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Charles J. Ned

May, 2012

A STUDY OF RELATIONSHIPS BETWEEN PARTICIPATION IN NINTH GRADE  
CENTERS AND STUDENT ACHIEVEMENT

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

In Partial Fulfillment  
of the Requirements for the Degree

Doctor of Education  
in Professional Leadership

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## ACKNOWLEDGEMENTS

I would like to begin by thanking my wife Tiffany for her love, patience, encouragement, and support during this journey. I could not have achieved this amazing accomplishment without her willingness to make sacrifices and attend to parental duties while I was preoccupied with completing the program; I am sincerely thankful for all that she has done. To my children, Kaitlyn and Cameron, that they may learn from my example the importance of education and that it is the key that can unlock the door to many opportunities that life has to offer.

To my parents, for instilling in me the value of education and the work ethic that provided me with the drive to pursue this degree and the perseverance to overcome the overwhelming challenges that balancing family obligations, doctoral program requirements, and building principal responsibilities presented on a regular basis.

Also, I would like to thank my committee members, Dr. Angus MacNeil, Dr. Steven Busch, and Dr. Guy Sconzo, for their guidance, input, and encouraging words that aided me in completing this program. Special thanks to my committee chair, Dr. Allen Warner, for the invaluable advice given and assistance provided in steering my thoughts in the right direction while providing words of wisdom along the way.

And finally, I am extremely grateful to all University of Houston College of Education and Humble ISD personnel, as well as the Class of 2012 cohort members, that have contributed to my success and have supported me during this two year journey of enhancing my knowledge/skills and exploring issues in education – THANK YOU!

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Ned, Charles J. "A Study of Relationships Between Participation in Ninth Grade Centers and Student Achievement" Unpublished Doctor of Education Doctoral Thesis, University of Houston, May, 2012.

## ABSTRACT

In an era where ninth grade is the most populated grade level, and studies show that more students drop out in ninth grade than any other grade level, there was a need to review research to determine if ninth grade centers have a significant impact on student achievement. Statistics show, and researchers agree, that a student's attendance and academic success in his or her ninth grade year can determine, and even predict, whether the student remains on track to graduate high school in four years. The purpose of this quantitative study was to determine if relationships exist between participation in ninth grade centers and student achievement, as measured by retention rates, standardized test scores, attendance rates, and dropout rates.

The data used in this study came from 132 traditional high schools and 10 stand-alone ninth grade centers within the Greater Houston area or Region 4, which encompass 53 school districts covering 7 counties. The Region 4 students come from a number of diverse backgrounds. The overall racial composition is 43% Hispanic, 29% Caucasian, 22% African American, 6% Asian, and 0.2% Native American, although these ratios vary widely between school districts. About 75% of students from Region 4 come from economically disadvantaged families and 19% have limited English proficiency.

Pearson's chi-squared test of homogeneity of proportions was used to identify any differences between the variables under analysis. The results of the data analysis revealed there was a significant difference between the ninth grade center group, those separated from other grade levels and housed at a stand-alone campus, and the Region 4

group of ninth graders, those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, in their dropout rates and student performance on standardized tests. The Region 4 group of ninth graders had significantly higher attendance rates when compared to that of the ninth grade center group. The data results also revealed that there were no significant differences between these groups when analyzing retention rates. The results of this study may provide more insight into strategies and interventions educators may use to improve ninth grade student performance and the organizational design that will benefit students the most.

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## **Chapter 1**

### **Introduction**

Over the last thirty years the number of students who fail the ninth grade has tripled producing a bottleneck effect or bulge in the number of students enrolled in grade nine when compared to any other grade level (Haney et al., 2004). Researchers target ninth grade as the most crucial year for completing high school; as it is during this time students must earn a minimum number of credits to satisfy graduation requirements; this is a noticeable change from middle school expectations (Fulk, 2003). The importance of the ninth grade year is extremely critical as graduation rates, both nationally and statewide, are calculated based on the percentage of students who enter grade nine and graduate four years later. Nationally, only 68% of ninth grade students graduate on time (Toch, Jerald, & Dillon, 2007). In Texas, that number drops to 61% with 50% of loss from the high school pipeline occurring in ninth grade. This is much higher than in most states (Swanson, 2006).

