slightly different using present tense for current participants of the Ninth

Grade Academy (9th-grade experimental group) and using past tense for nonparticipants (10th-grade control group).

In order for the survey to demonstrate reliability, students should have responded consistently to the questions. For example, students with good grades who were passing their classes should have responded in a positive way regarding student satisfaction (Fink, 2006). Using Cronbach's alpha, I was able to judge the reliability of the survey items by estimating how well items of similar construct produce similar results (Gravetter & Wallnau, 2005; Trochim 2006). According to George and Mallery (2003), the coefficient alpha has a range from zero to one. The closer the coefficient alpha is to one, the higher is the reliability of a particular survey instrument. George and Mallery (2003) provided the following general guidelines to indicate a reliable instrument. The authors suggested that a Cronbach's alpha of .7 and above is generally acceptable, values of .8 and above are good, while values of .9 and above are excellent. Thus, I determined that a Cronbach's Alpha at .75 or above would be sufficient as a reliable survey instrument.

Using the SPSS statistics program, I calculated that Cronbach's alpha was $\alpha = .807$ for 13 survey items, which according to George and Mallery (2003) indicates a survey instrument of good reliability. A Cronbach's alpha of $\alpha = .807$ was also above my predetermined coefficient alpha of .75. Table 3 individually lists the mean and the standard deviation for the 13 survey items that were tested for internal consistency. Additionally, Table 3 shows that there were 30 respondents (N) for each of the 13 survey items. As a result of these calculations, I was able to determine that the survey about

student satisfaction with their ninth-grade experience was a reliable survey instrument with reliable internal consistency.

Table 3

Cronbach's Alpha Item Statistics for Mean and Standard Deviation (N = 30)

	Mean	Std. deviation
GPA	5.57	.82
Cumulative credits earned	5.80	.76
Positive high school experience	4.90	1.03
Supportive administrators	4.23	1.23
Supportive guidance counselors	4.47	1.11
Satisfied with grades and progress	4.53	1.41
Ready to move on to 10th grade	5.37	1.07
Positive 9th grade experience	4.47	1.28
Learned skills for high school success	4.83	1.09
Supportive teachers	4.80	1.27
Positive elementary school experience	5.13	.90
Involved in extracurricular activities	3.97	1.47
Positive middle school experience	4.70	1.21

However, I did make a few minor format changes to the survey. First, I deleted the check box for Ninth Grade Academy Participant because the surveys were color coded: participants of the Ninth Grade Academy received yellow surveys, whereas 10th-

grade nonparticipants received blue surveys. Therefore, I did not need this check box and was able to space out a few questions for better legibility and structure. Second, I changed the numbering system of the questions and put them in a more logical sequence to better prevent students from accidentally skipping questions (Appendices F and G).

Data Collection and Analysis

Data Collection Procedures

After IRB approval and after obtaining parental consent, I collected data from the 222 study participants (10th-grade control and 9th-grade experimental group) during the second semester of the 2008-09 school year between April and May 2009, as well as after the second semester in June 2009. With the help of assistant principals of this high school, I collected data about cumulative GPAs and credits from official school district transcripts as well as the official school district year end scholastic report for the target high school. I collected GPA and credits of the 9th-grade experimental group (participants of the Ninth Grade Academy) at the end of their 9th-grade year 2008-09. I collected the same data for the 10th-grade control group also for the end of their ninth-grade year 2007-08, not their GPA and cumulative credits earned in 10th grade.

To collect the data about ninth-grade dropout rates, I requested two official school district reports for this particular high school from the school district's data base. The reports were produced by the school district's technical support team and sent to me via e-mail. One report indicated the dropout rates for ninth grade of the school year 2007-08 (control group) and one report indicated the dropout rates for ninth grade of the school year 2008-09 (experimental group).

Additionally, at the beginning of May 2009, all 222 study participants were asked to complete a survey about their satisfaction with their ninth-grade experience. I coordinated with an assistant principal 3 weeks in advance to reserve a 30-minute advisement on May 6, 2009 for the completion of the survey. Due to state mandated testing at the end of the semester as well as Advanced Placement and International Baccalaureate examinations, this date was canceled last minute on May 5, 2009 and changed to a 15-minute advisement on May 8, 2009, which was still enough time for students to complete the satisfaction survey.

I coordinated with 9th- and 10th-grade advisement teachers 1 week in advance, explaining survey procedures and providing information about the survey via e-mail. The day before the survey, I placed a folder with instructions, information, and surveys in each 9th- and 10th-grade advisement teacher's mail box. The folders included a roster with the highlighted names of students participating in this student satisfaction survey, the appropriate number of student assent forms and color coded surveys, two large envelopes for confidential returns (one labeled "surveys" and one labeled "assent forms"), as well as detailed instructions and checklists.

Assuring confidentiality and anonymity to students, advisement teachers were asked to distribute assent forms and surveys to participating students, supervise survey completion, collect all responses and assent forms, and seal them in the appropriate envelope. Advisement teachers were then asked to return the completed and sealed surveys and assent forms to my mailbox or to my classroom. Advisement teachers were also asked to keep a record of study participants who were absent on the day of the

completion of the survey and, following the same procedures, to administer the survey to these students during the next one or two advisement periods.

Due to state mandated testing at the end of the semester as well as Advanced Placement and International Baccalaureate examinations, absentee students in advisement caused a problem for the completion of the survey. Additionally, several teachers were absent themselves and had substitute teachers, and some teachers did not follow instructions for survey completion. Therefore, over the next few weeks until the end of the semester of the 2008-09 school year, I continued to follow up and encourage survey returns by sending regular e-mail reminders to all 9th- and 10th-grade advisement teachers. I also accessed schedule information for all absentee students and used my planning period to get in touch with these students and asked them to complete the survey. In addition, I used students' schedule information to select reliable and informed colleagues and then asked them to allow absentee students to complete the survey during their classes. Finally, on May 22, 2009, I mailed letters to the homes of 19 absentee students who could not be reached in school before the end of the semester on May 22, 2009. The letters included general information, a checklist with instructions, two assent forms, the student satisfaction survey, and a stamped self-addressed envelope. As a result, out of 222 study participants who returned signed parental consent forms, 212 students (95.5%) also participated in the student satisfaction survey, 113 ninth graders (Class of 2012 experimental group) and 99 tenth graders (Class of 2011 control group).

Data Analysis Plan

For this study, I selected the independent-measures t test to test all four null hypotheses that there is no significant statistical difference: (a) based on performance measured by GPA, (b) based on cumulative credits, (c) based on ninth-grade dropout rates, and (d) in student satisfaction as measured on a satisfaction survey between participants and nonparticipants of the Ninth Grade Academy transition program.

I used the independent-measures t test for comparing numerical data such as two independent sets of GPA scores, two independent sets of cumulative credits, and two independent sets of ninth-grade dropout scores. I also utilized the independent-measures t test to compare independent samples of survey data in form of a nominal rating scale and continuous data on a scale. I used the comprehensive computer software program SPSS to analyze the data, to perform the independent-measures t tests, to obtain information about descriptive statistics, and to create charts and tables.

Data Analysis

Research Question 1

RQ₁: Is there a statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on academic performance as measured by GPA?

H₀₁: There is no significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students

who did not participate in this transition program based on academic performance measured by GPA.

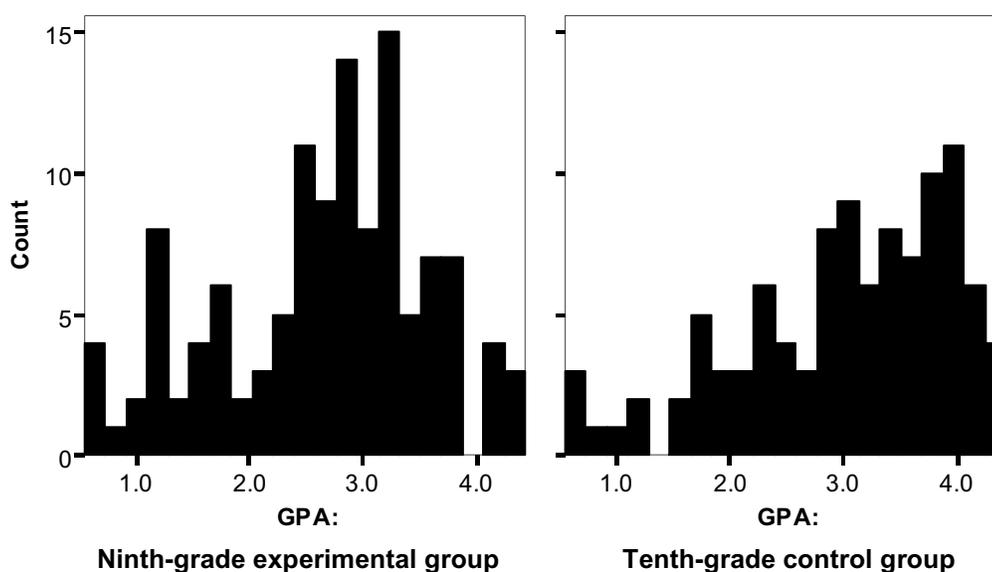


Figure 5. Grade point averages (GPA) of 9th-grade experimental and 10th-grade control group.

Figure 5 shows GPAs from both the 9th-grade experimental group (participants of the Ninth Grade Academy) and the 10th-grade control group (nonparticipants of the Ninth Grade Academy) at the end of their 9th-grade year. Although for the 9th-grade experimental group, the distribution is still negatively skewed, the GPAs are clustered somewhat around the lower end, then peak in the middle around a GPA of 3.0, and finally fall at the higher end of the distribution. For the 10th-grade control group, the distribution is clearly negatively skewed and the GPAs are clustered around the higher end of the distribution approximately between GPAs of 3.0 and 4.0. It also appears that

the GPAs of experimental group students peak approximately between 2.5 and 3.2 whereas the GPAs of control group students appear to peak between 2.9 and 4.2.

Table 4

Group Statistics of Grade Point Average (GPA)

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	120	2.67	.92	.08
Tenth	102	3.04	.96	.09

Table 4 shows that the participants of the Ninth Grade Academy in the experimental group achieved lower GPAs ($M = 2.67$, $SD = .92$) than the nonparticipants of the academy in the control group who did not have any access to any type of ninth-grade transition program during their 1st year in high school ($M = 3.04$, $SD = .96$). Statistical analysis indicates that there is a significant difference in mean scores between these two groups of students because $\text{Sig. (2-tailed)} = .005 < .05$ for both equal variances assumed and equal variances not assumed as shown in Table 5.

Table 5 shows that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 220$ (equal variances assumed) and $df = 211.36$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). Also, the calculated t statistics of -2.870 (equal variances assumed) and -2.861 (equal variances not assumed) do fall into the critical region. Therefore, the researcher rejected the null hypothesis and concluded that there is a significant statistical difference based on academic performance measured

by GPA between ninth graders who participated in the Ninth Grade Academy transition program and ninth graders who did not participate in this program.

$t(220) = -2.870, p = .005, r^2 = 03.61\%$ (equal variances assumed).

$t(211.34) = -2.861, p = .005, r^2 = 03.73\%$ (equal variances not assumed).

Table 5

Independent Samples t Test of Grade Point Average (GPA)

<i>t</i> test for equality of means					
	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	-2.870	220	.005	-.36	.13
Equal variances not ass.	-2.861	211.36	.005	-.36	.13

Research Question 2

RQ₂: Is there a statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on cumulative credits earned?

H₀₂: There is no significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on cumulative credits earned.

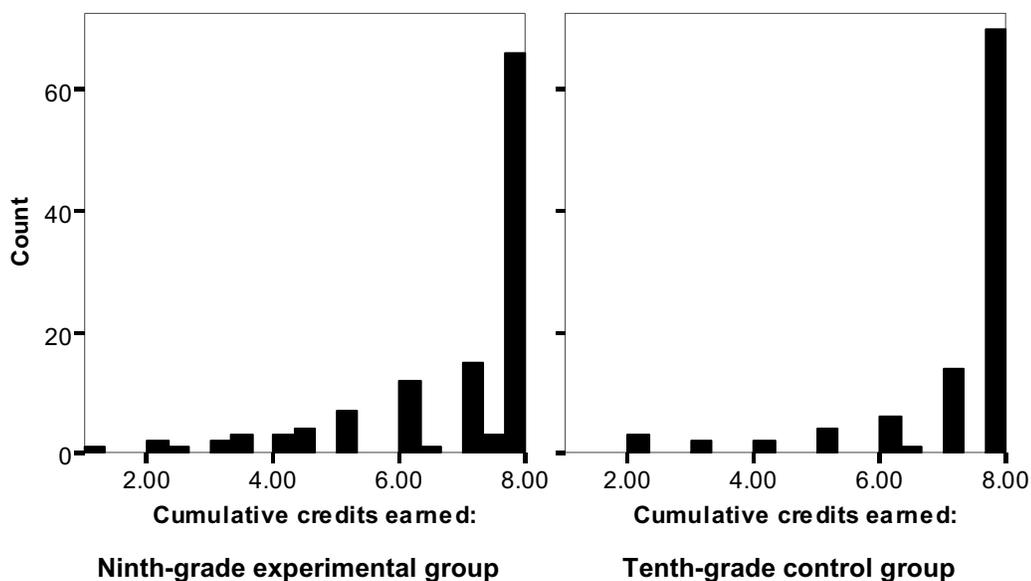


Figure 6. Cumulative credits of 9th-grade experimental and 10th-grade control group.

Figure 6 shows cumulative credits earned from both the 9th-grade experimental group (participants of the Ninth Grade Academy) and the 10th-grade control group (nonparticipants of the Ninth Grade Academy) at the end of their 9th-grade year. Although both distributions are clearly negatively skewed with a high peak at eight credits earned, it appears that for the 9th-grade experimental group, the counts for less than eight credits earned are higher than those of the 10th-grade control group. For the experimental group, the distribution shows more clusters in the lower end and in the middle of the distribution between two and six credits earned than in the distribution of the control group. The cumulative credits earned are displayed on an ascending scale ranging from *one* through *eight* credits earned. Figure 6 shows a larger quantity of bars as well as higher bars for the experimental group in the lower end and in the middle of the distribution between one and six credits earned. As a result, for the 9th-grade

experimental group there is a wider spread of cumulative credits earned as well as a larger number of students who earned between one and six cumulative credits than for 10th-grade control group students.

Table 6

Group Statistics of Cumulative Credits Earned

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	120	6.86	1.67	.15
Tenth	102	7.26	1.44	.14

Table 6 shows that the participants of the academy in the experimental group achieved fewer cumulative credits earned ($M = 6.86$, $SD = 1.67$) than the 10th-grade nonparticipants in the control group ($M = 7.26$, $SD = 1.44$). Statistical analysis indicates that there is no significant difference in mean scores between these two groups of students because Sig. (2-tailed) = .059 > .05 for equal variances assumed and Sig. (2-tailed) = .056 > .05 for equal variances not assumed (Table 7).

Table 7 indicates that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 220$ (equal variances assumed) and $df = 219.93$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). Also, the calculated t statistics of -1.899 (equal variances assumed) and -1.922 (equal variances not assumed) do not fall into the critical region. Therefore, the researcher failed to reject the null hypothesis and concluded that there is no significant statistical difference based cumulative credits

earned between ninth graders who participated in the Ninth Grade Academy and ninth graders who did not participate in the academy.

$t(220) = -1.899$, $p = .059$, $r^2 = 01.61\%$ (equal variances assumed).

$t(219.93) = -1.922$, $p = .056$, $r^2 = 01.65\%$ (equal variances not assumed).

Table 7

Independent Samples t Test of Cumulative Credits Earned

<i>t</i> test for equality of means					
	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	-1.899	220	.059	-.40	.21
Equal variances not ass.	-1.922	219.93	.056	-.40	.21

Research Question 3

RQ₃: Is there a statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on ninth-grade dropout rates?

H₀₃: There is no significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on ninth-grade dropout rates.

For all statistical analyses for this particular research question, the researcher was able to use the whole student population of 1085 students for comparison, 555 ninth-

grade experimental group students (Ninth Grade Academy Participants) and 530 tenth-grade control group students (nonparticipants of the Ninth Grade Academy).

Table 8

Ninth-Grade Dropout Rates and Reasons for Dropping Out of Ninth Grade

Dropout reasons	No. students	Percentage	No. students	Percentage
	experiment.	experiment.	control	control
Low grades & failure	0	0%	2	11.11%
Lack of attendance	2	18.18%	15	83.33%
Expelled	1	9.09%	0	0%
Incarcerated	2	18.18%	1	5.56%
Unknown	6	54.55%	0	0%
Total dropouts	11 (of 555)	1.98%	18 (of 530)	3.40%

Table 8 shows the ninth-grade dropout rates of the experimental group (Ninth Grade Academy participants) and the control group (nonparticipants of the academy). In the experimental group, 1.98% dropped out whereas in the control group, 3.40% dropped out during their ninth-grade year. It appears that the ninth-grade dropout rate of the experimental group is lower than the ninth-grade dropout rate of the control group.

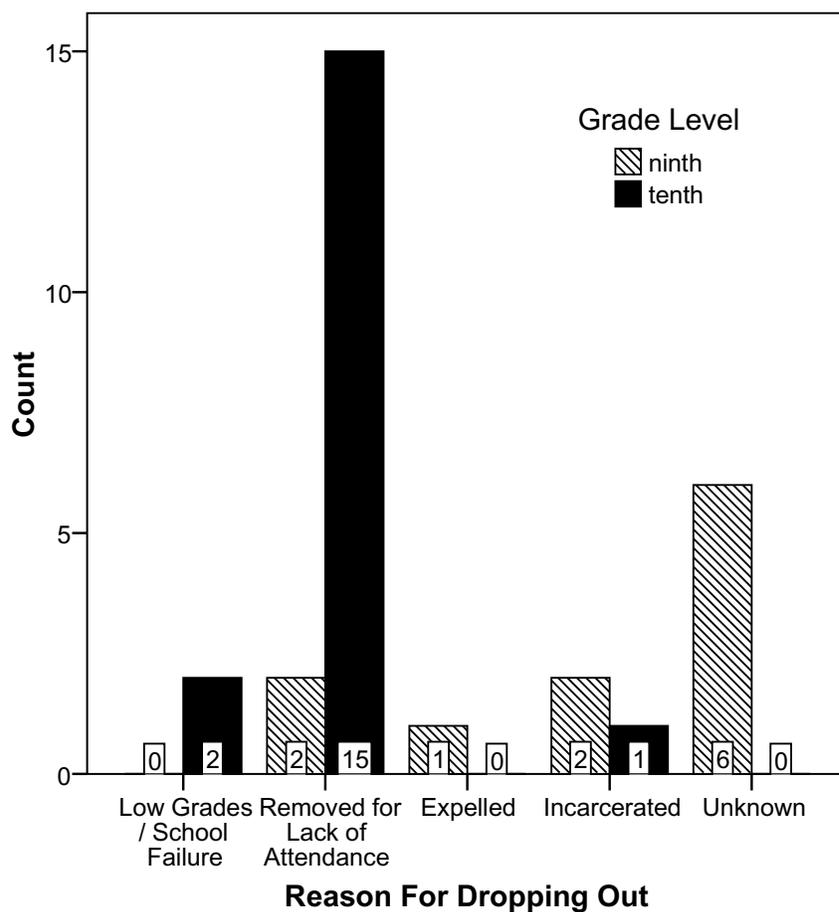


Figure 7. Reasons for dropping out of 9th grade for 9th-grade experimental and 10th-grade control group.

Additionally, Table 8 and Figure 7 indicate students' reasons for dropping out of high school during their ninth-grade year. The majority of control group students and nonparticipants of the Ninth Grade Academy was removed for lack of attendance, 15 students in total out of 18 (83.33%). In the ninth-grade experimental group (participants of the Ninth Grade Academy), only 2 of 11 students (18.18%) were removed for lack of attendance. In this particular group, the majority of students dropped out of ninth grade for reasons unknown, 6 students in total out of 11 (54.55%), and none of the students

dropped out because of low grades and school failure. However, in the control group, 2 students (11.11%) dropped out because of low grades and school failure.