Many freshmen across the nation are confronted with the very stressful episode of ninth grade transition. Contributors to the stress include moving to a new, larger school with a different structure, new teachers and peers, and increased academic responsibilities (Clark & Hunley, 2007). Research shows that these factors play a critical role in ninth graders becoming disconnected with high school early-on, resulting in increased absenteeism, behavioral problems, deplorable academic performance and an overall negative attitude towards school (Clark & Hunley, 2007; Kennelly & Monrad, 2007). Statistics show, and researchers agree, that a student's attendance and academic success

during his or her ninth grade year can determine, and even predict, whether the student remains on track to graduate high school in four years. These two factors outweigh both the student's background characteristics and the student's prior academic achievements (Allensworth & Easton, 2007).

Reents (2002) stated that "entering ninth grade can be one of the most emotionally difficult, most academically challenging times in children's lives. In fact, researchers have identified ninth grade as the most critical point to intervene and prevent students from losing motivation, failing and dropping out of school" (p. 1). Some schools have taken easing the transition to high school to an all new level by providing separate wings or buildings that allow for an entire year of transition time before being blended with students from upper grades (Kennelly & Monrad, 2007). These small learning community structures are known as ninth grade centers. Implementing a ninth grade center is an organizational reform measure aimed at improving ninth grade student performance by fostering a sense of interconnectedness among students and teachers, while isolating them from other grade levels (Barton, 2004; Smith, Akos, Lim & Wiley, 2008). The primary purpose of establishing this interconnectedness is to create an environment that not only supports learning but also aids in the maturation process (Felner, Seitsinger, Brand, Burns, & Bolton, 2007).

Historically, research has shown that most instruction at the high school level is teacher centered, with teachers lecturing and students taking notes. Also, there is very little or no guidance offered to help ninth graders adjust academically and socially to high school causing many students to fall by the wayside. In order to combat the issues of poor attendance, student apathy, unruliness, and high numbers of academic failures,

educational reformist, researchers, and administrators began looking at redesigning ninth grade as a school-within-a-school model. This research spurred the establishment of several ninth grade centers across the nation in the mid-1990s. According to the United States Department of Education (2008), there were 128 stand-alone ninth grade centers operating in 2000. Four of those schools are in the Aldine Independent School District located in Houston, Texas. This large urban school district decided to build these schools, which opened in 1998, to help reduce dropout rates, increase attendance rates, raise test scores, improve behavior, and increase the number of promotions to tenth grade. Thus far, the district has seen the benefits of having stand-alone ninth grade centers and the students have reaped the rewards. Although Aldine Independent School District has one of the best ninth grade models, they were not the first in the Houston area to erect ninth grade centers. Deer Park Independent School District opened the doors to its ninth grade center in the fall of 1974, which initially housed both ninth and tenth grade students. In 1992, the campus was reconfigured to service only ninth grade students. Multiple school districts have since established ninth grade centers to better address learner needs, including but not limited to Alief ISD, Channelview ISD, Conroe ISD, Galena Park ISD, and Pearland ISD.

Psychologist and researcher, Abraham Maslow's (1908-1970) work regarding human drive, motivation and hierarchy of needs provide a solid foundation to support the concept of ninth grade centers as viable structures for ninth graders. The separation of ninth graders from tenth and twelfth graders ties directly into the constructs of Maslow's hierarchy of needs. Maslow's hierarchy of needs uses a tiered pyramid to identify five psychological needs that can be incorporated into this study to enhance one's

understanding of how these variables impact the behavior and academic performance of ninth graders during transition from grade eight. Maslow (1943) developed a hierarchy of needs to prioritize and distinguish attributes specific to humans. Maslow (1943) believed that humans are motivated by wants and desires. His theory of pre-potency asserts that a person is incapable of moving on to the next level until lower needs are met. When basic needs are satisfied, people become restless and look for opportunities to grow, seek self-fulfillment and work to their highest potential. At the end of this study, it should be clear whether those ideas expressed by Maslow have merit as it relates to ninth grade student success.