Table 9

Group Statistics of Ninth-Grade Dropout Rates

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	555	1.02	.14	.006
Tenth	530	1.03	.18	.008

Table 9 shows that participants of the Ninth Grade Academy in the experimental group have slightly lower dropout scores ($M = 1.02$, $SD = .14$) than the nonparticipants in the control group ($M = 1.03$, $SD = .18$). However, statistical analysis indicates that there is no significant difference in mean scores between these two groups of students because Sig. (2-tailed) = .149 > .05 for equal variances assumed and Sig. (2-tailed) = .152 > .05 for equal variances not assumed (Table 10).

Table 10 indicates that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 1083$ (equal variances assumed) and $df = 993.15$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). In addition, the calculated t statistics of -1.444 (equal variances assumed) and -1.435 (equal variances not assumed) do not fall into the critical region. Therefore, the researcher failed to reject the null hypothesis and concluded that there is no significant statistical difference in ninth-grade dropout rates between ninth graders who participated in the Ninth Grade Academy transition program and ninth graders who did not participate in this program.

$t(1083) = -1.444, p = .149, r^2 = 00.19\%$ (equal variances assumed).

$t(993.15) = -1.435, p = .152, r^2 = 00.21\%$ (equal variances not assumed).

In this case, the t statistics have a negative value as a result of score assignment rather than possibly pointing toward a negative treatment effect. A low score represents a low dropout rate and a high score represents a high dropout rate.

Table 10

Independent Samples t Test of Ninth-Grade Dropout Rates

<i>t</i> test for equality of means					
	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	-1.444	1083	.149	-.01	.01
Equal variances not ass.	-1.435	993.15	.152	-.01	.01

Research Question 4

RQ₄: Is there a statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on student satisfaction with their ninth-grade experience as measured on a satisfaction survey?

H₀₄: There is no significant statistical difference between ninth-grade students who participated in the Ninth Grade Academy transition program and ninth-grade students who did not participate in this transition program based on student satisfaction with their ninth-grade experience as measured on a satisfaction survey.

Of the 222 study participants (parental consent obtained), 212 students participated in a survey about satisfaction with their ninth-grade experience. The survey participants included 113 Ninth Grade Academy participants in the experimental group and 99 control group students and nonparticipants of the Ninth Grade Academy.

Survey item general student information: Gender.

Table 11

Participants by Gender, Grade Level, and Percentage

	Total numbers	Male	Female
Ninth grade experimental	113	45	68
Percentages	100%	40%	60%
Tenth grade control	99	35	64
Percentages	100%	35%	65%
All survey participants	212	80	132
Percentages	100%	38%	62%

All 212 student satisfaction survey participants provided information about their gender. Table 11 indicates survey participation by gender and shows that 38% of the survey participants were male (80 students) and that 62% of the survey participants were female (132 students). This table also indicates that in both the experimental and the control group, there are more female than male participants, 68 female students in the experimental group (60%) and 64 female students in the control group (65%).

Survey item general student information: Ethnic background.

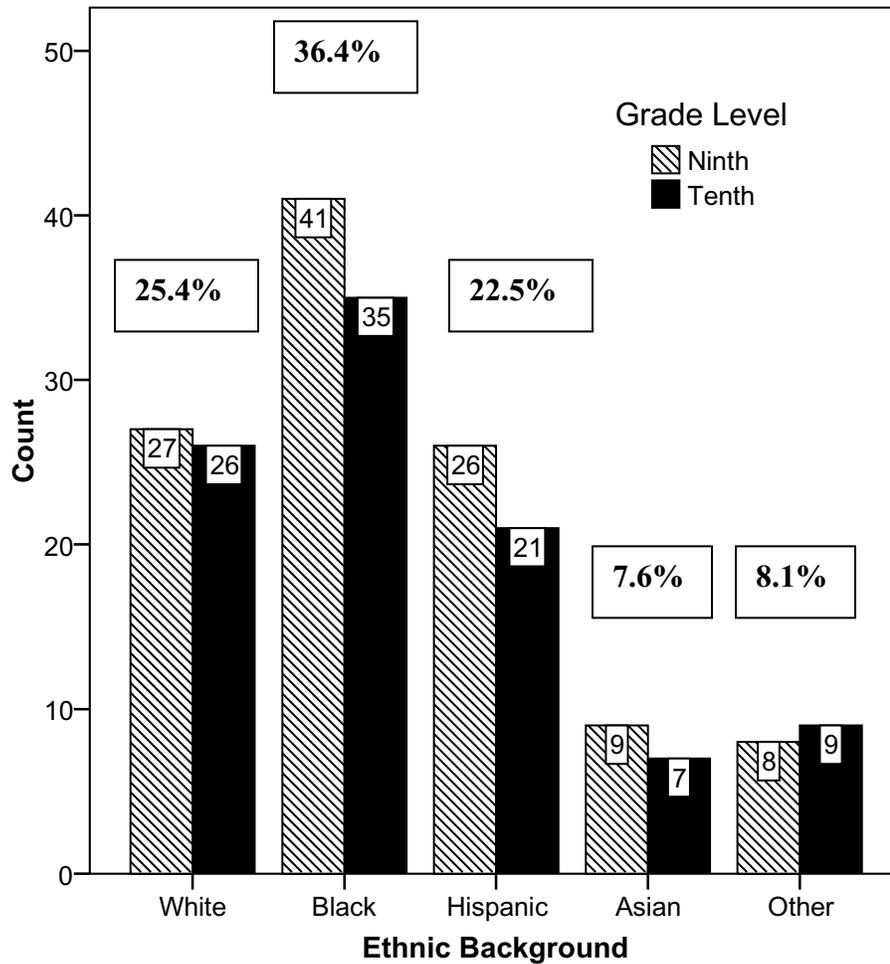


Figure 8. Survey participants by ethnic background and grade level.

Out of 212 survey participants, 209 students provided information about their ethnic background, 111 Ninth Grade Academy participants (experimental group) and 98 nonparticipants of the Ninth Grade Academy (control group). Three students, 2 participants and 1 nonparticipant of the academy, did not provide information about their ethnic background and did not respond to this question.

Figure 8 provides information about the ethnic background of the survey participants, which roughly corresponds to the general ethnic enrolment of the target high school. According to the web site of the Georgia Department of Education (2008), during the 2007-08 school year, there were 2107 students enrolled at this high school with enrolment by ethnicity as follows: 4.4% Asian, 48.2% Black, 22% Hispanic, 0.4% American-Indian, 3.3% Multiracial, and 21.7% White. The largest group of survey participants was also Black (36.4%), followed by White (25.4%), and then followed by Hispanic (22.5%). Finally, Figure 8 also shows that both the experimental group and the control group include students of ethnic backgrounds of relatively similar proportions, which again are also similar to the overall ethnicity of this particular high school.

Survey questions 1 and 2: Information about GPA and number of classes successfully passed in ninth grade. I did not include these survey items in the statistical analyses of research question 4 because I already addressed GPA and cumulative credits earned when discussing research questions 1 and 2. More importantly, for GPA and cumulative credits, I used official school district transcripts and the official school district year end scholastic report for the target high school to obtain reliable data.

However, the reason I did include GPA and classes successfully passed in ninth grade as part of this survey was to accurately determine internal consistency of this survey instrument. For example, students with a high GPA and passing most of their classes should also respond positively to questions about their ninth-grade experience.

Survey questions 5 and 6: I enjoyed my experience in middle school and in elementary school. I did not include these survey items in the statistical analyses of

research question 4 because they are not relevant to this particular research question.

However, I did include elementary and middle school experiences in this survey to be able to accurately determine internal consistency of this survey instrument. For example, students who enjoyed their experience in elementary and in middle school, are more likely to also enjoy their experience in high school.

Survey question 4: I enjoy being a high school student. Figure 9 reveals students' responses to the statement: I enjoy being a high school student. Students answered on a scale from *strongly disagree* to *strongly agree* which also has numerical values from *one* through *six*. The distributions of the 9th-grade experimental and the 10th-grade control group are both clearly negatively skewed indicating that the majority of students in both groups enjoy being high school students. However, there are more students in the experimental than in the control group who agreed and strongly agreed with the statement in survey question 4. Only few students in both groups were not sure but tended to disagree, disagreed, or strongly disagreed as indicated by the small clusters at the lower end of the distributions.

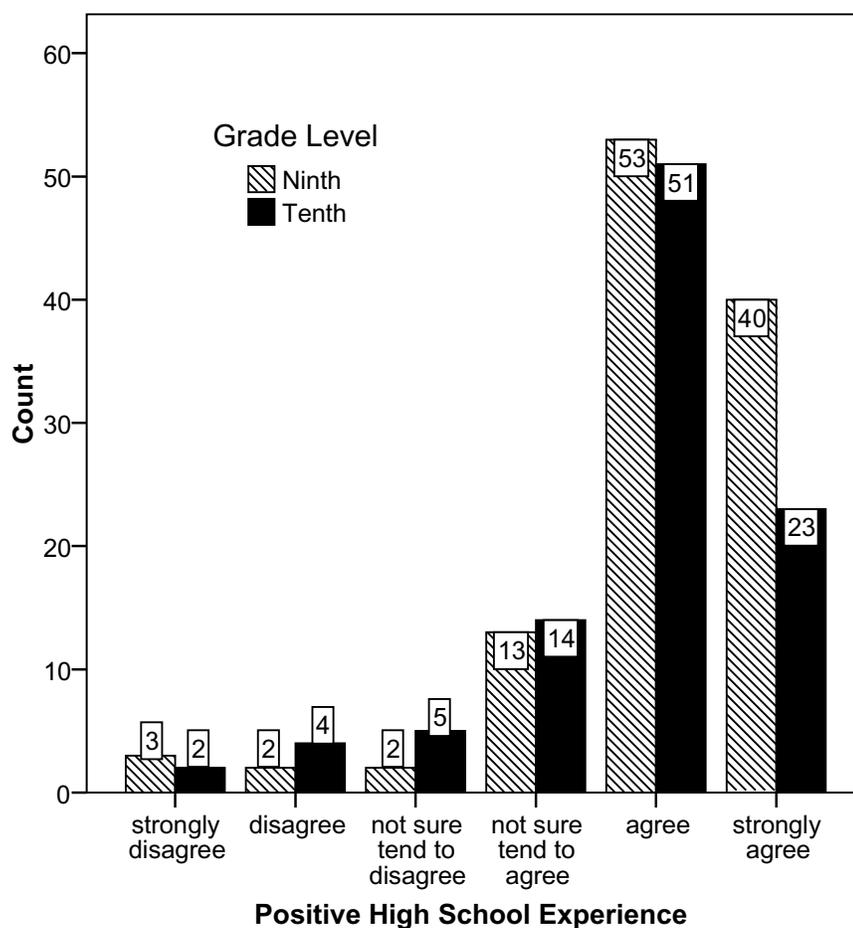


Figure 9. Responses to survey question 4 indicating the number of respondents for each answer choice in both the 9th-grade experimental and the 10th-grade control group.

Table 12 reveals information about how each individual student in each group rated survey question 4. For example, 40 ninth-grade experimental group students (35.4%) and 23 tenth-grade control group students (23.2%) strongly agreed with the statement that they enjoy their high school experience. Five experimental (4.5%) and 6 control group students (6%) disagreed and strongly disagreed with this statement. Finally,

this table also shows that all 212 survey participants provided an answer to this survey question.

Table 12

Grade Level Frequencies for Survey Question 4: I Enjoy Being a High School Student

Response	Ninth grade		Tenth grade	
	frequency	valid %	frequency	valid %
Strongly disagree	3	2.7	2	2.0
Disagree	2	1.8	4	4.0
Tend to disagree	2	1.8	5	5.1
Tend to agree	13	11.5	14	14.1
Agree	53	46.9	51	51.5
Strongly agree	40	35.4	23	23.2
Total	113	100.0	99	100.0
No response	-	-	-	-

Table 13 shows that the Ninth Grade Academy participants in the experimental group showed more agreement with the statement: I enjoy being a high school student ($M = 5.04$, $SD = 1.06$) than the nonparticipants in the control group ($M = 4.79$, $SD = 1.11$). However, statistical analysis indicates that there is not a significant difference in mean scores between these two groups of students because Sig. (2-tailed) = .088 > .05 for equal

variances assumed and Sig. (2-tailed) = .089 > .05 for equal variances not assumed (Table 14).

Table 13

Group Statistics of Survey Question 4: I Enjoy Being a High School Student

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	113	5.04	1.06	.10
Tenth	99	4.79	1.11	.11

Table 14 shows that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 210$ (equal variances assumed) and $df = 203.81$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). The calculated t statistics of 1.716 (equal variances assumed) and 1.711 (equal variances not assumed) do not fall into the critical region. The researcher failed to reject the null hypothesis and concluded that there is not a significant statistical difference in student satisfaction with their ninth-grade experience regarding enjoyment of being a high school student between both groups.

$t(210) = 1.716, p = .088, r^2 = 01.39\%$ (equal variances assumed).

$t(203.81) = 1.711, p = .089, r^2 = 01.42\%$ (equal variances not assumed).

Table 14

Independent Samples t Test of Survey Question 4: I Enjoy Being a High School Student

<i>t</i> Test for equality of means					
	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	1.716	210	.088	.26	.15
Equal variances not ass.	1.711	203.81	.089	.26	.15

Survey question 7: Overall, I had a positive 9th-grade experience. Figure 10 shows students' responses to the statement that overall, they had a positive 9th-grade experience. Students answered on a scale from *strongly disagree* to *strongly agree* which also has numerical values from *one* through *six*. The distributions of the 9th-grade experimental group and the 10th-grade control group are both clearly negatively skewed with a high peak for students who agreed and then a fall for students who strongly agreed. This indicates that the majority of students in both groups had a positive ninth-grade experience. Again in both groups, only a few students were not sure but tended to disagree, and fewer students disagreed and strongly disagreed as indicated by the small clusters in the lower end of the distribution.

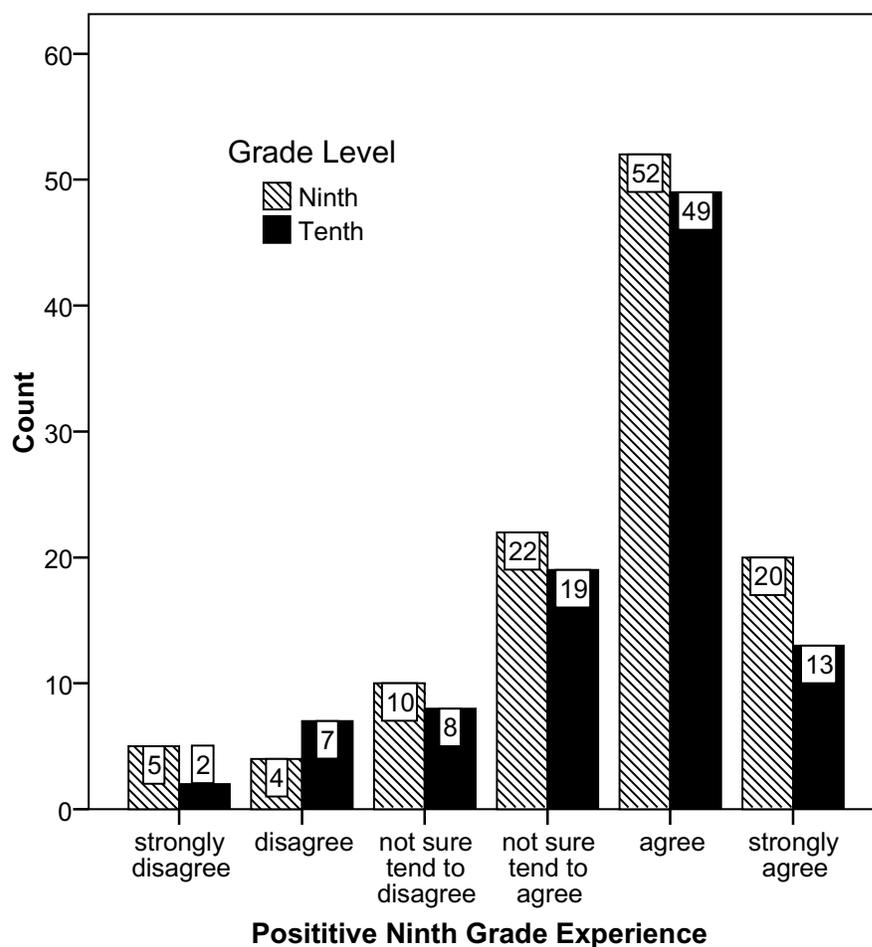


Figure 10. Responses to survey question 7 indicating the number of respondents for each answer choice in both the 9th-grade experimental and the 10th-grade control group.

Table 15 shows information about how each individual student in each group rated survey question 7. For example, 52 ninth graders in the experimental group (46%) and 49 tenth graders in the control group (50%) agreed with the statement that they had a positive 9th-grade experience. Twenty students in the experimental group (17.7%) and 13 students in the control group (13.3%) strongly agreed with this statement. Furthermore, a total of 9 students in each group (7.9% in the experimental and 9.1% in the control group) disagreed and strongly disagreed with the statement that they had a positive 9th-grade

experience. Finally, this table also shows that 1 student in the control group did not provide an answer to this survey question.

Table 15

Grade Level Frequencies for Survey Question 7: Overall, I Had a Positive Ninth-Grade Experience

Response	Ninth grade	Ninth grade	Tenth grade	Tenth grade
	frequency	valid %	frequency	valid %
Strongly disagree	5	4.4	2	2.0
Disagree	4	3.5	7	7.1
Tend to disagree	10	8.8	8	8.2
Tend to agree	22	19.5	19	19.4
Agree	52	46.0	49	50.0
Strongly agree	20	17.7	13	13.3
Total	113	100.0	98	100.0
No response	-	-	1	-

Table 16 indicates that the Ninth Grade Academy participants in the experimental group showed slightly more agreement with the statement: Overall, I had a positive high school experience ($M = 4.52$, $SD = 1.24$) than the nonparticipants in the control group ($M = 4.48$, $SD = 1.17$). However, statistical analysis indicates that there is not a significant difference in mean scores between these two groups of students because Sig. (2-tailed) =

.799 > .05 for equal variances assumed and Sig. (2-tailed) = .798 > .05 for equal variances not assumed (Table 17).

Table 16

Group Statistics of Survey Question 7: Overall, I Had a Positive High School Experience

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	113	4.52	1.24	.12
Tenth	98	4.48	1.17	.12

Table 17

Independent Samples t Test of Survey Question 7: Overall, I Had a Positive High School Experience

	t test for equality of means				
	t	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	.255	209	.799	.04	.17
Equal variances not ass.	.256	207.54	.798	.04	.17

Table 17 indicates that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 209$ (equal variances assumed) and $df = 207.54$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). The calculated t statistics of .255 (equal variances assumed) and .256 (equal variances not assumed) do not fall into the critical region. Therefore, the researcher failed to reject the null hypothesis and concluded that there is not a significant statistical difference in student satisfaction with ninth grade

regarding having a positive ninth-grade experience overall, between participants and nonparticipants of the Ninth Grade Academy transition program.

$t(209) = .255, p = .799, r^2 = 00.03\%$ (equal variances assumed).

$t(207.54) = .256, p = .798, r^2 = 00.03\%$ (equal variances not assumed).

Survey question 8: I feel or felt confident that I am or was ready to move on to 10th grade. Figure 11 indicates students' responses regarding readiness to move on to the next grade level. Students answered on a scale from *strongly disagree* to *strongly agree* which also has numerical values from *one* through *six*. The distributions of the 9th-grade experimental and the 10th-grade control group are both clearly negatively skewed with two high peaks for students who agreed and strongly agreed. This indicates that the majority of students in both groups felt that they are or that they were ready to move on to 10th grade. Only very few students in both groups responded that they do not or that they did not feel ready to move on to the next grade level as indicated by the very small clusters in the lower end of the distribution.