Advocates for ninth grade centers contend that smaller learning environments are more secure, more productive and more engaging (Vander Ark, 2002). Ninth grade centers create an environment where students can meet or exceed academic standards, while developing a sense of belonging and establishing positive relationships among students and staff. Giving consideration to the setting in which learning takes place has a significant psychological effect on students. Maslow's (1943) safety stage is probably the most significant in relation to ninth grade transition. The purpose of this stage is to develop an atmosphere in which students may be free from the threat of physical and emotional harm.

Reconstructing our high schools by creating smaller learning communities in which the physical layout and actions of the faculty and staff are sensitive to each student's need for physiological safety, represent a giant step toward personalizing education and establishing the right conditions for enhanced student achievement.

### **Statement of the Problem**

There are numerous studies that show the effects of small learning communities on attendance and academic performance. However, with regard to ninth graders, there are few studies that focus specifically on the structural design of the campus where ninth graders are housed and the effects of strategies implemented to improve attendance rates, retention rates, dropout rates, and standardized test scores. Being that ninth grade is such a critical year for most students, and in many cases can be used to predict how successful students will be during their remaining high school years, there is a need to establish more research related to the types of organizational designs and strategies that significantly impact ninth grade student attendance rates, retention rates, dropout rates and standardized test scores.

### **Purpose of the Study**

The purpose of this study was to determine if relationships exist between participation in ninth grade centers and student achievement, as measured by retention rates, standardized test scores, attendance rates, and dropout rates.

### **Significance of the Study**

In an era where ninth grade is the most populated grade level, and research shows that more students drop out in ninth grade than any other grade level, there is a need to review research to determine if ninth grade centers have a significant impact on ninth grade student performance. National statistics show a disturbing trend in which ninth grade students continue to fare poorly academically even if their academic records prior to high school show exemplary performance. The number of students who disappear between ninth and tenth grade has tripled over the past thirty years. Attrition between

ninth and tenth grade began increasing in the late 1970s and accelerated from the mid-1980s onward (Haney et al., 2004). By the year 2000, there were nearly 12% fewer students enrolled in the tenth grade when compared to ninth grade statistics from the previous year. The National Center for Education Statistics provides staggering numbers that explain the attrition problem. In 1998-99, there were 3.86 million students enrolled in ninth grade public schools, but in 1999-2000, there were 3.42 million students enrolled in the tenth grade. The difference, 440,000 students, meant that 11.4% of ninth graders did not show up as enrolled tenth graders in 1999-2000, which clearly showed that ninth to tenth grade transition is the largest leak in the education pipeline (Haney et al., 2004).

For many students, the ninth grade year is plagued with high rates of absenteeism, disengagement and course failures. Interviewed or shadowed ninth graders repeatedly report they disengage from school when they feel teachers don't care about getting to know them as individuals (Wheelock & Miao, 2005). Furthermore, Finn and Voelkl (1993) contend that students must feel a sense of belonging in order to succeed in today's schools.

Maslow (1943) has cited that a student's need to be cared for plays a major role in this stage of development. His research also showed that in settings where students feel a sense of belonging, they are more than likely to experience acceptance as a "total person" before they are willing to disclose and be supportive of others. After students feel that they belong, the urge to attain a degree of importance emerges. Esteem needs can be categorized as external and internal motivators. Internally motivating esteem needs are those such as self-respect and gaining a sense of accomplishment. External needs have the greatest impact on adolescents as they care more about how they're viewed by their

peers. At various points in a person's life, he or she is motivated by completely different needs; for ninth graders, recognition, attention and social status play a major role in their development. Again, where humans differ is in what all of Maslow's studies have referred to as values and growth motivators. These are best described as behaviors that lead to growth and further learning which is extremely critical for ninth graders. Current events have shown that students who feel ostracized by peers may turn to drastic acts of violence or suicide to fill the void created by that lack of acceptance by peers.