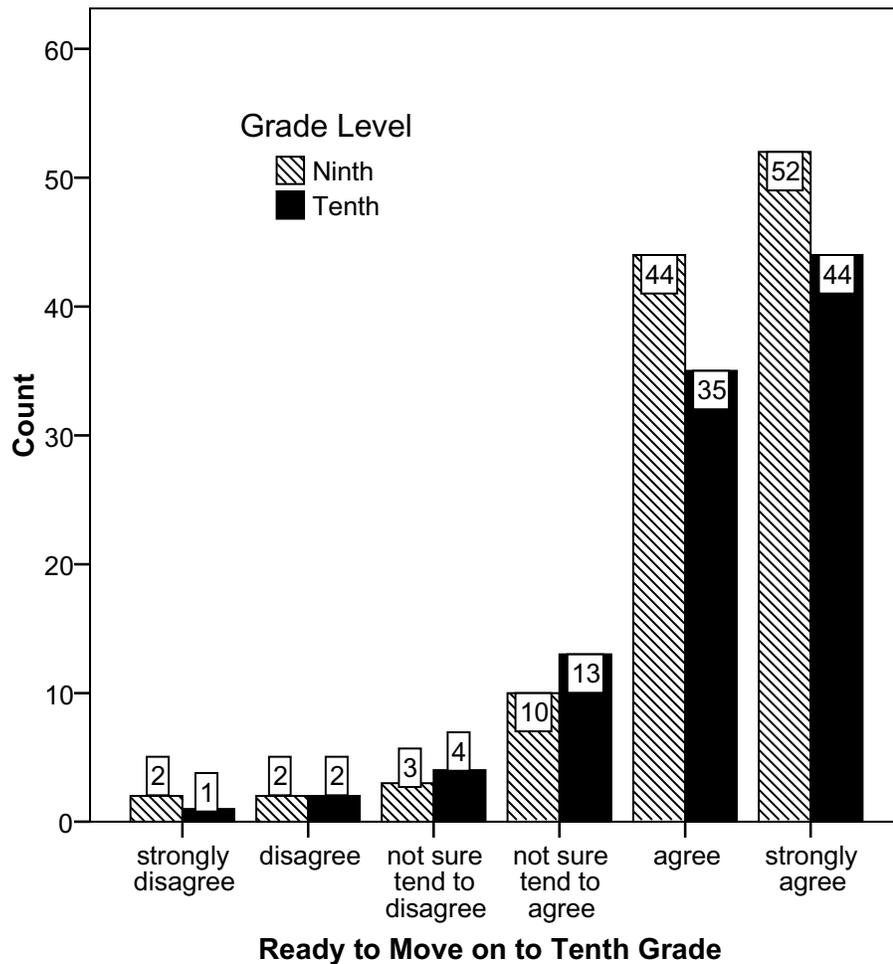


Figure 11. Responses to survey question 8 indicating the number of respondents for each answer choice in both the 9th-grade experimental and the 10th-grade control group.

Table 18 reveals detailed information about how each individual student in each group rated survey question 8. For example, 96 experimental group students (84.9%) and 79 control group students (79.8%) agreed with the statement that they are or that they were ready to move on to 10th grade. There were only 4 students in the experimental group (3.6%) and 3 students in the control group (3%) who disagreed and strongly

disagreed with this statement. Finally, this table also shows that all 212 participants responded to this survey question.

Table 18

Grade Level Frequencies for Survey Question 8: I Feel or Felt Confident That I Am or Was Ready to Move on to 10th Grade

Response	Ninth grade	Ninth grade	Tenth grade	Tenth grade
	frequency	valid %	frequency	valid %
Strongly disagree	2	1.8	1	1.0
Disagree	2	1.8	2	2.0
Tend to disagree	3	2.7	4	4.0
Tend to agree	10	8.8	13	13.1
Agree	44	38.9	35	35.4
Strongly agree	52	46.0	44	44.4
Total	113	100.0	99	100.0
No response	-	-	-	-

Table 19 shows that the Ninth Grade Academy participants in the experimental group showed slightly more agreement with the statement: Overall, I had a positive high school experience ($M = 5.2$, $SD = 1.03$) than the nonparticipants in the control group ($M = 5.13$, $SD = 1.04$). However, statistical analysis indicates that there is not a significant difference in mean scores between these two groups of students because Sig. (2-tailed) = .657 > .05 for both equal variances assumed and equal variances not assumed (Table 20).

Table 19

Group Statistics of Survey Question 8: I Feel or Felt Confident That I Am or Was Ready to Move on to 10th Grade

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	113	5.20	1.03	.10
Tenth	99	5.13	1.04	.10

Table 20 shows that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 210$ (equal variances assumed) and $df = 206.21$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). The calculated t statistics of .445 for both equal variances assumed and not assumed do not fall into the critical region.

Therefore, the researcher failed to reject the null hypothesis and concluded that there is not a significant statistical difference in student satisfaction with their ninth-grade experience regarding feeling ready to move on to 10th grade, between participants and nonparticipants of the Ninth Grade Academy transition program.

$t(210) = .445, p = .657, r^2 = 00.10\%$ (equal variances assumed).

$t(206.21) = .445, p = .657, r^2 = 00.10\%$ (equal variances not assumed).

Table 20

Independent Samples t Test of Survey Question 8: I Feel or Felt Confident That I Am or Was Ready to Move on to 10th Grade

<i>t</i> test for equality of means					
	<i>t</i>	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	.445	210	.657	.06	.14
Equal variances not ass.	.445	206.21	.657	.06	.14

Survey question 9: I feel that in ninth grade I learned the necessary skills to be successful in high school. Figure 12 indicates students' responses regarding having learned the necessary skills in ninth grade to be successful in high school. Students answered on the same scale as before. The distributions of the ninth-grade experimental and the control group are both negatively skewed. However, the distribution of the experimental group shows an extremely high peak for students who agreed. The count of experimental group students who strongly agreed is also relatively high in comparison to the count of the control group students. Although the answers of the control group students are also clustered around the higher end of the distribution, fewer students in that group agreed and strongly agreed with the statement of survey question 9. In addition, a noticeably larger number of control group than experimental group students were not sure but tended to agree and disagreed.

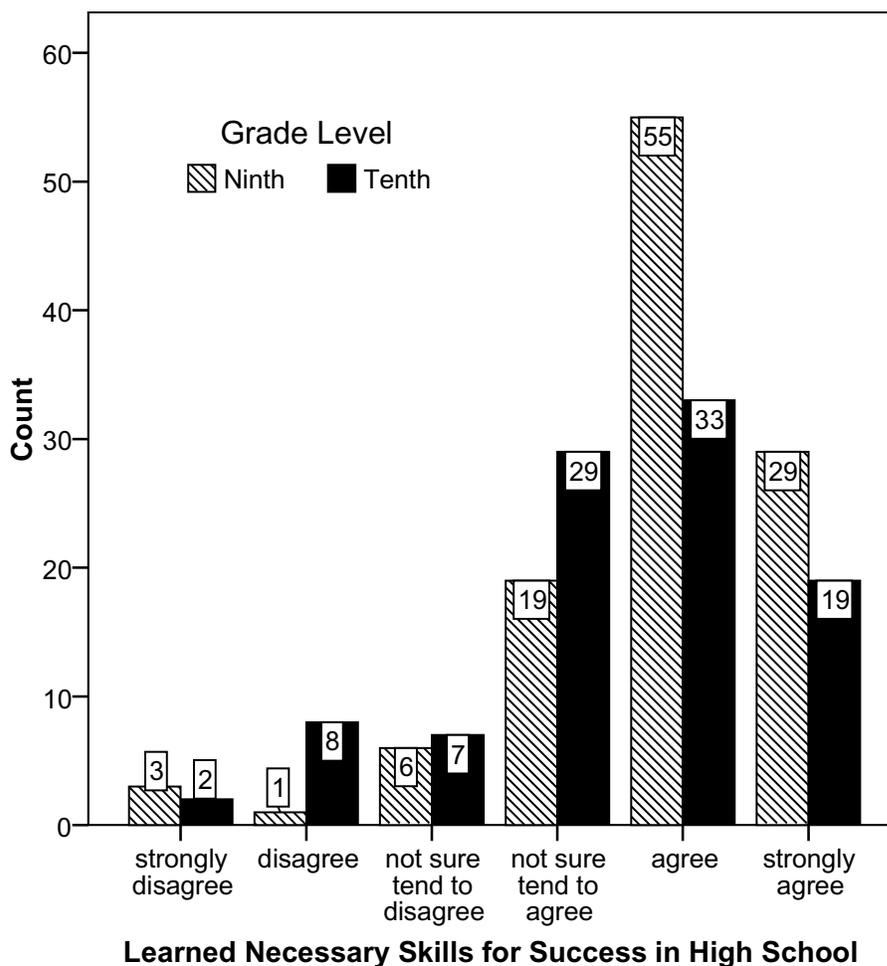


Figure 12. Responses to survey question 9 indicating the number of respondents for each answer choice in both the 9th-grade experimental and the 10th-grade control group.

Table 21 shows how each individual student in each group rated survey item 9. For example, 84 ninth-grade experimental students (74.4%) and 52 tenth-grade control group students (53.1%) agreed and strongly agreed with the statement that they learned the necessary skills to be successful in high school. Only 4 experimental group students (3.6%) yet 10 control group students (10.2%) disagreed and strongly disagreed with this

statement. Finally, this table also shows that out of all 212 survey participants, 1 control group student did not provide an answer to this survey question.

Table 21

Grade Level Frequencies for Survey Question 9: I Feel That in Ninth Grade I learned the Necessary Skills to Be Successful in High School

Response	Ninth grade	Ninth grade	Tenth grade	Tenth grade
	frequency	valid %	frequency	valid %
Strongly disagree	3	2.7	2	2.0
Disagree	1	.9	8	8.2
Tend to disagree	6	5.3	7	7.1
Tend to agree	19	16.8	29	29.6
Agree	55	48.7	33	33.7
Strongly agree	29	25.7	19	19.4
Total	113	100.0	98	100.0
No response	-	-	1	-

Table 22 shows that Ninth Grade Academy participants in the experimental group showed more agreement with the statement: I feel that (in ninth grade) I learned the necessary skills to be successful in high school ($M = 4.85$, $SD = 1.06$) than the nonparticipants in the control group ($M = 4.43$, $SD = 1.24$). Statistical analysis indicates that there is a significant difference in mean scores between these two groups of students

because Sig. (2-tailed) = .008 < .05 for equal variances assumed and Sig. (2-tailed) = .009 < .05 for equal variances not assumed (Table 23).

Table 22

Group Statistics of Survey Question 9: I Feel That in Ninth Grade I learned the Necessary Skills to Be Successful in High School

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	113	4.85	1.06	.10
Tenth	98	4.43	1.24	.10

Table 23 indicates that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 209$ (equal variances assumed) and $df = 192.71$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). The calculated t statistics of 2.661 (equal variances assumed) and 2.663 (equal variances not assumed) do fall into the critical region. Therefore, the researcher rejected the null hypothesis and concluded that there is a significant statistical difference in student satisfaction with their ninth-grade experience regarding having learned the necessary skills for success in high school between the participants and nonparticipants of the Ninth Grade Academy.

$t(209) = 2.661, p = .008, r^2 = 03.28\%$ (equal variances assumed).

$t(192.71) = 2.633, p = .009, r^2 = 03.47\%$ (equal variances not assumed).

Table 23

Independent Samples t Test of Survey Question 9: I Feel That in Ninth Grade I learned the Necessary Skills to Be Successful in High School

<i>t</i> test for equality of means					
	<i>t</i>	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	2.661	209	.008	.42	.16
Equal variances not ass.	2.663	192.71	.009	.42	.16

Survey question 10: Overall, in 9th grade my teachers helped and supported me.

Figure 13 shows students' responses to the statement that in 9th grade they received help and support from their teachers. Students answered using the same scale as before. The distributions of the 9th-grade experimental and the 10th-grade control group are both clearly negatively skewed with a high peak for students who agreed and then a slight fall for students who strongly agreed with the statement in survey question 10. The majority of the responses are clustered in the high end of the distributions indicating that the majority of students in both groups felt that they have or had helpful and supportive teachers in 9th grade. Only a few students in both groups responded that their teachers in 9th grade are not or were not helpful and supportive as indicated by the small clusters in the lower end of the distribution.

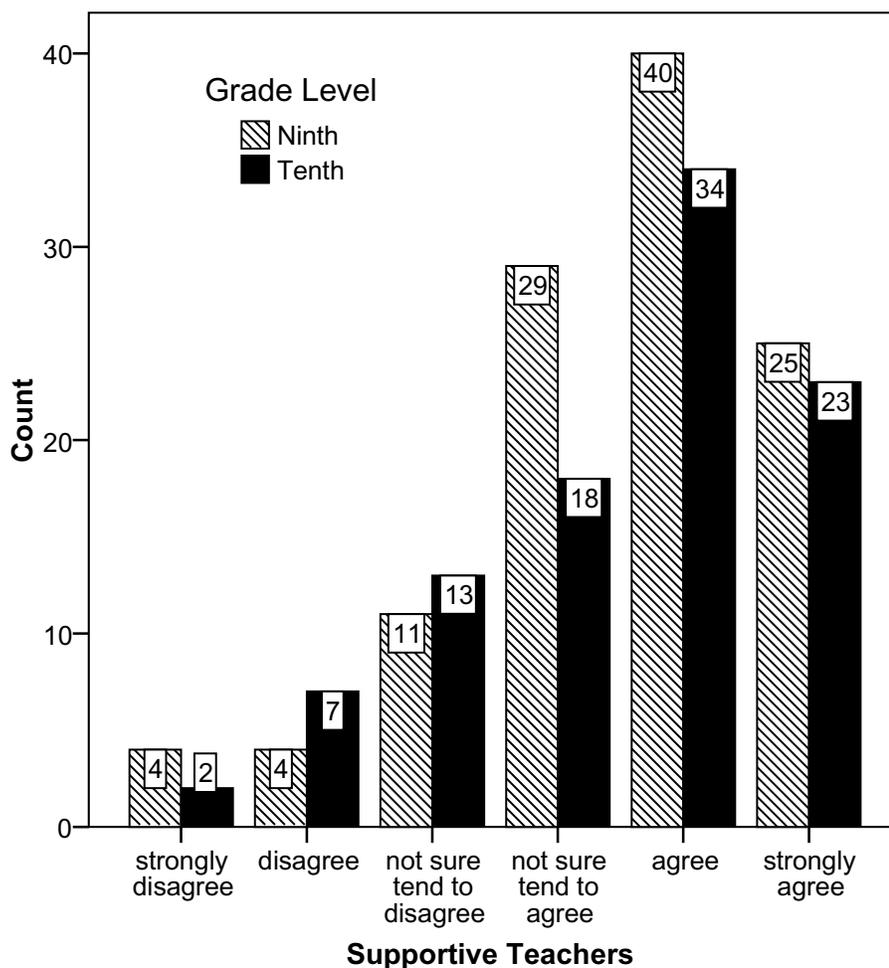


Figure 13. Responses to survey question 10 indicating the number of respondents for each answer choice in both the 9th-grade experimental and the 10th-grade control group.

Table 24 reveals detailed information about how each individual student in each group rated survey question 10. For example, 65 ninth-grade experimental group students (57.5%) and 57 tenth-grade control group students (58.8%) agreed with the statement that in ninth grade their teachers are or were helpful and supportive. There were 8 students in the experimental group (7%) and 9 students in the control group (9.3%) who disagreed and strongly disagreed with this statement. Finally, this table also shows that out of all

212 survey participants, 2 control group students did not provide an answer to this survey question.

Table 24

Grade Level Frequencies for Survey Question 10: Overall, in Ninth Grade My Teachers Helped and Supported Me

Response	Ninth grade	Ninth grade	Tenth grade	Tenth grade
	frequency	valid %	frequency	valid %
Strongly disagree	4	3.5	2	2.1
Disagree	4	3.5	7	7.2
Tend to disagree	11	9.7	13	13.4
Tend to agree	29	25.7	18	18.6
Agree	40	35.4	34	35.1
Strongly agree	25	22.1	23	23.7
Total	113	100.0	97	100.0
No response	-	-	2	-

Table 25 shows that Ninth Grade Academy participants in the experimental group showed slightly more agreement with the statement: Overall, in ninth grade my teachers helped and supported me ($M = 4.52$, $SD = 1.24$) than the nonparticipants in the control group ($M = 4.49$, $SD = 1.3$). However, statistical analysis indicates that there is not a significant difference in mean scores between these two groups of students because Sig. (2-tailed) = .831 > .05 for both equal variances assumed and not assumed (Table 26).

Table 25

Group Statistics of Survey Question 10: Overall, in Ninth Grade My Teachers Helped and Supported Me

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	113	4.52	1.24	.12
Tenth	97	4.49	1.30	.13

Table 26

Independent Samples t Test of Survey Question 10: Overall, in Ninth Grade My Teachers Helped and Supported Me

<i>t</i> test for equality of means					
	<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	.214	208	.831	.04	.18
Equal variances not ass.	.213	199.96	.831	.04	.18

Table 26 shows that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 208$ (equal variances assumed) and $df = 199.96$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). Also, the calculated t statistics of .214 (equal variances assumed) and .213 (equal variances not assumed) do not fall into the critical region. Therefore, the researcher failed to reject the null hypothesis and concluded that there is not a significant statistical difference in student satisfaction with their ninth-grade experience regarding feeling that overall, in ninth grade teachers were

helpful and supportive, between participants and nonparticipants of the Ninth Grade Academy transition program.

$t(208) = .214, p = .831, r^2 = 00.02\%$ (equal variances assumed).

$t(199.96) = .213, p = .831, r^2 = 00.03\%$ (equal variances not assumed).

Survey question 11: Overall, in 9th grade my administrators helped and supported me. Figure 14 shows how students felt about administrators being helpful and supportive during their 1st year in high school. Students answered on the same scale as before. The distributions of the 9th-grade experimental and the 10th-grade control group are both negatively skewed. However, the experimental group distribution shows two high peaks for students who were not sure but tended to agree and students who agreed. Then there is a sharp fall for experimental group students who strongly agreed. The control group distribution shows a high peak for students who were not sure but tended to agree, then a fall for students who agreed, followed by a further fall for those who strongly agreed. More 10th-grade control group than 9th-grade experimental group students disagreed with the statement that their administrators in 9th grade were helpful and supportive.

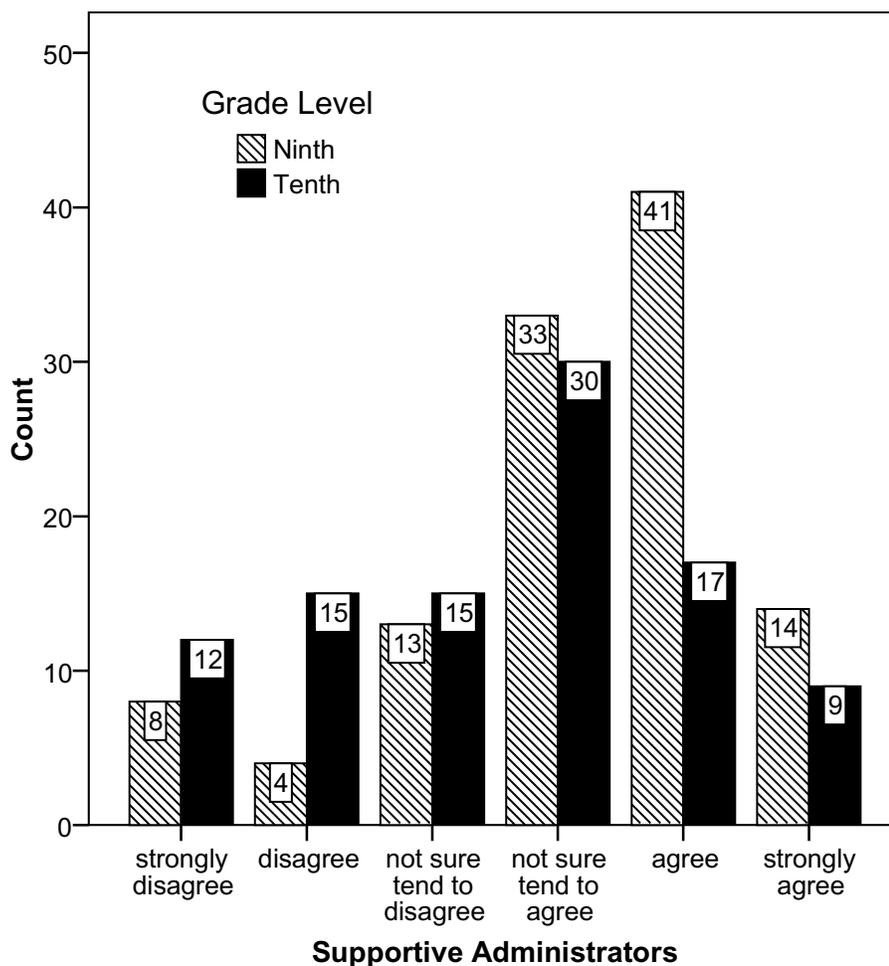


Figure 14. Responses to survey question 11 indicating the number of respondents for each answer choice in both the 9th-grade experimental and the 10th-grade control group.