In order to combat this dilemma, many school districts have resorted to restructuring ninth grade into small learning communities that aid students with the transition to high school. The small learning community setting promotes an atmosphere in which students feel comfortable and building relationships are expected. This setting also allows for ninth graders to examine personal fears without the risk of rejection, and to explore alternatives for solving problems and experiment with new behaviors in a safe setting.

Sammon (2000) described small learning communities by clustering them into six main models: career academies, houses, small learning community/school within school, magnet schools and ninth grade centers. This research will look at the attendance rates, retention rates, dropout rates, and standardized test scores of students enrolled in stand-alone ninth grade centers and at traditional 9<sup>th</sup>-12<sup>th</sup> grade campuses throughout the Greater Houston area. Although decades of research on school size provide substantial evidence that small schools provide more favorable student outcomes than large high schools (Cotton, 2001), many school districts have been forced to eliminate ninth grade centers because of the financial commitment they require. This study's purpose was to

examine the relationship participation in ninth grade centers have on ninth grade student achievement.

### **Research Questions**

In order to determine if differences exist between the academic performance, as measured by retention rates and achievement on standardized tests, attendance rates, and dropout rates of ninth grade students housed at stand-alone ninth grade centers and ninth grade students housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, this study examined the following research questions:

1. In Region 4, is there a difference in the attendance rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting?
2. In Region 4, is there a difference in the retention rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting?
3. In Region 4, is there a difference in the dropout rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting?
4. In Region 4, is there a difference in the standardized test scores, as measured by the Texas Assessment of Knowledge and Skills (TAKS), of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting?

## Hypotheses

In order to determine if differences exist between the academic performance, as measured by retention rates and achievement on standardized tests, attendance rates, and dropout rates of ninth grade students housed at stand-alone ninth grade centers and ninth grade students housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, this study tested the following null and alternative hypotheses. Each null and alternative hypothesis coincides with the research question of the same number in the preceding section.

- H1<sub>0</sub>: There is no significant difference in the proportion of attendance of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H1<sub>1</sub>: There is a significant difference in the proportion of attendance of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H2<sub>0</sub>: There is no significant difference in the proportion of retention of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H2<sub>1</sub>: There is a significant difference in the proportion of retention of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H3<sub>0</sub>: There is no significant difference in the proportion of dropouts of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.

- H3<sub>1</sub>: There is a significant difference in the proportion of dropouts of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H4<sub>0</sub>: There is no significant difference in the proportion of students that met TAKS passing standard of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H4<sub>1</sub>: There is a significant difference in the proportion of students that met TAKS passing standard of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.

### **Definition of Terms**

*Absenteeism* – The act of students accumulating absences from school inclusive of excused and unexcused absences.

*Academic Performance* – Attendance, promotion and retention rates, as well as number of course credits earned, will be used to define “academic performance”. Most of the data will be obtained from the Texas Education Agency’s (TEA) Academic Excellence Indicator System (AEIS).

*At-Risk* – Refers to aspects of a student’s background and environment that may lead to a high risk of educational failure; students meet one of twelve indicated conditions to be labeled as such.

*Attendance Rate* – The average number of days students attend school as compared to the number of days enrolled.

*Common Planning* – A time in which teachers from the same subject area collaborate in order to improve learning strategies and help produce better student outcomes (Hertzog & Morgan, 1998).

*Course Credits* – Students receive credit for a course by earning a course grade of 70 or above and must be in attendance 90% of the time at the end of the semester.

*Course Failure* – A student fails a course when the course grade at the end of the semester is 69 or below.

*Disciplinary Placements* – Students removed from their home campus to a disciplinary alternative education program, due to particular behavior infractions.

*Dropout* – A student who is enrolled in a public school in grades 7-12, does not return to public school the following fall, is not expelled, and does not graduate, receive a GED, continue school outside of the public school system, begin college or die.

*English as a Second Language (ESL)* – Students whose second language is English as indicated on the Home Language Survey upon entering a Texas public school.

*First-Time Ninth Graders* – “First-time ninth grade students are defined as students whose records indicate they were in the ninth grade in the year under study and in the eighth grade in the previous year’s administrative data file” (Kemple, Herlihy, & Smith, 2005, p. 5).