Table 27 reveals information about how each individual student in each group rated survey question 11. A similar number and percentage of students in both groups were not sure but tended to agree that they had helpful and supportive administrators in ninth grade: 33 experimental group students (29.2%) and 30 control group students (30.6%). However, 55 students in the experimental group (48.7%) and only 26 in the control group (26.5%) agreed that their ninth-grade administrators are or were helpful

and supportive. Subsequently, 12 students in the experimental (10.6%) and 27 students in the control group (27.5%) disagreed and strongly disagreed with this statement. Table 27 also shows that 1 control group student did not provide an answer to this survey question.

Table 27

Grade Level Frequencies for Survey Question 11: Overall, in Ninth Grade My Administrators Helped and Supported Me

Response	Ninth grade frequency	Ninth grade valid %	Tenth grade frequency	Tenth grade valid %
Strongly disagree	8	7.1	12	12.2
Disagree	4	3.5	15	15.3
Tend to disagree	13	11.5	15	15.3
Tend to agree	33	29.2	30	30.6
Agree	41	36.3	17	17.3
Strongly agree	14	12.4	9	9.2
Total	113	100.0	98	100.0
No response	-	-	1	-

Table 28 indicates that Ninth Grade Academy participants in the experimental group showed more agreement with the statement: Overall, in ninth grade my administrators helped and supported me ($M = 4.21$, $SD = 1.31$) than the nonparticipants in the control group ($M = 3.53$, $SD = 1.49$). Statistical analysis indicates that there is a significant difference in mean scores between these two groups of students because Sig.

(2-tailed) = .000 < .05 for equal variances assumed and Sig. (2-tailed) = .001 < .05 for equal variances not assumed (Table 29).

Table 28

Group Statistics of Survey Question 11: Overall, in Ninth Grade My Administrators Helped and Supported Me

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	113	4.21	1.31	.12
Tenth	98	3.53	1.49	.15

Table 29 indicates that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 209$ (equal variances assumed) and $df = 195.2$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). The calculated t statistics of 3.538 (equal variances assumed) and 3.507 (equal variances not assumed) do fall into the critical region. Therefore, the researcher rejected the null hypothesis and concluded that there is a significant statistical difference in student satisfaction with their ninth-grade experience regarding feeling that overall, in ninth grade, administrators were helpful and supportive, between participants and nonparticipants of the Ninth Grade Academy.

$t(209) = 3.538, p = .000, r^2 = 05.65\%$ (equal variances assumed).

$t(195.2) = 3.507, p = .001, r^2 = 05.93\%$ (equal variances not assumed).

Table 29

Independent Samples t Test of Survey Question 11: Overall, in Ninth Grade My Administrators Helped and Supported Me

<i>t</i> test for equality of means					
	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	3.538	209	.000	.68	.19
Equal variances not ass.	3.507	195.20	.001	.68	.19

Survey question 12: Overall, in 9th grade my guidance counselors helped and supported me. Figure 15 shows students' responses to the statement that their guidance counselors in 9th grade were helpful and supportive. Students answered on the same scale as before. The distributions of the 9th-grade experimental and the 10th-grade control group are both negatively skewed with two high peaks for students who were not sure but tended to agree and those who agreed. Then there is a sharp fall for students who strongly agreed. There are more students in the experimental group than there are in the control group who were not sure but tended to agree, who agreed, strongly agreed, and who strongly disagreed with survey item 12. However, more control group than experimental group students disagreed that their guidance counselors in 9th grade were helpful and supportive.

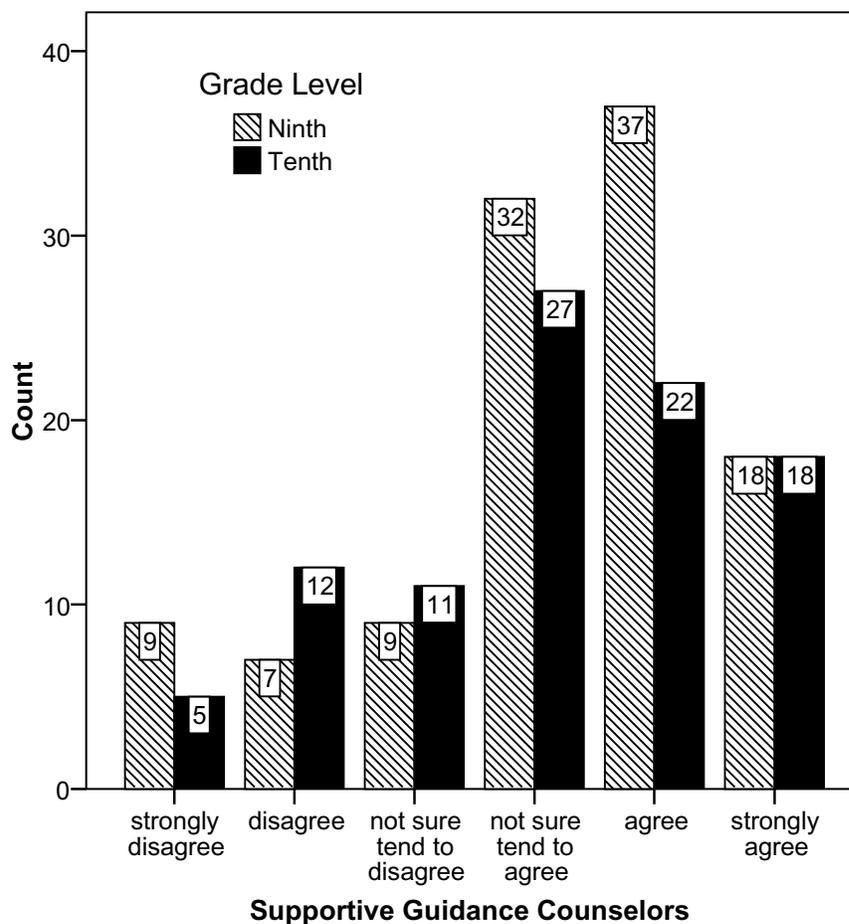


Figure 15. Responses to survey question 12 indicating the number of respondents for each answer choice in both the 9th-grade experimental and the 10th-grade control group.

Table 30 shows information about how each individual student in each group rated survey question 12. A similar percentage of students in both groups were not sure but tended to agree that their guidance counselors in ninth grade are or were helpful and supportive: 28.6% of experimental and 28.4% of control group students. In addition, 55 students in the experimental (49.1%) and 40 students in the control group (42.1%) agreed and strongly agreed with survey item 12. In contrast, 16 experimental group

students (14.3%) and 17 students in the control group (17.9%) disagreed and strongly disagreed with this statement. Out of all 212 survey participants, 1 experimental group and 4 control group students did not respond to this question. It appears that survey question 12 is the item with the most missing responses.

Table 30

Grade Level Frequencies for Survey Question 12: Overall, in Ninth Grade My Guidance Counselors Helped and Supported Me

Response	Ninth grade frequency	Ninth grade valid %	Tenth grade frequency	Tenth grade valid %
Strongly disagree	9	8.0	5	5.3
Disagree	7	6.3	12	12.6
Tend to disagree	9	8.0	11	11.6
Tend to agree	32	28.6	27	28.4
Agree	37	33.0	22	23.2
Strongly agree	18	16.1	18	18.9
Total	112	100.0	95	100.0
No response	1	-	4	-

Table 31 shows that Ninth Grade Academy participants in the experimental group showed slightly more agreement with the statement: Overall, in ninth grade my guidance counselors helped and supported me ($M = 4.21$, $SD = 1.42$) than the nonparticipants in the control group ($M = 4.08$, $SD = 1.45$). However, statistical analysis indicates that there

is not a significant difference in mean scores between these two groups of students because Sig. (2-tailed) = .544 > .05 for equal variances assumed and Sig. (2-tailed) = .545 > .05 for equal variances not assumed (Table 32).

Table 31

Group Statistics of Survey Question 12: Overall, in Ninth Grade My Guidance Counselors Helped and Supported Me

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	112	4.21	1.42	.13
Tenth	95	4.08	1.45	.15

Table 32 indicates that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 205$ (equal variances assumed) and $df = 197.92$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). The calculated t statistics of .607 (equal variances assumed) and .606 (equal variances not assumed) do not fall into the critical region. The researcher failed to reject the null hypothesis and concluded that there is not a significant statistical difference in student satisfaction with their ninth-grade experience regarding feeling that overall, in ninth grade guidance counselors were helpful and supportive, between participants and nonparticipants of the Ninth Grade Academy.

$t(205) = .607, p = .544, r^2 = 00.18\%$ (equal variances assumed).

$t(197.92) = .606, p = .545, r^2 = 00.19\%$ (equal variances not assumed).

Table 32

Independent Samples t Test of Survey Question 12: Overall, in Ninth Grade My Guidance Counselors Helped and Supported Me

<i>t</i> test for equality of means					
	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	.607	205	.544	.12	.20
Equal variances not ass.	.606	197.92	.545	.12	.20

Survey question 13: In 9th grade I am or was satisfied with my grades and with my progress. Figure 16 shows students' responses to the statement: In 9th grade I am or was satisfied with my grades and with my progress. Students answered on the same scale as before. The distribution of the 10th-grade control group is negatively skewed and the majority of these students agreed and strongly agreed with survey item 13. Although the distribution of the experimental group is also negatively skewed as indicated by two high peaks for students who were not sure but tended to agree and those who agreed, there is a sharp fall for students who strongly disagreed. It appears that the control group students were more satisfied with their grades and their progress in 9th grade than the experimental group students.

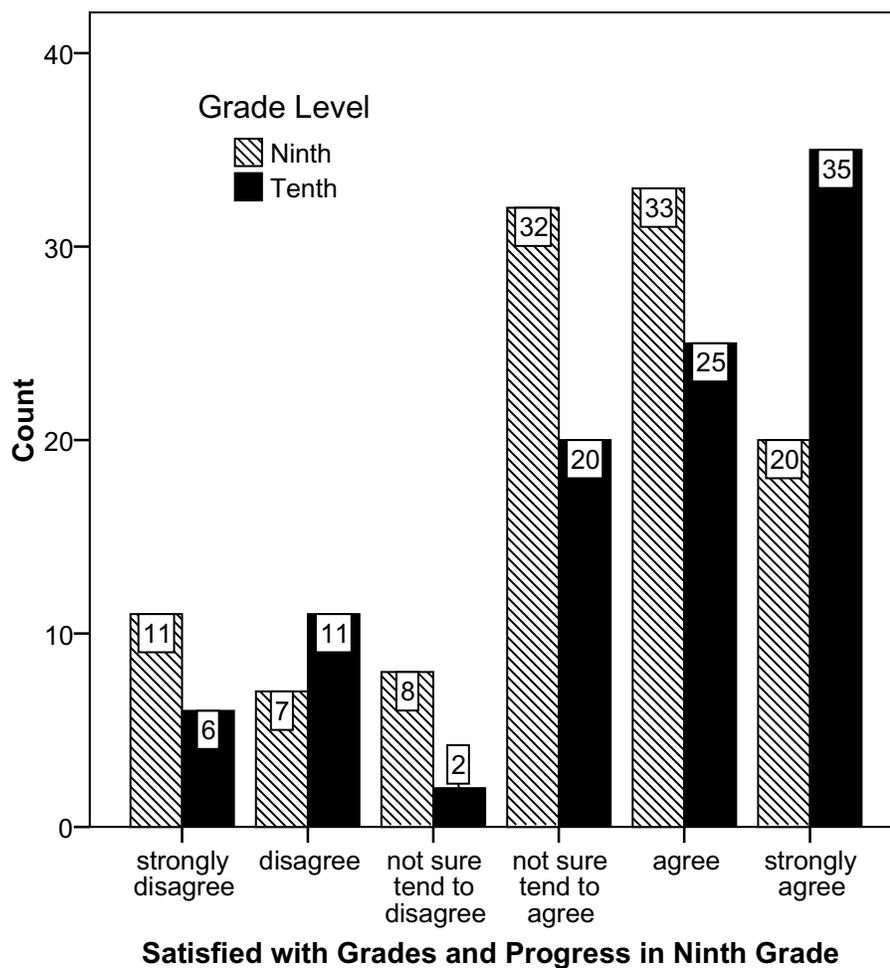


Figure 16. Responses to survey question 13 indicating the number of respondents for each answer choice in both the 9th-grade experimental and the 10th-grade control group.

Table 33

Grade Level Frequencies for Survey Question 13: In Ninth Grade I Am or Was Satisfied With My Grades and With My Progress

Response	Ninth grade	Ninth grade	Tenth grade	Tenth grade
	frequency	valid %	frequency	valid %
Strongly disagree	11	9.9	6	6.1
Disagree	7	6.3	11	11.1
Tend to disagree	8	7.2	2	2.0
Tend to agree	32	28.8	20	20.2
Agree	33	29.7	25	25.3
Strongly agree	20	18.0	35	35.4
Total	111	100.0	99	100.0
No response	2	-	-	-

Table 33 reveals detailed information about how each individual student in each group rated survey question 13. For example, a similar percentage of students in both groups disagreed and strongly disagreed expressing that they are or were not satisfied with their grades and their progress in ninth grade: 15.9% of the experimental group students and 17.2% of the control group students. However, 53 ninth-grade experimental group students (47.7%) and 60 tenth-grade control group students (60.7%) agreed and strongly agreed with survey item 13. There are also more experimental group students (28.8%) who selected "not sure but tend to agree" than there are control group students (22.2%). There is a similar difference between these two groups for answer choice "not

sure but tend to disagree” with 7.2% of the experimental group and just 2% of the control group students. Finally, table 33 also shows that out of all 212 survey participants, 2 experimental group students did not provide an answer to this survey question.

Table 34

Group Statistics of Survey Question 13: In Ninth Grade I Am or Was Satisfied With My Grades and With My Progress

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	111	4.16	1.49	.14
Tenth	99	4.54	1.55	.16

Table 34 shows that Ninth Grade Academy participants in the experimental group were less satisfied with their grades and their progress in ninth grade ($M = 4.16$, $SD = 1.49$) than the nonparticipants in the control group ($M = 4.54$, $SD = 1.55$). However, statistical analysis indicates that there is not a significant difference in mean scores between these two groups because $\text{Sig. (2-tailed)} = .078 > .05$ for both equal variances assumed and for equal variances not assumed (Table 35).

Table 35 indicates that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 208$ (equal variances assumed) and $df = 203.12$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). Also, the calculated t statistics of -1.774 (equal variances assumed) and -1.770 (equal variances not assumed) do not fall into the critical region. Therefore, the researcher failed to reject the null hypothesis and concluded that there is not a significant statistical difference in student satisfaction

with their ninth-grade experience regarding satisfaction with their grades and their progress in ninth grade, between the two groups of students.

$t(208) = -1.774, p = .078, r^2 = 01.49\%$ (equal variances assumed).

$t(203.12) = -1.770, p = .078, r^2 = 01.52\%$ (equal variances not assumed).

Table 35

Independent Samples t Test of Survey Question 13: In Ninth Grade I Am or Was Satisfied With My Grades and With My Progress

<i>t</i> test for equality of means					
	<i>t</i>	df	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	-1.774	208	.078	.37	.21
Equal variances not ass.	-1.770	203.12	.078	.37	.21

Survey question 14: In ninth grade I got actively involved in extracurricular activities. Figure 17 shows responses to the statement: In ninth grade I got actively involved in extracurricular activities. Students answered on the same scale as before. The distribution of the ninth-grade experimental group is negatively skewed as indicated by a high peak for students who agreed. Although this peak is followed by a fall for students who strongly agreed, the majority of ninth graders in the experimental group agreed that they got actively involved in extracurricular activities.

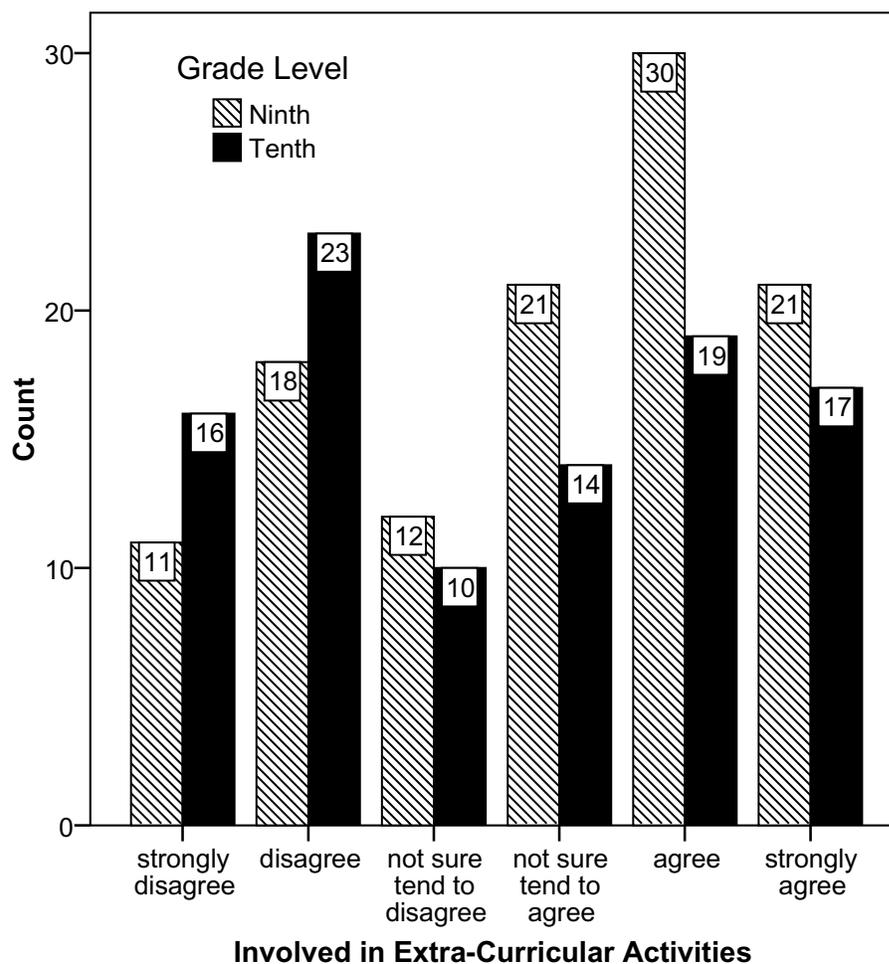


Figure 17. Responses to survey question 14 indicating the number of respondents for each answer choice in both the 9th-grade experimental and the 10th-grade control group.

In contrast, Figure 17 also reveals that the 10th-grade control group distribution appears to be a fairly symmetric distribution even though there is a high peak for the answer "disagree" in the lower end of the distribution. It also appears that the fairly large numbers of control group students who selected "strongly disagree" and "strongly agree" are very similar. Although many control group students agreed that they got involved in

extracurricular activities in their 9th-grade year, it appears that students' responses are fairly evenly split between disagreement and agreement with survey item 14.