*Graduation Rate* – A federally required benchmark that calculates the percent of on-time graduates with a standard high school diploma.

*High-Stakes Testing* – Administering standardized test with important consequences for the test taker, such as becoming eligible to graduate from high school.

*Ninth Grade Academy* – A separate transition program, housed on a 9<sup>th</sup>–12<sup>th</sup> grade campus, provided for students in their first year of high school that places them with small interdisciplinary teams of teachers (National Association of Secondary School Principals, 1996).

*No Child Left Behind* – A federal law adopted in 2001 that aims to bring all students up to the proficient level on state tests by the 2013-14 school year, while holding states and schools more accountable for results.

*Public Education Information System (PEIMS)* – PEIMS is a data collection system developed by the Texas Education Agency to provide a single system for collecting school district information and to maintain the information in one common coordinated database for accountability.

*Promotion* – Grade level requirements have been satisfied and a student moves on to the next grade.

*Region 4* – established by the Texas State Legislature in 1967, Region 4 includes all public schools in seven counties in and around the Houston area. This large region contains 53 school districts with a total of 1,420 campuses.

*Relationship* – Defined as a connection, association, or the condition of being related.

*Retention* – Having a student repeat a grade he or she was unable to successfully complete.

*Small Learning Community* – Any separately defined, individualized learning unit that may be in a separate building or within a larger school setting. Students and

teachers are usually placed in teams, and frequently have a common area of the school for classes (Cotton, 2001).

*Stand-Alone Ninth Grade Center* – Refers to housing the entire first time ninth grade population in its own building, separate and away from the 10<sup>th</sup>–12<sup>th</sup> grade population, with its own facilities, faculty and staff.

*Texas Assessment of Knowledge and Skills (TAKS)* – Refers to the standardized assessment students in the state of Texas are required to take annually in order to measure the extent in which they have learned and are able to apply the defined knowledge and skills at each tested grade level. Ninth grade students only test in the area of reading and mathematics.

*Texas Education Agency (TEA)* – A branch of the state government, headquartered in Austin, Texas, that is responsible for the oversight of public primary and secondary education.

*Teaming* – The process of teachers with common students meeting to discuss individual students and approaches taken to improve learning outcomes.

*Traditional 9<sup>th</sup>-12<sup>th</sup> Grade Campus* – Refers to the structure of most high schools in which 9<sup>th</sup> grade students are housed, take classes, eat lunch and interact with upperclassmen, who are sometimes four to five years older than they are.

*Transition* – The process of students moving from one educational setting to the next. Students typically transition from elementary to middle school and middle school to high school.

### **Overview of Methodology**

This quantitative study used a causal-comparative approach with a quasi-experimental design. The study used archived data to compare the performance of ninth grade students housed at stand-alone ninth grade centers to those housed at a traditional 9<sup>th</sup>-12<sup>th</sup> grade campus. The data used in this study came from 132 traditional high schools and 10 stand-alone ninth grade centers within the Greater Houston area or Region 4, which encompass 53 school districts covering 7 counties. This study used archival data from the Texas Education Agency (TEA) to compare the academic performance, as measured by retention rates and achievement on standardized tests, attendance rates, and dropout rates of ninth grade students housed in both settings.

A true experimental design was not appropriate for this study since the manipulation of the independent variable, ninth grade students housed at stand-alone ninth grade centers versus those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, had already occurred and the groups of students in this study had already been established making random selection of each group impossible. Under these conditions, the causal-comparative approach was the most appropriate for this study. The dependent variables of attendance rates, retention rates, dropout rates and standardized test performance were analyzed using descriptive and inferential statistics.

### **Organization of the Study**

The study contains five chapters. Chapter One consists of the introduction, statement of the problem, purpose of the study, significance of the study, research questions, definition of terms, and an overview of methodology. Chapter Two provides a review of the related literature connected to transition problems that many ninth graders

face upon entering high school and the reasons for these problems. Then, it reviews the research on the primary types of small learning community structures being implemented at various schools across the country, specifically stand-alone ninth grade centers. This chapter concludes with a review of strategies and interventions used, and their effect on attendance rates and academic performance. Chapter Three describes the methodology used in this study. The description includes information about the participating campuses, research instrument, data collection procedures, statistical procedures of treatment of data, and the limitations of the study. Chapter Four provides an analysis of the data. Chapter Five presents a summary of the study, discussion of findings, and recommendations for future study.