Table 36

Grade Level Frequencies for Survey Question 14: In Ninth Grade I Got Actively Involved in Extracurricular Activities

Response	Ninth grade	Ninth grade	Tenth grade	Tenth grade
	frequency	valid %	frequency	valid %
Strongly disagree	11	9.7	16	16.2
Disagree	18	15.9	23	23.2
Tend to disagree	12	10.6	10	10.1
Tend to agree	21	18.6	14	14.1
Agree	30	26.5	19	19.2
Strongly agree	21	18.6	17	17.2
Total	113	100.0	99	100.0
No response	-	-	-	-

Table 36 reveals information about how each individual student in each group rated survey question 14. For example, 51 ninth-grade experimental (45.1%) versus 36 tenth-grade control group students (36.4%) agreed and strongly agreed with survey item 14. More students in the control group (39 = 39.4%) than in the experimental group (29 = 25.6%) selected “disagree” and “strongly disagree” for survey item 14. However, 50 tenth-grade control group students (50.5%) generally agreed that they did get actively

involved in extracurricular activities in ninth grade while 49 control group students (49.5%) generally disagreed. Table 36 also shows that all 212 survey participants responded to this survey question.

Table 37 shows that Ninth Grade Academy students in the experimental group participated slightly more in extracurricular activities ($M = 3.92$, $SD = 1.63$) than the nonparticipants in the control group ($M = 3.49$, $SD = 1.77$). Still, statistical analysis indicates that there is not a significant difference in mean scores between these two groups because Sig. (2-tailed) = .063 > .05 for equal variances assumed and Sig. (2-tailed) = .065 > .05 for equal variances not assumed (Table 38).

Table 37

Group Statistics of Survey Question 14: In Ninth Grade I Got Actively Involved in Extracurricular Activities

Grade level	Number	Mean	Std. deviation	Std. error mean
Ninth	113	3.92	1.63	.15
Tenth	99	3.49	1.77	.18

Table 38

Independent Samples t Test of Survey Question 14: In Ninth Grade I Got Actively Involved in Extracurricular Activities

<i>t</i> test for equality of means					
	<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean difference	Std. error difference
Equal variances assumed	1.867	210	.063	.44	.23
Equal variances not ass.	1.857	200.62	.065	.44	.24

Table 38 indicates that for a two-tailed test with an alpha-level of $\alpha = 0.5$ and $df = 210$ (equal variances assumed) and $df = 200.62$ (equal variances not assumed), the critical region is ± 1.960 (Gravetter & Wallnau, 2005, p. A-27). The calculated *t* statistics of 1.867 (equal variances assumed) and 1.857 (equal variances not assumed) do not fall into the critical region. Therefore, the researcher failed to reject the null hypothesis and concluded that there is not a significant statistical difference in student satisfaction with their ninth-grade experience regarding involvement in extracurricular activities in ninth grade, between the two groups of students.

$t(210) = 1.867, p = .063, r^2 = 01.64\%$ (equal variances assumed).

$t(200.62) = 1.857, p = .065, r^2 = 01.69\%$ (equal variances not assumed).

Discussion of Findings and Results

Research Question 1

Research question 1 investigated whether there is a statistical difference between participants and nonparticipants of the Ninth Grade Academy transition program based

on academic performance as measured by GPA. The independent-measures t test revealed that there is a significant difference in mean scores between these two groups of students: $M = 2.67$ for the participants in the experimental group and $M = 3.04$ for the nonparticipants in the control group (also refer to Tables 4 and 5). Therefore, the researcher rejected the null hypothesis and concluded that there is a significant statistical difference based on academic performance measured by GPA between the participants and nonparticipants of the Ninth Grade Academy transition program.

$t(220) = -2.870$, $p = .005$, $r^2 = 03.61\%$ (equal variances assumed).

$t(211.34) = -2.861$, $p = .005$, $r^2 = 03.73\%$ (equal variances not assumed).

The negative t statistics and the mean scores of $M = 2.67$ (9th-grade experimental group) and $M = 3.04$ (10th-grade control group) indicate that the control group students and nonparticipants of the Ninth Grade Academy transition program achieved higher GPAs and not as expected the participants of the Ninth Grade Academy in the experimental group. The average GPA of the experimental group is 2.67 whereas the average GPA of the control group is 3.04. Therefore, it appears that the Ninth Grade Academy had a negative treatment effect on the GPAs of the experimental group students even though the treatment effect is considered to be small.

One possible explanation for this unexpected outcome may be the increase in margin of error to at least 5.87% at a 95% confidence level due to a smaller sample size than statistically required for this particular population of 1085 students. The minimum required sample size is 284 yet the researcher was able to obtain parental consent from only 222 students (also refer to Figure 3).

However, there may be another important and possible reason for this unexpected outcome because during the 2008-09 school year, the new Georgia Performance Standards (GPS) for mathematics were implemented in ninth grade. According to the Georgia Department of Education web site (2007), this new curriculum is well aligned to the standards of national organizations such as the National Council of Teachers of Mathematics, the American Statistical Association, Achieve, and the College Board. The new standards “have been designed to achieve a balance among concepts, skills, and problem solving” and the new curriculum places emphasis on “rigorous concept development, presents realistic and relevant tasks, and keeps a strong emphasis on computational skills” (Georgia Department of Education, 2007, ¶ 4).

As a result of the implementation of the new mathematics curriculum, the Ninth Grade Academy participants in the experimental group were taught this new curriculum featuring the new GPS for mathematics. On the other hand, the 10th-grade nonparticipants in the control group were still taught the old mathematics curriculum during their 1st year in high school in 2007-08. Therefore, the lower GPA scores of the experimental group may be the result of the new mathematics curriculum rather than the Ninth Grade Academy (treatment effect).

Many students provided additional individual comments on the back of their student satisfaction survey. A large number of these comments appear to concur with my evaluation of problems with the new GPS for mathematics for ninth grade. Out of 21 students who reported problems with math, only 3 students were nonparticipants of the Ninth Grade Academy who were taught the old mathematics curriculum. The other 18

academy participants were taught the new mathematics curriculum and criticized math in general, the math support classes, and the change to the new mathematics curriculum. For example, 1 of these students wrote, “I did not enjoy math. The curriculum got changed over the summer so we got lost and had to catch up. It was also very tricky so we all failed!” and another student commented, “I did not find the changing of the math curriculum helpful. If that would not have changed [*sic*] I could have passed.” Even though both groups of students noted problems with math, the vast majority of math problems were reported by the Ninth Grade Academy participants in the experimental group. However, further investigation is necessary to clearly determine the impact of the Georgia Performance Standards (GPS) for mathematics on student achievement.

Research Question 2

Research question 2 investigated whether there is a statistical difference between participants and nonparticipants of the Ninth Grade Academy transition program based on cumulative credits. The independent-measures *t* test revealed that there is no significant difference in mean scores between these two groups of students: $M = 6.86$ for 9th graders in the experimental group and $M = 7.26$ for 10th graders in the control group (also refer to Tables 6 and 7). Therefore, the researcher failed to reject the null hypothesis and concluded that there is no significant statistical difference based on cumulative credits between participants and nonparticipants of the Ninth Grade Academy transition program. As a result, it appears that the Ninth Grade Academy did not have any treatment effect on the cumulative credits of the 9th-grade experimental group students. $t(220) = -1.899, p = .059, r^2 = 01.61\%$ (equal variances assumed).

$t(219.93) = -1.922$, $p = .056$, $r^2 = 01.65\%$ (equal variances not assumed).

However, even though the independent-measures t test revealed that there is no significant difference in mean scores between these two groups of students, the mean scores do indicate that the Ninth Grade Academy participants in the experimental group achieved slightly fewer cumulative credits than the nonparticipants in the control group who did not have any access to any type of ninth-grade transition program during their 1st year in high school. Ninth graders in the experimental group achieved an average of 6.86 cumulative credits and students in the control group achieved a slightly higher average of 7.26 credits during their ninth-grade year (also refer to Tables 6 and 7). Even though statistically not significant according to the independent-measures t test, this is an unexpected result. Not only does the Ninth Grade Academy not show any treatment effect, it also appears that it has a tendency toward showing a very small negative treatment effect with the negative t statistics being barely outside the critical region of ± 1.960 (Gravetter & Wallnau, 2005, p. A-27).

As also discussed for research question 1, the increase in margin of error from 5% to at least 5.87% due to a limited return of parental consent forms for this study may be partially responsible for this unexpected outcome. However, the implementation of the GPS for mathematics for ninth grade during the 2008-09 school year may be yet again another possible reason. It also appears that students' additional survey comments regarding problems with math confirm this evaluation because 18 Ninth Grade Academy participants who were taught the new math curriculum reported serious problems in this

subject area versus only 3 nonparticipants who were taught the old math curriculum during their ninth-grade year in 2007-08.

Research Question 3

Research question 3 investigated whether there is a statistical difference between participants and nonparticipants of the Ninth Grade Academy transition program based on ninth-grade dropout rates. The independent-measures t test revealed that there is no significant difference in mean scores between these two groups of students: The mean score for the ninth-grade dropout rate for experimental group students is $M = 1.02$ and for control group students $M = 1.03$ (also refer to Tables 9 and 10). Therefore, the researcher failed to reject the null hypothesis and concluded that there is no significant statistical difference based on ninth-grade dropout rates between these two groups of students. As a result, it appears that the Ninth Grade Academy did not have any treatment effect on the dropout rate of the ninth-grade experimental group students.

$t(1083) = -1.444, p = .149, r^2 = 00.19\%$ (equal variances assumed).

$t(993.15) = -1.435, p = .152, r^2 = 00.21\%$ (equal variances not assumed).

The negative t statistics do not point to a negative treatment effect of the Ninth Grade Academy. A low score represents a low and a high score represents a high dropout rate.

This zero treatment effect of the Ninth Grade Academy was unexpected but cannot be explained by margin of error because the researcher was able to use the whole student population of 1085 students for comparison, 555 ninth-grade experimental group students and 530 tenth-grade control group students. Thus, the margin of error for the statistical calculations is 0% and cannot be responsible for the lack of treatment effect.

However, to collect the data about ninth-grade dropout rates, the researcher requested two official school district reports for the target high school from the school district's data base. The reports were produced by the school district's technical support team and sent to me via e-mail. One report indicated the dropout rates for ninth grade of the school year 2007-08 (control group) and one report indicated the dropout rates for ninth grade of the school year 2008-09 (experimental group). The accuracy of the statistical calculations regarding ninth-grade dropout rates depends entirely on two major factors: (a) parents or guardians informing the school district about change in enrolment status, and (b) correct data entry on part of school district employees. For example, parents and guardians may be reluctant to inform the school district about their student dropping out of high school. Some parents and guardians may face difficult family and work situations, may be reluctant to inform the school district, or may have too much on their mind and may simply forget.

Regarding correct data entry, one could argue that the correct entry of data on part of school district employees is also of the utmost importance when it comes to GPAs and cumulative credits and not just ninth-grade dropout rates. However, school district employees such as teachers, administrators and guidance counselors, as well as students and their parents refer to GPAs and credits on a regular basis throughout the semester. Therefore, GPAs and cumulative credits are constantly used for reference, checked, updated, and reported on progress reports and report cards. In addition, both students and their parents generally have a great interest in GPAs and credits and for that reason tend

to keep up with this information. Consequently, it is easier to detect and correct possible errors with data entry for GPAs and cumulative credits.

On the other hand, information about change in enrolment status including dropout rates seems to disappear in a large school district data base and remain there laying dormant until someone requests a specific report. Due to the delicate nature of dropping out of school, it is also very difficult if not impossible to check the accuracy of the information unless students were removed by the school district for reasons such as lack of attendance, low grades and school failure, expulsion, and incarceration. However, a student making their own decision dropping out and not returning to school may be extremely difficult to verify. In addition, parents and families may not want the school district to find out that their student dropped out of high school and may prefer to keep this information private.

For example, Table 8 indicates that out of 530 tenth-grade control group students, a total of 18 students (3.4%) dropped out during their ninth-grade year, most for lack of attendance (15 students = 83.33%). Additionally, 2 students were removed for low grades and school failure and 1 student was incarcerated. Provided that the information was entered correctly, this data appears accurate and verifiable.

The same table also shows that out of 555 experimental group students, a total of 11 students (1.98%), dropped out during their ninth-grade year. One student was expelled, 2 students were incarcerated, and 2 students were removed for lack of attendance. However, for 6 of the 11 dropout students in the experimental group (54.55%), the reasons for dropping out are unknown. Whereas these students could be

dropout students who simply did not return to school and disappeared, another reason maybe that the families moved away to a different district or even out of state and simply did not tell the school district. If that was the case and these 6 students were not counted as dropout students, the results of the independent-measures t test would be different:

With a dropout rate mean score of $M = 1.009$ for experimental group students and $M = 1.034$ for control group students, statistical analysis would indicate that there was a significant statistical difference between the two groups of students and therefore the researcher would fail to reject the null hypothesis:

$t(1083) = -2.860, p = .004, r^2 = 00.75\%$ (equal variances assumed).

$t(788.77) = -2.823, p = .005, r^2 = 01.00\%$ (equal variances not assumed).

Again, the t statistics have a negative value as a result of score assignment rather than pointing toward a negative treatment effect. On the contrary, in this hypothetical context, the Ninth Grade Academy would show a positive impact on the ninth-grade dropout rate of the academy participants. Even though these calculations put an interesting perspective on the findings of this study, they are simply theory because the researcher does not know what actually happened to these students and therefore did count them as high school dropouts for statistical analysis.

Research Question 4

Research question 4 investigated whether there is a statistical difference between participants and nonparticipants of the Ninth Grade Academy transition program based on student satisfaction with their ninth-grade experience as measured on a satisfaction survey. To answer this research question, the researcher closely examined and

statistically analyzed nine survey questions. Table 39 provides a general overview of these results and shows each of the nine survey question, the results of the statistical analyses, and the statements about the null hypotheses. Table 39 also indicates that for seven out of the nine survey items, the researcher failed to reject the null hypothesis because there was no significant statistical difference between the two groups of students. Therefore, it appears that the Ninth Grade Academy transition program did not have any treatment effect on seven out of the nine survey items.

Table 39

Results of Statistical Analyses of Student Satisfaction Survey Questions

Survey questions	Statistical analysis	Null hypothesis
	(a) Equal variances assumed (b) Equal variances not assumed	
Qu.4: I enjoy being a high school student.	(a) $t(210) = 1.716, p = .088, r^2 = 01.39\%$ (b) $t(203.81) = 1.711, p = .089, r^2 = 01.42\%$	Fail to reject
Qu.7: Overall, I had a positive ninth-grade experience.	(a) $t(209) = .255, p = .799, r^2 = 00.03\%$ (b) $t(207.54) = .256, p = .798, r^2 = 00.03\%$	Fail to reject
Qu.8: I feel or felt confident that I am or was ready to move on to 10th-grade.	(a) $t(210) = .445, p = .657, r^2 = 00.10\%$ (b) $t(206.21) = .445, p = .657, r^2 = 00.10\%$	Fail to reject
Qu.9: I feel that (in ninth grade) I learned the necessary skills to be successful in high school.	(a) $t(209) = 2.661, p = .008, r^2 = 03.28\%$ (b) $t(192.71) = 2.633, p = .009, r^2 = 03.47\%$	Reject
Qu.10: Overall, in ninth grade, my teachers helped and supported me.	(a) $t(208) = .214, p = .831, r^2 = 00.02\%$ (b) $t(199.96) = .213, p = .831, r^2 = 00.03\%$	Fail to reject
Qu.11: Overall, in ninth grade, my administrators helped and supported me.	(a) $t(209) = 3.538, p = .000, r^2 = 05.65\%$ (b) $t(195.2) = 3.507, p = .001, r^2 = 05.93\%$	Reject
Qu.12: Overall, in ninth grade, my guidance counselors helped and supported me.	(a) $t(205) = .607, p = .544, r^2 = 00.18\%$ (b) $t(197.92) = .606, p = .545, r^2 = 00.19\%$	Fail to reject
Qu.13: In ninth grade, I am or was satisfied with my grades and my progress.	(a) $t(208) = -1.774, p = .078, r^2 = 01.49\%$ (b) $t(203.12) = -1.770, p = .078, r^2 = 01.52\%$	Fail to reject
Qu.14: In ninth grade, I got actively involved in extracurricular activities.	(a) $t(210) = 1.867, p = .063, r^2 = 01.64\%$ (b) $t(200.62) = 1.857, p = .065, r^2 = 01.69\%$	Fail to reject

Survey questions 4 and 7. Participants in both the experimental and the control group enjoy being high school students (survey question 4) and also had a positive 9th-grade experience overall (survey question 7). Large percentages in both groups reported

that they enjoy being a high school student: 82.3% of the 9th-grade experimental group and 74.7% of the 10th grade control group students. The majority of students in both groups also reported having a positive 9th-grade experience: 73.7% students in the experimental and 63.3% students in the control group. Unexpectedly, it appears that the Ninth Grade Academy did not have any treatment effect (also refer to Tables 12-17).

In addition to evaluating their ninth-grade experience on a scale for survey question 7, there were 12 students who provided individual comments. All 4 Ninth Grade Academy participants and 5 nonparticipants described a positive ninth-grade experience and only 3 nonparticipants of the academy were not satisfied with their experience in ninth grade. Comments from participants read “The year was good and a change from middle school” and “Overall, freshman year has been a good experience.”

Nonparticipants stated “Overall, so far, my freshman year was the best year in my life” and “Freshman year was better than sophomore year.” These student evaluations concur with the outcome of the statistical analysis confirming that most students did enjoy their ninth-grade experience and that there are no noteworthy differences between participants and nonparticipants of the Ninth Grade Academy.

As an interesting observation, 31 students commented specifically on the Ninth Grade Academy transition program. All 7 nonparticipants expressed their dissatisfaction with this program and out of 24 participants of the academy, 18 students did not find the Ninth Grade Academy helpful and also expressed their dissatisfaction with the program.

For example, 1 nonparticipant stated, “I believe the freshman academy is simply a way to baby the freshmen” and another wrote, “Let the freshmen experience high school

for themselves, I don't believe that cushioning the freshmen by separating them from the rest of the school will help them integrate into the school's population." One Ninth Grade Academy participant stated, "I did not enjoy all of you making us feel like dumb little children that can't take care of ourselves. We are 15 years old and this dumb academy made our 1st year in high school torture. Being isolated is not cool." Another participant commented, "The _____ Academy [name withheld] did not help, it made things worse" and 1 participant wrote, "I did not find helpful that the ninth grade is separated from the rest of the school. It didn't help at all. It just is another shelter that we don't need. We are in high school now. Middle school already prepared us. We didn't need another year of that." and finally 1 participant commented "The whole separating the ninth grade from other grades pretty much is a terrible idea."

Students expressed passionate opinions yet even though the majority provided negative comments about the Ninth Grade Academy, in particular isolating ninth graders from the upperclassmen, this did not impact students' feelings about their ninth-grade experience overall. As shown in the statistical analyses, the majority of students reported that they enjoy being high school students (survey question 4) and that overall, they had a positive ninth-grade experience (survey question 7).

Survey questions 8 and 9. Survey question 8 asked students about their readiness to move on to 10th grade and survey question 9 asked students about having acquired the necessary skills to be successful in high school. The majority of students in both groups, 84.9% of 9th-grade experimental group students and 79.8% of 10th-grade control group students (also refer to Table 18), reported that they felt confident that they were ready to

move on to 10th grade. As an unexpected result, the Ninth Grade Academy transition program did not have any treatment effect regarding survey question 8 (also refer to Tables 19 and 20).

Having established a zero treatment effect of the Ninth Grade Academy on readiness to move on to 10th grade, it was even more unexpected to then determine a positive treatment effect of the Ninth Grade Academy on having learned the necessary skills to be successful in high school (survey question 9). Whereas 74.4% of the Ninth Grade Academy participants in the experimental group reported that they have learned the necessary skills to be successful in high school, only 53.1% of 10th-grade nonparticipants in the control group reported that they had acquired those skills (also refer to Table 21). According to statistical analysis, in this case, the researcher was able to reject the null hypothesis because there was a significant statistical difference between the two groups of students and the Ninth Grade Academy participants clearly expressed more satisfaction with their acquisition of necessary skills to be successful in high school (also refer to Tables 22 and 23).

However, it may be important to mention that the experimental group students completed this survey right at the end of their 9th-grade year whereas the control group students completed this survey about their 9th-grade experience at the end of their 10th-grade year. Therefore, the control group students may have answered this particular survey question retrospectively while taking into account their experiences, failures, and successes during their 10th-grade year.

In addition, it was an interesting observation that the reported serious problems with mathematics (additional comments of student satisfaction survey) in the ninth-grade experimental group did not seem to influence these students' feelings regarding survey questions 8 and 9. Even though 18 of 19 academy participants indicated serious problems with math including high failure rates, the students in the ninth-grade experimental group still felt that they were ready to move on to the next grade level and that they acquired the necessary skills to be successful in high school.

Survey questions 10, 11, and 12. Survey questions 10, 11, and 12 asked students about their satisfaction regarding help and support from their teachers, their administrators, and their guidance counselors during ninth grade. The results of the statistical analyses were unexpected in so far that a positive treatment effect could only be established regarding satisfaction with their administrators.

For survey questions 10 and 12, students from both groups, participants and nonparticipants of the Ninth Grade Academy, expressed general satisfaction with their ninth-grade teachers and guidance counselors. For example, 57.5% of experimental group students and 58.8% of control group students expressed satisfaction with the help and support from their teachers. Additionally, 25.7% of the experimental group and 18.6% of the control group students were not sure but tended to agree that they were also generally satisfied with their teachers (also refer to Table 24). Regarding guidance counselors, 49.1% of the experimental group students and 42.1% of the control group students expressed satisfaction with their guidance counselors' help and support. In addition, 28.6% of the experimental group students and 28.4% of the control group students were

not sure but tended to agree that they were also generally satisfied with their counselors in ninth grade (also refer to Table 30).

Statistical analyses for survey question 10 and for survey question 12 indicated that there was no significant statistical difference between the two groups of students. Therefore, the researcher failed to reject the null hypothesis and concluded that the Ninth Grade Academy had no significant treatment effect (also refer to Tables 25 and 26, as well as Tables 31 and 32). Students' additional comments in the student satisfaction survey appear to confirm this evaluation because the majority of students in both groups commented that they enjoyed having both supportive and caring ninth-grade teachers as well as guidance counselors.

For example, 17 participants and 15 nonparticipants of the Ninth Grade Academy mentioned supportive, caring, and helpful teachers whereas only 6 nonparticipants and 5 participants expressed dissatisfaction with their teachers. One academy participant wrote, "I enjoyed the chances that a lot of my teachers gave me to prove myself in high school" and 1 nonparticipant stated "I enjoyed how my teachers were really involved and cared about me passing." In addition, the comments about guidance counselors from 5 participants and 4 nonparticipants of the transition program were all positive.

However, for survey question 11, the researcher was able to reject the null hypothesis and conclude that there is a significant statistical difference in student satisfaction with their ninth-grade administrators being helpful and supportive, between Ninth Grade Academy participants and nonparticipants. For example, 48.7% ninth

graders in the experimental group and only 26.3% students in the control group reported satisfaction with their administrators' help and support (also refer to Tables 27-29).

This positive treatment effect of the Ninth Grade Academy may indicate that the Ninth Grade Academy administrators get more actively involved with these ninth graders than administrators normally do. For example, all teachers and administrators within this transition program are working together as a team and have regular team meetings. This additional involvement of ninth-grade administrators and their collaboration with teachers may explain why Ninth Grade Academy participants in the experimental group are generally satisfied with their administrators' help and support and why there is a significant statistical difference between the two groups of students.

Survey question 13. Survey question 13 asked students to express their level of satisfaction with their grades and their progress in ninth grade. Statistical analysis indicates that there is no significant statistical difference between the two groups of students and the researcher failed to reject the null hypothesis. The Ninth Grade Academy transition program did not have any treatment effect. For example, 47.7% of students in the experimental group and 60.7% in the control group expressed satisfaction with their grades and their progress in ninth grade (also refer to Tables 33-35).

At this point, it may be important to point out that the statistical analysis of research question 1 revealed a significant statistical difference based on academic performance measured by GPA between participants and nonparticipants of the Ninth Grade Academy (also refer to Tables 4 and 5). Unexpectedly, the ninth-grade experimental group achieved lower GPAs ($M = 2.67$) than the tenth-grade control group

($M = 3.04$). Nevertheless, this outcome does not seem to have any influence on students' feelings about their grades and their progress.

Survey question 14. The last survey question asked students to comment on their involvement in extracurricular activities. Statistical analysis indicates that there is no significant statistical difference between the two groups of students and the researcher failed to reject the null hypothesis. The Ninth Grade Academy transition program did not have any treatment effect. For example, 45.1% of the experimental group and 36.4% of the control group students reported that in ninth grade, they got actively involved in extracurricular activities. Additionally, 18.6% of the experimental group and 14.1% of the control group students were not sure but tended to agree (refer to Table 36-38).

The additional student comments about their extracurricular involvement concur with these results and confirm that most students expressed at least some agreement that they got involved in extracurricular activities during their ninth-grade year. Except from one Ninth Grade Academy participant, who did not like school-wide assemblies, the other 12 participants as well as 10 nonparticipants provided very positive feedback about extracurricular and school-wide activities. For example, 1 participant wrote, "I enjoyed the rewards and fun activities you had to offer the student. I found the sports and programs helpful in many ways" and another commented, "The activities that this school provides, all the football games and festivals were amazingly fun." One nonparticipant explained, "I enjoyed the extracurricular activities and fun experiences I had. They allowed me to make friends, fit in, and have momentum in school".

In the literature, high GPAs are often linked to extracurricular involvement (Caldwell, 2007; Copeland, 2006; Lampert, 2005). In this study, the researcher found out that there is a significant statistical difference based on students' GPAs between Ninth Grade Academy participants and nonparticipants. Tables 4 and 5 display that the average mean score of the experimental group Ninth Grade Academy participants is $M = 2.67$ and therefore unexpectedly lower than the average mean score of $M = 3.04$ for the control group nonparticipants. However, the statistical analysis result of survey question 14 does not confirm this apparent link between high GPAs and extracurricular activities, because that analysis revealed that there is no significant statistical difference regarding extracurricular involvement between the two groups of students.

Statistically not significant but worth mentioning is also the fact that the overall percentage of the control group students who got involved in extracurricular activities in ninth grade is lower (50.5%) than the overall percentage of ninth-grade experimental group students (63.7%). The researcher calculated these overall percentages from the positive responses for survey question 14 (agree, strongly agree, not sure but tend to agree) in Table 36 in this section. Nevertheless, the tenth-grade control group students have higher GPAs than the ninth-grade experimental group students.

This inconsistency regarding GPAs and extracurricular activities in this study may be explained by several interesting survey comments of exclusively nonparticipants of the Ninth Grade Academy in the control group. Nine nonparticipants commented on the lack of information about activities and that they often were not aware of what was going on in the school. One student wrote, "News about clubs wasn't known unless you knew

someone who was in that club” and another “We didn’t know about things that were going on at school.” Another nonparticipant explained, “It was a little difficult to get involved because of lack of knowledge. I didn’t know about the various clubs until 10th grade.” In contrast, Ninth Grade Academy participants did not mention at all any lack of information regarding school activities and extracurricular activities. One reason may be that the academy participants in the experimental group were also not aware of extracurricular activities or probably more likely, this group of students received important information about clubs, sports, and activities through the Ninth Grade Academy transition program.

Summary of survey analyses for research question 4. As a result of statistically analyzing nine survey questions of a student satisfaction survey, the researcher concluded that there is no statistical difference in student satisfaction with their ninth-grade experience between the participants of the Ninth Grade Academy transition program in the experimental group and the nonparticipants of this program in the control group. The researcher came to this conclusion because the researcher failed to reject the null hypothesis for seven out of the nine survey questions. Among these seven questions, one question specifically asked students to comment on their satisfaction with their ninth-grade experience and one question asked about satisfaction with their grades and progress in ninth grade. For both survey items, there was no significant statistical difference between the two groups of students. Other survey questions with no significant statistical difference were: (a) enjoying being a high school student, (b) confidence of being ready to move on to the next grade level, (c) helpful and supportive ninth-grade teachers and

guidance counselors, and (d) involvement in extracurricular activities. It appears that for these seven survey items, the Ninth Grade Academy did not have any treatment effect.

There were only two survey questions where statistical analyses indicated a significant statistical difference between the experimental group participants and the control group nonparticipants of the Ninth Grade Academy. First, students in the experimental group reported more agreement that they learned the necessary skills to be successful in high school and second, they were more satisfied with their ninth-grade administrators being helpful and supportive than the students in the control group. For both survey questions, the researcher was able to reject the null hypothesis and conclude that the Ninth Grade Academy transition program has a positive treatment effect. Nevertheless, only two survey questions out of nine indicating a significant statistical difference between the two groups of students was not enough evidence to reject the null hypothesis for research question 4 in general.

Finally, it may be important to point out that out of 222 study participants, 212 students completed the student satisfaction survey. According to the Raosoft (2004) sample size calculator, for 212 students the margin of error increases to 6.04% at a 95% confidence level. For some survey questions, there are even less than 212 respondents because several students omitted some items and did not provide an answer. The minimum number of respondents was 207 for survey question 12, which increases the margin of error to 6.13%. This increase in margin of error may partially explain the general absence of a treatment effect of the Ninth Grade Academy as well as inconsistencies regarding several survey items.

Conclusion

Research Question 1

For research question 1, the researcher rejected the null hypothesis and concluded that there is a significant statistical difference based on academic performance measured by GPA between participants and nonparticipants of the Ninth Grade Academy transition program. However, the average GPA for the ninth-grade experimental group students is 2.67 and thus unexpectedly lower than the average 3.04 GPA of the control group. Therefore, statistically, the Ninth Grade Academy had a small yet unexpected negative treatment effect on the GPAs of the ninth-grade experimental group. A potential reason for this unexpected result may be the implementation of the new GPS for mathematics in ninth grade (experimental group) during the 2008-09 school year. The numerous additional comments from Ninth Grade Academy participants in the student satisfaction survey regarding severe problems with math also seem to point into the direction that the new math curriculum may be at least partially responsible for the lower GPAs of the ninth-grade experimental group.

Research Question 2

For research question 2, the researcher failed to reject the null hypothesis and concluded that there is no significant statistical difference based on cumulative credits earned between the two groups of students. Even though statistically not significant, ninth-grade experimental group students achieved a slightly lower average of 6.86 cumulative credits than the control group students with an average of 7.26 credits. As with research question 1, the implementation of the new GPS for mathematics may be a

possible reason for this unexpected lack of treatment effect. Students' additional comments appear to reveal a particular problem with mathematics.

Research Question 3

For research question 3, the researcher also failed to reject the null hypothesis and concluded that there is no significant statistical difference based on ninth-grade dropout rates between the two groups of students. According to the independent-measures t test there is no significant difference in mean scores thus establishing a zero treatment effect of the Ninth Grade Academy on the dropout rate of the experimental group students.

Research Question 4

For this research question, the researcher analyzed nine items of a student satisfaction survey and concluded that there is no statistical difference in general student satisfaction with their ninth-grade experience between the two groups because the researcher failed to reject the null hypotheses for seven out of the nine survey questions (also refer to Table 39). As a conclusion, establishing a positive treatment effect and rejecting the null hypotheses for only two out of nine survey items was not enough evidence to reject the null hypothesis for research question 4 and not enough evidence to presume a general treatment effect of the Ninth Grade Academy.

Finally, the researcher determined that the Ninth Grade Academy transition program did not have the expected positive treatment effect on student outcomes. Based on statistical analyses, there was no significant difference based on cumulative credits earned, based on ninth-grade dropout rates, and in student satisfaction with their ninth-grade experience between participants and nonparticipants of the Ninth Grade Academy.

Regarding academic achievement based on GPA, the researcher found out that the Ninth Grade Academy did have an unexpected negative treatment effect and based on statistical analysis, there was a significant difference between the two groups of students.

Unexpectedly, the Ninth Grade Academy participants in the experimental group achieved lower GPAs than the nonparticipants in the control group. However, the implementation of a new math curriculum for experimental group students may have affected this surprising outcome.

Preview of Section 5

Section 5 provides a final conclusion of this study and consists of a general overview, five main areas, and a concluding summary:

1. Summary of findings for all research questions and the relationship to the literature and current research.
2. Account of the relationship between the theoretical framework of this study, Hirschi's (1969) social bonding theory and the constructivist learning theory, and the findings of this study.
3. Implications of this study for positive social change.
4. Recommendations for action such as the evaluation of teaching methods, an investigation of the impact of the new math curriculum on student achievement, and the continuation of data collection of the impact of the Ninth Grade Academy.
5. Recommendations for further longitudinal study using larger sample size and identical treatment as well as consistent dependant variable for both the experimental and the control group.

SECTION 5: INTERPRETATIONS, RECOMMENDATIONS, AND CONCLUSION

Overview of This Study

Problem Statement and Purpose of This Study

This study discussed the problem of failing ninth graders and their difficulties to adjust to the demands in high school. To help students ease the transition from middle to high school, the literature suggests the implementation of transition programs (Akos & Galassi, 2004; Baker et al., 2005; Brigman et al., 2007; Butts & Cruzeiro, 2005; Caldwell, 2007; Campbell & Jacobson, 2008; Case, 2006; Copeland, 2006; Duncan, 2004; Herlihy et al., 2005; Lampert, 2005; MacKay, 2006; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Mizelle, 2005; Peasant II, 2006; Potter, 2004). To reduce failure rates, concerned educators at the researcher's high school implemented the Ninth Grade Academy in 2008-09 and it was the purpose of this quasi-experimental quantitative study to investigate the impact of this ninth-grade transition program on GPAs, cumulative credits, ninth-grade drop-out rate, and student satisfaction with ninth grade.

Summary of Findings

The results of this study indicated that the Ninth Grade Academy did not have the expected positive treatment effect on student outcomes. Statistical analyses revealed that there was no significant difference based on cumulative credits, based on ninth-grade dropout rates, and in student satisfaction with their ninth-grade experience between the participants and the nonparticipants of the Ninth Grade Academy transition program. Regarding academic achievement based on cumulative GPA, the Ninth Grade Academy appeared to have a negative treatment effect with a significant statistical difference

between the two groups of students. Unexpectedly, the ninth-grade experimental group students and participants of the Ninth Grade Academy achieved lower GPAs than the control group students and nonparticipants. However, inconsistent treatment in form of two different math curricula due to the implementation of the new GPS for ninth grade may have possibly affected these findings.

Interpretation of Findings

Introduction

The literature suggests that ninth graders often cannot deal with the social expectations and academic challenges in high school and can find it difficult to adjust (Baker, Copley & Hughes, 2005; Butts & Cruzeiro, 2005; Campbell, 2001; Case, 2006; Chapman & Sawyer, 2001; Duncan, 2004; Haney et al., 2004; Herlihy, 2007; Kennelly & Monrad, 2007; Lampert, 2005; MacKay, 2006; Mizelle, 2005; J. S. Smith, 2006). This study's investigation of the impact of the Ninth Grade Academy transition program on cumulative GPAs and credits, ninth-grade dropout rates, and student satisfaction with ninth grade falls in line with the numerous researchers who suggested transition programs to help ninth graders ease the transition process and to reduce failure rates (Akos & Galassi, 2004; Baker et al., 2005; Brigman et al., 2007; Butts & Cruzeiro, 2005; Caldwell, 2007; Campbell & Jacobson, 2008; Case, 2006; Copeland, 2006; Duncan, 2004; Herlihy et al., 2005; Lampert, 2005; MacKay, 2006; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Mizelle, 2005; Peasant II, 2006; Potter, 2004).

This study specifically relates to previous research about ninth-grade transition programs to address transition problems and to help ninth-grade students be successful in

high school (Baker et al., 2005; Caldwell, 2007; Copeland, 2006; Herlihy et al., 2005; Lampert, 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Potter, 2004; Reents, 2002). However, whereas in most cases the findings of these researchers indicated that ninth-grade transition programs have a positive effect on student outcomes, the results of this study appear to paint a slightly different picture and generally do not concur.

Research Question 1

RQ₁: Is there a statistical difference between participants and nonparticipants of the Ninth Grade Academy based on academic performance as measured by GPA?

Statistical analysis in Section 4 revealed that there is a significant difference in GPA means scores between these two groups of students. Very unexpectedly, the average GPA of 2.67 for the participants of the Ninth Grade Academy is lower than the average GPA of 3.04 for the nonparticipants. Thus, it appears that the Ninth Grade Academy had a negative treatment effect on the GPAs of the ninth-grade experimental group students. These results can be examined in Tables 4 and 5 of Section 4. However, an increased margin of error of at least 5.87% and even more importantly, the implementation of the new Georgia Performance Standards (GPS) for mathematics for the ninth-grade experimental group students may have influenced this particular outcome.

Current literature does not provide much information about the impact of ninth-grade transition programs on GPAs. However, in a quantitative study, Caldwell (2007) reported a significant statistical difference as well as a large size effect of .15 using a one-way ANOVA: $F(2,90) = 7.81, p < .01$. The researcher established a significant

improvement in GPAs for participants of the Bearcat “Pride” ninth-grade transition program. The results of Caldwell’s (2007) study do not concur with the findings of this study but Caldwell (2007) conducted his study over a 3- year period with three small groups of specifically selected ninth-grade at-risk students, two groups of 26 participants each and one group of 43 participants. In comparison, this study did not specifically target at-risk students and did not select any students regarding academic performance, discipline, or attendance. Finally, Caldwell (2007) analyzed pretreatment data from eighth grade in middle school and posttreatment data from ninth grade in high school whereas this study compared only ninth-grade data between participants and nonparticipants of the Ninth Grade Academy transition program at the end of their 1st year in high school.

Similar to the findings of this study, the ninth-grade transition program in Case’s (2006) study appeared to have a negative treatment effect on students’ GPAs. In a mixed methods study, Case (2006) found out that two thirds of the ninth graders in a small rural school without a ninth-grade transition program achieved higher GPAs in ninth grade than in eighth grade. In contrast, nearly 90% of ninth graders in a larger suburban high school with a ninth-grade transition program in place experienced lower GPAs than they did in eighth grade. This study compared ninth-grade GPAs yet the transition program participants also experienced lower GPAs than the nonparticipants.

Although Peasant’s II (2006) study appears to be similar to this study, Peasant II (2006) measured achievement through the Mississippi Subject Area Testing Program (SAPT) in algebra I and biology I for the 2005-06 school year whereas this study

examined students' GPAs. Additionally, Peasant II (2006) was able to include 600 ninth-grade participants while this study only included 222 participants. Peasant II (2006) conducted a quantitative study to examine the impact of ninth-grade transition programs by comparing the achievement of first-time ninth graders participating in a ninth-grade academy with the achievement of first-time ninth graders without access to any form of ninth-grade transition program. The researcher reported a significant statistical difference in both the algebra I and the biology I SAPT scores and ninth-grade academy participants outperformed nonparticipants by more than 15 points in the algebra I SAPT and by nearly 25 points in the biology I SAPT. As a result, this study does not concur with Peasant's II (2006) findings. However, in addition to fewer participants, this study also faced the implementation of a new math curriculum for the experimental group as an unforeseen factor. In comparison, all students in both groups of Peasant's II (2006) study were taught the same curriculum for algebra I and the same curriculum for biology I.

Research Question 2

RQ₂: Is there a statistical difference between participants and nonparticipants of the Ninth Grade Academy based on cumulative credits earned?

Statistical analysis described in Section 4 revealed that there is no significant difference in mean scores of cumulative credits earned between the two groups of students. It therefore appears that the Ninth Grade Academy did not have any treatment effect on cumulative credits earned of the experimental group students. The results of this statistical analysis can be examined in Tables 6 and 7 of Section 4.

These results do not concur with the current literature where the majority of researchers reported that ninth-grade transition programs had a positive effect on student outcomes including cumulative credits earned (Baker et al., 2005; Caldwell, 2007; Copeland, 2006; Herlihy et al., 2005; Lampert, 2005; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Potter, 2004; Reents, 2002). For example, McIntosh and White (2006) collected longitudinal quantitative data over a period of 6 years to evaluate the impact of a Freshman Wing transition program. The researchers reported that among the ninth-grade transition program participants, the number of students failing more than five classes decreased to less than 5% and the number of students failing four or five classes has fallen from 16% to 7.1% over a 4-year period. The Freshman Wing program helped reduce failure rates, students earned more credits, and all stakeholders reported positive experiences. Subsequently, McIntosh and White's (2006) results do not concur with the findings of this study regarding cumulative credits earned.

However, this study examined the impact of the Ninth Grade Academy during its very 1st year of implementation whereas McIntosh and White (2006) evaluated longitudinal data from a 6-year period. Moreover, the Freshman Wing program had additional support structures such as an intervention specialist for at-risk students, collaboration with the Alcohol Drug Addiction and Mental Health Services Board, Family Resource Centers, the Juvenile Court, and other agencies that provided resources, support, and funding. The Ninth Grade Academy in this study had only several traditional components such as dedicated teams of teachers and administrators, a separate ninth-grade floor, and specific ninth-grade activities.

Similar to the Freshman Wing program (McIntosh & White, 2006), ninth graders in schools participating in the Talent Development High School model also increased their total credits earned by .69 credits (Herlihy et al., 2005). This model was initiated in 1994 and as of the 2003-04 school year has grown to 83 participating high schools in 32 school districts in 20 states. The report examined five high schools in the School District of Philadelphia that implemented the Talent Development High School model and six high schools in the same school district that did not participate in this program. The researchers used a comparative interrupted time series design to track 20 cohorts of ninth graders for up to 4 years in high school and reported that ninth graders in the Talent Development schools had improved attendance, more academic credits earned, and an increased promotion rate. These findings also do not concur with the results of this study.

However, both McIntosh and White (2006) and Herlihy et al. (2005) were able to use longitudinal data as well as include data from several high schools. Additionally, rather than creating an isolated transition program within one independent school such as the target high school in this study, the success of the Talent Development High School model may be explained by the fact that this program has expanded into a strong nationwide program since 1994. Moreover, the program was developed with the help of the Center for Research on the Education of Students Placed At Risk (CRESPAR), based at Howard University and The Johns Hopkins University. The adoption of such an existing successful program may be more effective than the implementation of a completely new transition program such as the Ninth Grade Academy at the target high school in this study.

Furthermore, ACE Academy students passed more courses (5.02) than the overall 9th-grade population of 2003-04 (4.35) and 70% of the ACE Academy students were on track for promotion to 10th grade passing five or more courses in comparison to 62.5% of the overall 9th-grade population (Melton III, 2004). This quantitative, cause-and-effect, time-delayed study targeted only ninth graders identified as at risk and its findings do not concur with the findings of this study.

The current literature points to a positive effect of ninth-grade transition programs on students' credits earned and courses passed (Herlihy et al., 2005; Melton III, 2004; McIntosh & White, 2006). The findings of this study do not concur and the Ninth Grade Academy in this study did not have any effect on the ninth-grade experimental group's cumulative credits. However, in comparison to this study, several researchers were able to use longitudinal data, some researchers included a larger sample size, and others targeted a specific student population only, for example at-risk students. Additionally, the implementation of a different math curriculum for the experimental group in this study may also have played a major role regarding the Ninth Grade Academy showing no treatment effect on cumulative credits earned.

Finally, several researchers who examined 9th-grade transition programs also investigated 9th-grade failure rates and the promotion of 9th graders to 10th grade (Herlihy et al., 2005; Lampert, 2005; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992). These authors were able to conclude that 9th-grade transition programs have a positive effect on both. The researcher of this study was unable to investigate these aspects because as a result of the Ninth Grade Academy implementation in the

2008-09 school year, all 9th graders of the previous school year 2007-08, who did not participate in any transition program, were promoted to 10th grade regardless of failing grades and the number of credits earned. The participants of the Ninth Grade Academy were all true first-time 9th graders and did not include any repeating 9th-grade students.

Research Question 3

RQ₃: Is there a statistical difference between participants and nonparticipants of the Ninth Grade Academy based on ninth-grade dropout rates?

Statistical analysis displayed in Tables 9 and 10 in Section 4 revealed that there is no significant difference in mean scores between the ninth-grade experimental group students and the control group students. It therefore appears that the Ninth Grade Academy did not have any treatment effect on the ninth-grade dropout rate of the experimental group.

It appears that the current literature does not provide any information that specifically addresses dropout rates during 9th grade. Nevertheless, without referring to specific data, Reents (2002) suggested that high schools with fully developed 9th-grade transition programs experienced a lower dropout rate overall. Similarly, and also without referring to specific dropout data, Peasant II (2006) concluded that 9th-grade academies could potentially decrease general high school dropout rates. In agreement with both researchers, Herlihy et al. (2005) revealed that the Talent Development High School model resulted in improved student performance on 11th-grade standardized assessment tests as well as higher graduation rates thus proving long-lasting effects of this transition program on student outcomes.

Overall, it appears that the findings of this study do not concur with these researchers. However, this study did not examine general and long-term high school dropout rates. This study investigated just ninth-grade dropout rates because the focus of this study was to evaluate the impact of the Ninth Grade Academy transition program on ninth-grade student outcomes. This program was implemented in the 2008-09 school year and therefore, only this particular ninth-grade experimental group data was available. The findings of this study suggest that the Ninth Grade Academy transition program did not have any impact on ninth-grade dropout rates. However, a relatively large number of students in the ninth-grade experimental group simply left for reasons unknown and therefore may or may not be dropout students.

Research Question 4

RQ4: Is there a statistical difference between participants and nonparticipants of the Ninth Grade Academy based on student satisfaction with their ninth-grade experience as measured on a satisfaction survey?

Statistical analyses of nine survey questions indicated that for seven out of nine survey items there was no statistical difference between the ninth-grade participants and the nonparticipants of the Ninth Grade Academy. Table 39 in Section 4 of this study provides an overview of the statistical findings for each survey item. As a result, the researcher concluded that overall, there is no statistical difference in student satisfaction with their ninth-grade experience between the two groups of students and that the Ninth Grade Academy did not have any treatment effect.

In the literature, several researchers employed student surveys (Baker et al. 2005; Melton III, 2004; Pantleo, 1992; Potter, 2004). However, in contrast to this study, a few researchers used survey tools to find out about students' needs and expectations ahead of the implementation of ninth-grade transition programs (Melton III, 2004; Pantleo, 1992). These survey responses were utilized to create effective programs catering to the individual needs of the students. Similar to this study, only Baker et al. (2005) and Potter (2004) reported the use of surveys to investigate student satisfaction with their ninth-grade experience.

In this study, the participants of the Ninth Grade Academy were just as satisfied with their experience in ninth grade as the nonparticipants. Similarly, CHANGES students felt about the same and also had similar perceptions and attitudes about themselves and their learning experiences at the end of ninth grade as the nonparticipants in the control group (Baker et al., 2005). Findings in both studies concurred and revealed that the Ninth Grade Academy and the CHANGES ninth-grade transition program did not have a major impact on student satisfaction with their ninth-grade experience.

In another study, approximately 350 ninth graders responded to a survey about their ninth-grade experience (Potter, 2004). The participants of the ninth-grade transition program reported more opportunities for class participation, the ability to build stronger relationships with peers, and generally more success in state-wide testing. Similar to this study, the author also investigated the experiences and perceptions of students after the 1st year of the introduction of this transition program. Nevertheless, the positive results

do not concur with the findings of this study because the Ninth Grade Academy did not have any impact on students' satisfaction with their ninth-grade experience.

However, although Potter's (2004) findings suggest a positive impact of this ninth-grade transition program based on both quantitative and qualitative data analyses, these results originate from the perceptions of the individual participants. For example, the report of greater success on state tests is not based on actual test results. Furthermore, the author did not compare the results of an experimental group with those of a control group whereas this study distinguished between participants and nonparticipants of the Ninth Grade Academy transition program.

Survey Item 14 in Relationship to Research Question 1

Survey item 14 states that: In ninth grade, I got actively involved in extracurricular activities. Research question 1 investigated the statistical difference based on academic performance measured by GPA between ninth graders who participated in the Ninth Grade Academy and ninth graders who did not.

The findings of survey item 14 in relationship to the outcome of research question 1 are important because in the literature, high GPAs are often linked to extracurricular involvement (Caldwell, 2007; Copeland, 2006; Lampert, 2005). This study concluded that there is a significant statistical difference based on students' GPAs between Ninth Grade Academy participants and nonparticipants. Tables 4 and 5 in Section 4 indicate that the Ninth Grade Academy participants in the experimental group achieved a lower GPA mean score ($M = 2.67$) than the nonparticipants in the control group ($M = 3.04$). However, the statistical analysis result of survey item 14 does not confirm this apparent

link between high GPAs and extracurricular activities, because the analysis revealed that there is no significant statistical difference regarding extracurricular involvement between the two groups of students.

Additionally, as shown in Table 36 in Section 4, the overall percentage of the control group students getting involved in extracurricular activities is lower (50.5%) than the overall percentage of experimental group students (63.7%) even though the control group students have higher GPAs than the experimental group students. These findings concur with Case (2006). During the student interview phase of a mixed methods study, the author was unable to report a significant statistical difference between successful and unsuccessful students regarding participation in extracurricular activities.

Relationship to the Theoretical Framework

Hirschi's (1969) social bonding theory is based on individuals building connections to society through a *bond* consisting of four elements: (a) attachment, (b) commitment, (c) involvement, and (d) belief. This theory suggests that the closer a person is tied to society through any of these elements, the stronger this person's bond to society as a whole. Adolescents have already formed either weak or stronger bonds with society in form of three major relationships: (a) with their parents, (b) with school, and (c) with their peers. Additionally, bonds such as sense of belonging, the extent to which students like or dislike school, teacher care and support, supportive friends, engagement in learning, fair and effective discipline procedures, as well as participation in extracurricular activities have a great influence on student achievement and student delinquency (Andriot, 2005; Libbey, 2004).

Ninth-grade transition programs may help students form a strong and successful bond with school, teachers, peers, and society. Subsequently, this may help students adjust to the social and academic demands in high school and ease the transition process. Although the findings of this study revealed that the Ninth Grade Academy transition program did not have any impact on students' cumulative credits earned, ninth-grade dropout rates, and satisfaction with their ninth-grade experience and even had a negative impact on students' GPAs, there are several other important considerations.

First, the Ninth Grade Academy has just recently been implemented in 2008-09 and there were bound to be beginning problems. Educators need to learn from these 1st-year experiences and continue to review and improve the individual components of this program. Second, the implementation of the GPS in mathematics in ninth grade may have affected the results of this study. Math is a core subject area and the experimental group experienced a different math curriculum than the control group. Third, the Ninth Grade Academy did have a positive impact on how students felt about being ready to move on to the next grade level and about their administrators being helpful and supportive. These are two stepping stones to build upon because it may be that the experimental group students formed a stronger bond with administrators than the control group students. In addition, students in the experimental group felt ready and prepared to move on, which may also suggest a stronger bond or connection to school.

Finally and at this moment in time probably most importantly, the Ninth Grade Academy represents a solid foundation for further improvement and for further development of ninth-grade support. A dedicated team of teachers, administrators, and

counselors as well as ninth-grade orientation, a separate ninth-grade wing, Freshmen Focus Class, AVID instruction, character and study skills classes, a strict behavior and conduct policy, improved communication with parents, a firm dress code, an incentive program, and special ninth-grade activities have all been set up to benefit students.

Although there is a necessity for review and improvement, these components should strengthen students' bonds such as their sense of belonging, the extent to which they feel supported by their teachers, and the extent to which they like or dislike school. These elements should also encourage students' engagement in learning and their involvement in extracurricular activities in order to raise student achievement and decrease student delinquency.

The findings of this study also relate to the constructivist learning theory because the understanding of learning as a continuous process of change and transition as well as the construction of knowledge based on personal experiences play an important role when developing successful transition programs. The results of this study showed that the Ninth Grade Academy transition program did not appear to have any impact on students' cumulative credits earned, ninth-grade dropout rates, and satisfaction with ninth grade and even had a negative impact on students' GPAs. According to the constructivist learning theory, when designing and implementing curricula or creating effective transition programs, teachers need to recognize students' individual experiences, different levels of achievement, and different background knowledge. It appears that apart from reviewing the impact of the new GPS in mathematics in ninth grade, educators at this

particular high school need to review both ninth-grade curricula and their teaching methods to include constructivist ideas.

For example, Bruner (1960/1994) suggested producing curricula using a spiral method to allow the learner to continuously build upon existing information and continuously extend their knowledge base. Additionally, Bruner (1966) emphasized appropriate pace, sequence, and structure of the material to be learned. Marzano (2004) pointed out the importance of students' background knowledge, which may point to possible collaboration and curriculum alignment with middle schools. Finally, educators also need to consider the implementation of Gardner's (1999) theory of multiple intelligences, Jung's (1921/1976) theory of learning styles, and Brown and Wiggins (2004) concept of understanding by design including essential questions. Finally, Vygotsky's theory of *the zone of proximal development* views learning as a social activity and points out the significance of social interaction in cognitive development. Through the implementation of modern constructivist curricula and teaching methods, the Ninth Grade Academy transition program may become more effective in the future.

Implications for Social Change

As explained in Section 1 of this study, the vision of Walden University (2007) emphasizes the importance of social change leading to the progression of human and social conditions. The purpose of this study was to investigate the impact of the Ninth Grade Academy transition program on student outcomes. The goal of the Ninth Grade Academy transition program is to help new ninth graders adjust to the demands in high school in order to prepare them for their future careers. This objective concurs with the

Challenge to Lead Goals for Education in the SREB report *High School to College and Careers: Aligning State Policies* (2007), in which two major goals regarding high school education are “All young adults have a high school diploma – or if not, pass the GED tests” and “All recent high school graduates have a solid academic preparation and are ready for postsecondary education and a career” (p.25). The findings in Section 4 of this study contribute to positive social change because they evaluate the effectiveness of a ninth-grade transition program thus helping educators better understand students’ social and academic needs for a successful career in high school. A successful high school career may subsequently lead to successful postsecondary education as well as professional careers.

First, the findings of this study are significant for students and their families because they are important stakeholders regarding students’ successful career in high school. It is in both their interest that students have a smooth transition from middle to high school, that students experience academic success, that they are on track for high school graduation, and that they are equipped with the necessary skills for postsecondary education or the professional world. However, the findings of this study indicate that there is room for improvement in these areas. As a result, all stakeholders including students and their parents do not only have the right to be informed but according to Cauley and Jovanovich (2006) also need to be involved in all stages of the planning process such as reviewing and enhancing the components of the Ninth Grade Academy.

In addition, research underlines the importance of parental involvement (Akos et al., 2008; Allensworth & Easton, 2005; Barnow et al., 2005; Caldwell, 2007; Cauley &

Jovanovich, 2006; Copeland, 2006; Dillon, 2008; Herlihy, 2007; Hertzog, 2006). It is essential for families and parents to have the reassurance that their student, regardless of race, class, and economic background, receives the necessary knowledge, skills, and tools needed to (a) manage their lives independently as responsible and informed citizens, (b) obtain both productive and rewarding employment, and (c) serve their local communities by contributing to the progress of society and the greater good. The findings of this study may encourage students and their families to get actively involved in the collaboration process to achieve these goals. Additionally, Cushman stated that “No one knows better than students themselves what they need from teachers as they move into high school” (p. 47). As a result, the findings of this study may also encourage students to participate in the collaboration process and to take responsibility for their own learning.

Second, since the results of this study in Section 4 indicate that the Ninth Grade Academy transition program did not have the expected positive treatment effect on student outcomes, the findings of this study are predominantly important for educators in middle and high schools. Teachers are an essential connection between the students and the school (Dedmond, 2008). In addition, teachers develop close bonds with their students to meet their individual learning needs, reduce transition problems, and help them succeed (Copeland, 2006). These educators are still striving to assist ninth graders become self-motivated and self-directed learners throughout their high school career and beyond. The findings of this study may assist educators to move forward in the right direction to achieve these goals.

Even more importantly, it is not the sole responsibility of middle school or high school teachers in isolation from each other to prepare students for their career in high school (Copeland, 2006). There is a crucial connection between both middle and high school levels and these teachers should work together in collaboration viewing students' academic success in high school as a mutual responsibility. Therefore, the findings of this study may encourage educators from the middle schools and the target high school to work more closely together in order to improve the components of the Ninth Grade Academy. Educators are in the forefront when it comes to the transformation of high schools to learning communities of the 21st century whose graduates will use their knowledge to embrace critical societal challenges in advancement of greater global benefits (Walden University, 2007), and the findings of this study provide further insights into how to develop such learning communities with the help of effective ninth-grade transition programs.

Third, the ninth-grade problem has become urgent and the challenges during the transition to high school may cause disruptions in students' high school careers (Cauley & Jovanovich, 2006). In addition, several researchers described ninth grade as a pivotal point and suggested immediate intervention strategies (Allensworth & Easton, 2005; Black, 2004; Caldwell, 2007; Dillon, 2008; Gewertz, 2007, T. J. Smith, 2007). An example of the urgency is that especially in low-performing city high schools, those students who do not drop out are still ill-prepared for both college and future careers (Herlihy et al. 2005). In addition, major failure and retention rates occur in ninth grade (Haney et al., 2004). However, according to Herlihy et al. (2005) "Educators and

policymakers – including President Bush, state governors, and foundation and business leaders – have recently recommitted themselves to addressing the challenge of reforming secondary education in urban settings” (p. ES-1). The findings of this study may contribute to the field of secondary education reform by evaluating the Ninth Grade Academy transition program as a means of student support and intervention to address areas of concern such as the transition to high school, ninth-grade failure, low performance, and lack of professional skills.

Nevertheless, the unexpected findings of this study pose new challenges for educators in middle and high schools. Their task is to equip high school students with the necessary skills sought by employers for a workforce that will contribute to America’s well being and strong economic status in the 21st century. The Ninth Grade Academy did not have the expected positive effect on student outcomes. However, rather than viewing these findings as a failure of this transition program, educators need to examine contributing factors and unexpected problems, review, modify, and adjust procedures, as well as implement improved strategies.

For example, educators need to investigate the impact of the new Georgia Performance Standards in mathematics on the outcome of this study. According to the Georgia Department of Education web site (2007), this new mathematics curriculum was designed by education professionals and leaders in government, business, and industry with emphasis on the development of mathematical concepts as well as problem-solving and computational skills. This new curriculum is in line with nationwide standards such as those of the National Council of Teachers of Mathematics, the American Statistical

Association, Achieve, and the College Board as well as in line with the overall goal to reform secondary education according to Herlihy et al. (2005). The findings of this study appear to indicate that this new curriculum should be aligned with and incorporated into the Ninth Grade Academy transition program. With continuous improvement over time, transition programs may help students obtain the necessary skills to advocate positive social change in their future careers and to use their expertise for human advancement in areas such as science, technology, and the environment. Subsequently, transition programs such as the Ninth Grade Academy may contribute to the transformation of high schools to learning communities of the 21st century.

Overall, the findings of this study are simply a small stepping stone at the target high school toward the overall vision of positive social change and the improvement of human and social conditions. For example, this program was created as a method of support for all incoming ninth graders regardless of their socioeconomic background or performance levels. However, students enter high school from different socioeconomic environments and with a variety of background knowledge and skills, all of which are influential factors regarding academic performance and future success (Marzano, 2004). Social change and the improvement of human conditions begin with equal access to and equal distribution of knowledge and resources as well as valuing each individual student regardless of their socioeconomic conditions and their abilities. Therefore, the findings of this study may indicate that, in order to advocate true social change, educators need to develop additional support structures within the Ninth Grade Academy to cater to all individual students' needs.

Finally, the findings of this study are also important for communities that are in need of political leaders, visionaries, entrepreneurs, and investors as well as employers who are looking for critical thinking skills, people skills, flexibility, the ability to multitask, and problem-solving skills. According to the High School Leadership Summit (2004), it is the responsibility of high school education to help students obtain these workforce readiness skills. Research discussed in Section 2 of this study suggests that ninth-grade transition programs may support the acquisition of these required proficiencies. The expertise of our present high school students will shape America's future workforce thus also shaping the future of America and its economic status in the 21st century (High School Leadership Summit, 2004). Therefore, the results of this study are particularly important because they appear to indicate that the Ninth Grade Academy transition program does not yet fully equip students with the necessary academic skills to secure America's future in an exceedingly competitive global economy. This program provides a solid foundation for student support but is in need of further improvement with a clear vision to educate and prepare a future workforce that can (a) maintain the well being of America and (b) advance its leadership role in the areas of science and technology as well as freedom, justice, and social change.

Recommendations for Action

This study examined the impact of the Ninth Grade Academy transition program on cumulative GPAs and credits, ninth-grade dropout rates, and student satisfaction with ninth grade. While research suggests that ninth-grade transition programs generally have a positive effect on student outcomes (Baker et al., 2005; Caldwell, 2007; Copeland,

2006; Herlihy et al., 2005; Lampert, 2005; Martin, 2004; McIntosh & White, 2006; Melton III, 2004; Pantleo, 1992; Peasant II, 2006; Potter, 2004; Reents, 2002), the findings of this study indicate that the Ninth Grade Academy transition program did not.

As a result, the following are my recommendations for action:

1. To raise students' GPAs and increase the number of cumulative credits earned, educators at this high school need to evaluate their teaching methods and student support strategies as part of a successful ninth-grade transition program (Baker et al., 2005; Bottoms & Cooney, 2008; Bottoms et al., 2002; Bunting, 2004; Butts & Cruzeiro, 2005; Calderon et al., 2003; Caldwell, 2007; Case, 2006; Cauley & Jovanovich, 2006; Collins, 2005; Copeland, 2006; Dedmond, 2008; Dillon, 2008; Duncan, 2004; Farley & Neild, 2008; Freeman, 2005; Herlihy, 2007; Herlihy et al., 2005; Hmelo-Silver, 2004; Mizelle, 2005; Pantleo, 1992; Potter, 2004; Smith, 2007; Yecke, 2006).
2. It appears that the introduction of the new Georgia Performance Standards (GPS) for math in ninth grade in 2008-09 may have affected the results of this study regarding GPAs and cumulative credits earned. Therefore, especially math teachers at this high school need to evaluate their teaching methods and student support strategies as part of a successful ninth-grade transition program (Baker et al., 2005; Bottoms & Cooney, 2008; Bottoms et al., 2002; Bunting, 2004; Butts & Cruzeiro, 2005; Calderon et al., 2003; Caldwell, 2007; Case, 2006; Cauley & Jovanovich, 2006; Collins, 2005; Copeland, 2006; Dedmond, 2008; Dillon, 2008; Duncan, 2004; Farley & Neild, 2008;

Freeman, 2005; Herlihy, 2007; Herlihy et al., 2005; Hmelo-Silver, 2004; Mizelle, 2005; Pantleo, 1992; Potter, 2004; Smith, 2007; Yecke, 2006).

3. All teachers at this high school need to assess the introduction of specific teaching methods and strategies as an effective component of the Ninth Grade Academy transition program, for example:
 - a. Consideration of students' different learning styles (Duncan, 2004; Jung, 1921/1976).
 - b. Consideration of students' multiple intelligences (Gardner, 1999).
 - c. Collaboration and planning between teachers (Copeland, 2006; Duncan, 2004; Potter, 2004).
 - d. Collaboration and planning between middle and high school teachers (Bunting, 2004; Collins, 2005).
 - e. Team teaching (Caldwell, 2007; Cauley & Jovanovich, 2006; Duncan, 2004; Herlihy, 2007; Herlihy et al., 2005; Smith, 2007).
 - f. Consideration of existing programs and strategies such as Reading Across the Curriculum, Writing to Learn Across the Curriculum, Culturally Relevant Instructional Strategies (CRIS) and Embedded Study Skills.
 - g. Implementation of strategies recommended by Marzano (1998, 2000, 2003) such as activating prior and background knowledge, specific vocabulary learning strategies, graphic organizers, and cooperative learning.

- h. Implementation of project-based and problem-based learning (Hmelo-Silver, 2004; Mizelle, 2005).
 - i. Implementation of integrated curricula and differentiation strategies (Martin, 2004).
 - j. Implementation of smaller learning communities and small class sizes for individualized instruction depending on students' needs (Butts & Cruzeiro, 2005; Caldwell, 2007; Case, 2006; Cauley & Jovanovich, 2006; Dedmond, 2008; Dillon, 2008; Duncan, 2004; Freeman, 2005; Herlihy, 2007; Herlihy et al., 2005).
4. Teachers and administrators at this high school need to place emphasis on teacher training and professional development as integrated part of the Ninth Grade Academy transition program (Butts and Cruzeiro, 2005).
 5. Regarding the implementation of the new GPS for ninth-grade math, math teachers at this high school need to compare the standardized mathematics test scores of their ninth graders with those of ninth graders in other schools and school districts to determine whether there is a problem with math at this particular high school or whether there is a general and more complex problem with the new GPS for mathematics. For example, state-mandated End of Course Test (EOCT) test scores can be viewed at the Georgia Department of Education web site.
 6. Educators at this high school need to continue collecting and evaluating data about GPAs, cumulative credits, and dropout rates. For example, regarding

GPA and credits, this study was limited to 222 participants out of 1085 students due to parental consent issues. However, according to the rules of this school district, educators are allowed to use student data on an internal basis for quality assessment purposes without parental consent as long as the findings are not published. Educators should examine the impact of the Ninth Grade Academy on GPA and credits using data from all 1085 students and then investigate whether these results concur with the findings of this study.

7. Again, as long as the results remain unpublished and within the school district, educators could perform a second internal study between ninth graders at this high school who participate in the Ninth Grade Academy transition program and ninth graders at a different high school with similar demographics who do not have any access to any type of transition program. This approach would avoid the dilemma of the GPS for mathematics in the ninth-grade experimental group because all ninth graders in both high schools are subject to this new curriculum.
8. Educators at this high school need to consider the implementation of an existing successful and nationwide program such as the Talent Development High School model (Herlihy et al., 2005).

Recommendations for Further Study

Further research is needed to address the impact of ninth-grade transition programs and to investigate components of a successful ninth-grade transition program.

Based on the analyses presented in Section 4 of this study, the following are my recommendations for further study:

1. Increase the sample size by possibly including more schools with and without ninth-grade transition programs in order to improve validity and reliability. Gravetter and Wallnau (2005) explained this strategy as the *law of large numbers* where a larger sample size increases the probability that the sample mean will be close to the population mean. As long as the new study will not be published and will only be used as an internal evaluation instrument, sufficient data should be available without having to obtain parental consent.
2. Conduct a study where both the experimental group participants of a ninth-grade transition program and the control group nonparticipants are instructed using the same curricula to be able to examine student achievement. Exposing the experimental and the control group to different curricula may leave doubts about the treatment effect because a different curriculum may or may not have an additional impact on the results of a study. Delivering the same curricula to both groups of students would eliminate this factor of doubt and allow a true focus on the treatment effect of the ninth-grade transition program.
3. Conduct longitudinal research to investigate the long-term impact and generate lasting theories of ninth-grade transition programs on both student achievement and dropout rates. Longitudinal data provides more solid evidence about the effectiveness of a ninth-grade transition program whereas data from only one school year maybe considered as a small glimpse of a

much larger picture. Furthermore, with federal and state mandates such as No Child Left Behind, Adequate Yearly Progress, End of Course Tests, and Georgia Graduation Requirements, schools and school districts have to demonstrate that their policies and programs are working effectively regarding academic achievement and student outcomes.

4. Include extensive qualitative analysis to investigate the impact of ninth-grade transition programs. Although the survey about students' satisfaction with their ninth-grade experience contributed considerably to the quantitative analysis of this study, qualitative aspects such as the attitudes and perceptions of stakeholders (students, parents, teachers, administrators, principals etc.) may provide further valuable insights and add more depth to the evaluation of the impact of ninth-grade transition programs.
5. Finally, further research is necessary to investigate the effectiveness of the individual components of ninth-grade transition programs (isolating ninth graders, instructional methods used, class size reduction, student mentoring, collaboration with middle schools, and parental involvement) and which of these components can be successfully combined in a well structured transition program. For example, additional research is necessary to find out whether a few well structured, well organized in-depth components prove to be more or less effective than a larger number of different components combined but possibly not quite as much in-depth.

Conclusion

This study investigated the impact of the Ninth Grade Academy transition program on student outcomes such as GPAs, credits, ninth-grade dropout rate, and on student satisfaction with ninth grade. Although the findings of this study did not confirm a positive treatment effect of the Ninth Grade Academy, this study has provided some promising data regarding students' satisfaction with the help and support they received from administrators as well as students' feelings about their readiness to move on to the next grade level. Additionally, the findings of this study emphasized educators' difficult task to help students adjust to the demands in high school and to prepare them for their future careers. For example, despite educators' continued efforts developing and implementing the Ninth Grade Academy to support students, the introduction of the new Georgia Performance Standards for math in ninth grade at the same time may have caused additional and unforeseen difficulties.

Even though the anticipation of a positive impact of the Ninth Grade Academy on student achievement and satisfaction with ninth grade was not fulfilled, this program still may benefit students and positively impact student outcomes. The implementation of this ninth-grade transition program laid a solid foundation to help ninth graders adjust to the expectations in high school. Educators now have the challenging task to perform detailed reviews and thorough investigations that will scrutinize all aspects of this program to make the necessary improvements and adjustments. Stakeholders also need to examine the individual components of this program, compare these features with similar programs

from existing research, and consider the introduction of new elements that according to the literature have proven to be successful.

Assisting students with the transition from middle school to high school as well as helping them acquire the necessary skills to succeed, is a continuous and infinite process. During this ongoing process, educators are constantly striving at excellence in the classroom to enhance and support the learning process for the benefit of their students. As a result, the implementation of the Ninth Grade Academy needs to be viewed as a contributing factor in an ongoing practice of change for the better and therefore, just another step in the right direction. Subsequently, the findings of this study represent an opportunity to review, refocus, and restart this continuing process of helping students become self-directed and self-motivated learners in an exceedingly competitive world.

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Please feel free to make additional comments about your ninth-grade experience on the back of this sheet: things you did or did not enjoy, things you found helpful or not helpful, suggestions and recommendations. Thank you for your time.

I enjoyed / found helpful:

I did not enjoy / did not find helpful:

Suggestions and Recommendations:

Any Other Comments:

Please feel free to make additional comments about your ninth-grade experience on the back of this sheet: things you did or did not enjoy, things you found helpful or not helpful, suggestions and recommendations. Thank you for your time.

I enjoyed / found helpful:

I did not enjoy / did not find helpful:

Suggestions and Recommendations:

Any Other Comments:

APPENDIX C

Parental Consent Form

My signature below indicates that I have read the information provided and have decided to allow my child to participate in the study titled

“Evaluation of the Success and Effectiveness of the Ninth Grade Academy Ninth Grade Transition Program at a Suburban Greater Atlanta Area High School”

to be conducted at my child’s school from ***December 2008 – May 2009***. I understand that the signature of the principal indicates his agreement with this research project at Campbell High School.

I understand the purpose of the research project will be ***to examine the success of the Ninth Grade Academy ninth-grade high school transition program. The success is determined by comparing cumulative GPAs, the number of cumulative credits earned, ninth-grade dropout rate, and data from a student satisfaction survey.***

My child will participate in the following manner:

- ***Complete anonymous survey about ninth-grade experience (duration approximately 10 minutes)***
- ***Anonymous, confidential use of GPAs, credits earned during ninth-grade year, and ninth-grade dropout-rate, all in form of numbers and/or percentages without any references or identification of participants***

Potential benefits of the study are:

- ***Students may feel that their opinion matters and that their points of view are valued.***
- ***Students may feel included in the decision-making process about transitions from middle to high school.***
- ***Students should have a say about benefits, strategies, and methods to help them succeed in high school.***
- ***Future ninth-grade students may benefit from recommendations and suggestions for improvement.***
- ***Successful adjustment to the demands, challenges, and expectations of high school decreases dropout rates and helps prepare students for their future careers.***
- ***The findings of this study may assist ninth-grade students become self-motivated and self-directed learners in an exceedingly competitive world.***
- ***Educators will be able to gain new insights about the effects of ninth-grade transition programs on students’ cumulative GPAs, cumulative credits earned, ninth-grade dropout rate, and satisfaction with their ninth-grade experience. As a result, ninth-grade transition programs with curricula and courses***

specifically designed to support ninth-grade students, may become good practice in many high schools.

I agree to the following conditions with the understanding that I can withdraw my child from the study at any time should I choose to discontinue participation.

- The identity of participants will be protected. All data will be used anonymously and without any reference to the participants of this study.
- Information gathered during the course of the project will become part of the data analysis and may contribute to published research reports and presentations.
- Participation in the study does not involve any form of compensation.
- There are no foreseeable inconveniences or risks involved to my child participating in the study.
- Participation in the study is voluntary and will not affect either student grades or placement decisions (or if staff are involved-will not affect employment status or annual evaluations.) If I decide to withdraw permission after the study begins, I will notify the school of my decision.
- I may keep a copy of this informed consent form for my own records.

If further information is needed regarding the research study, I can contact **Brita R. Buhrman (Teacher of German and French), Campbell High School, 5265 Ward Street, Smyrna, GA 30080; Phone: 678-842-6850 ext. 517; e-mail: Brita.Buhrman@cobbk12.org**

Signature

Parent

Date

Signature

Principal

Date

APPENDIX D

Walden University EdD

Brita Buhrman

Rubric: Content Validity of Student Satisfaction Survey

 Content Validity Establishing Content Validity of Ninth-Grade Student Satisfaction Survey				
	Poor 1 pts Major Changes and Revisions Needed	Fair 2 pts Several Changes and Revisions Needed	Satisfactory 3 pts A Few Changes and Revisions Needed	Good 4 pts No Changes or Revisions Needed
Accurate Representation Do the survey questions accurately represent student satisfaction with their ninth-grade experience? (Fink, 2006, p. 39)	Poor	Fair	Satisfactory	Good
Content Related to Student Satisfac Does the survey contain a reasonable sample of words and ideas commonly used to discuss student satisfaction? (Fink, 2006, p. 39)	Poor	Fair	Satisfactory	Good
Representative Samples Are the survey items representative samples to evaluate general student satisfaction with their ninth-grade experience? (Fink, 2006, p. 39)	Poor	Fair	Satisfactory	Good

<p>Clarity of Questions Are the questions clear and easy to understand from the perspective of a ninth grader? (Fink, 2006, p. 40)</p>	Poor	Fair	Satisfactory	Good
<p>General Format Is the general format of this survey adequate from the perspective of a ninth grader? (Fink, 2006, p. 40)</p>	Poor	Fair	Satisfactory	Good
<p>Foreced-Choice Questions Are the choices of forced-choice questions mutually exclusive? (Fink, 2006, p. 40)</p>	Poor	Fair	Satisfactory	Good
<p>Clarity and Bias of Language Is the language of this survey clear and unbiased? (Fink, 2006, p. 40)</p>	Poor	Fair	Satisfactory	Good
<p>Directions and Transitions Are the directions of this survey clear and do the transitions make sense? (Fink, 2006, p. 40)</p>	Poor	Fair	Satisfactory	Good
<p>Order of the Questions Is the order of the survey questions appropriate? (Fink, 2006, p. 40)</p>	Poor	Fair	Satisfactory	Good
<p>Length of Survey Is the length of this survey appropriate? (Fink, 2006, p. 40)</p>	Poor	Fair	Satisfactory	Good

40)				
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Build free rubrics at www.iRubric.com

Rubric Code: **P26XA5**

APPENDIX E

Experts Evaluating Content Validity of Student Satisfaction Survey

Name	Position	Degree
Davidson, US	District Director of Alternative Education	Ed.D.
Davis, Terry	High School Science Teacher	Ph.D., Physiology
Ewing, Gregory	District Supervisor ESOL & Foreign Language Programs and International Welcome Centers	Ed.D.
Gunther, Skip	High School Mathematic Teacher	Ph.D., Operations Research
Porter, Phyllis	Assistant High School Principal	Ed.D.
Romunchuk, Judy	High School Coordinator of International Baccalaureate Program	Ph.D., Learning and Language Literacy
Terracin, Steven	High School Social Studies Teacher	Ed.D.
Tischler, Richard	High School Administrator of Ninth Grade Academy transition program	Master of Educational Leadership
Wannamaker, G. Noell	High School Social Studies Teacher	Ph.D., American History

Please feel free to make additional comments about your ninth-grade experience on the back of this sheet: things you did or did not enjoy, things you found helpful or not helpful, suggestions and recommendations. Thank you for your time.

I enjoyed / found helpful:

I did not enjoy / did not find helpful:

Suggestions and Recommendations:

Any Other Comments:

Please feel free to make additional comments about your ninth-grade experience on the back of this sheet: things you did or did not enjoy, things you found helpful or not helpful, suggestions and recommendations. Thank you for your time.

I enjoyed / found helpful:

I did not enjoy / did not find helpful:

Suggestions and Recommendations:

Any Other Comments:

CURRICULUM VITAE

Brita R. Buhrman

e-mail: BritaR2000@live.com
Brita.Buhrman@cobbk12.org

Nationality : German **Languages**: German (native), French, English, and Russian

Qualifications Summary :

Sixteen years of experience teaching French and German in the United States and England

- University of Cambridge, Homerton College, England, UK
 - Post-Graduate Certificate in Education (PGCE) for French & German
 - Life-time teaching certification in the UK and all member states of the EU
- Institute of Linguists, London, England, UK
 - Examinations in Languages for International Communication
 - BA Honors Degree in German (as a foreign language)
 - BA Honors Degree in English (as a foreign language)
- Open University, Milton Keynes, England, UK
 - Associate Degree in French
- Georgia Educator Certificate for German and French (valid to 06/30/11)
 - Gifted in-field certification
 - ESOL Endorsement
 - AP French certified
- Georgia licensed Private Investigator
- Walden University, Minneapolis, MN
 - Master's Degree in Education (Introducing Technology in the Classroom)

Professional Experience :

Smitha Middle School, Marietta, GA

2009 –

Teacher of French and ESOL (English as a second language)

Campbell High School, Smyrna, GA

2006 – 2009

Teacher of German and French

Osborne High School, Smyrna, GA

2002 – 2006

Teacher of German and French

Mount Paran Christian School, Marietta, GA

2001 – 2002

Teacher of French

Northampton High School, Northampton, England, UK

1997 - 2000

Second in Modern Languages Department

Head of German and teacher of German and French

Sharnbrook Upper School, Bedford, England, UK

1990 - 1997

Teacher of French and German

1992 - 1997

German Language Assistant

1990 – 1991

Additional Professional and Business Experience :**Biddenham Upper School Adult Education Centre, Bedford, England, UK**

1995 - 1999

Teacher of German (business German for adults)**Addecco Services, Columbia, SC**

2000 – 2001

Project Administrator at SCANA for a 70 memberInformation Technology project team)**Stealth Investigations, Marietta, GA**

2002 –

Private Investigator**Education :**University of Leipzig, Leipzig, Germany

1987 – 1990

- Diploma – Tutor of Russian and English (Specialty: University Instructor)
- Studied at the State University of Voronezh, Russia 1989 - 1990

Institute of Linguists, London, England, UK

1991 & 1995

- Examination in Languages for International Communication (BA Diploma in German)
- Examination in Languages for International Communication (BA Diploma in English)

University of Cambridge, Homerton College, England, UK

1991 – 1992

- Post Graduate Certificate in Education (PGCE) for German & French

Open University, Milton Keynes, England, UK

1996 - 1998

- Associate Degree in French

Walden University, Minneapolis, MD

2003 - 2005

- Master's Degree in Education with Focus on Introducing Technology to the Classroom