## **Chapter 2**

### **Literature Review**

#### **Introduction**

Many leading researchers have noted that the ninth grade year is the most significant year of a student's school career. It provides "the foundation for a successful high school experience and is an indoctrination period into the high school culture of high expectations" (Caldwell, 2007, p. 28). The effect of large high schools as they exist today is of the utmost concern to school districts nationwide as they attempt to determine why so many ninth graders are experiencing difficulty getting promoted to the tenth grade (Jonsson, 2004).

Federal policies such as No Child Left Behind (NCLB) have placed heavy demands and stringent accountability requirements on schools in an attempt to reform educational practices (U.S. Department of Education, 2008). One of the purposes of NCLB is to increase graduation rates while turning out young adults who are competently skilled, life-long learners who possess the knowledge required to be productive members of society.

Horace Mann (1848), who is considered by many to be the father of modern education, noted that education is the "great equalizer of the conditions of men – the balance wheel of social machinery" (p. 1). With all children achieving at different levels, Mann's observation of equality through education has not been realized. In light of NCLB, it is no longer enough just to educate all children but all children must achieve as well (Haycock, 2006). Caldwell (2007) stated that "the risk of academic failure in our

nation is a high priority issue for educators and policy makers” (p. 43). Educators, policymakers, and the general public want to know what students are learning and utilize standardized test results as the primary means of measurement.

During a student’s school years, there are many transitions “from home to school, elementary to middle school, middle school to high school, and high school to college or work” (Schumacher, 1998, p.1). As ninth graders enter high school, they experience a larger, more competitive learning environment than they had been accustomed to in the past (Mizelle & Irvin, 2000). Students also tend to experience a greater diversity of teachers and peers, and have more choices to make than ever before. There is data to support the difficulties a ninth grade student endures as there are more failures in ninth grade than any other grade level (Marshall, 2003; Williams & Richman, 2007) and over the last thirty years, the number of students failing ninth grade has tripled (Haney et al., 2004).

There are many contributing factors that lead to a struggling student’s academic demise. Statistics show that the largest percentage of failing grades, 26%, occur in the ninth grade, and at least 14% of all students classified as freshmen are over-aged. In a study conducted by Hertzog and Morgan (1998) consisting of 3000 eighth graders, some concerns about entering high school were identified. Some of the top ten concerns include bullying, having mean teachers, getting lost in the school, being late to class, finding a boyfriend or girlfriend, homework, tests, extracurricular activities and graduation. These results show that students enter high school feeling pressured both socially and academically.

Kerr (2002) has suggested that students who face the dual stressors of adolescent growth and the transition from middle school to high school are ill-equipped to handle the new high school environment. In addition to this, teachers tend to have the same expectations for ninth grade students as they would for upperclassmen, but in reality, many of these students have not fully matured from adolescence. Other students are struggling with how to handle the responsibilities of pre-adulthood (Reents, 2002). Eccles, Lord, and Midgley (1991) hypothesized that some of the negative psychological changes associated with adolescent development result from a mismatch between the needs of developing adolescents and the opportunities afforded to them by their social environments. To further complicate the transition from middle school to high school, students are confronted with one of the most difficult developmental periods of their lives, placing them at greater risk for the downward spiral to academic failure and dropping out (Caldwell, 2007).

For many students, the first year of high school is accompanied by an increase in discipline referrals (George & McEwin, 1999), as high school personnel are more controlling and less tolerable of inappropriate behaviors in comparison to middle school staff (Legters, 2000). The search for identity is a top priority for many ninth graders, and Queen (2002) believes the search occurs in three different ways: by developing their values, by developing pride and achievement in their accomplishments, and by developing a strong peer support system. The notion of trying to establish a sense of identity may be the primary trigger behind this as students develop a more negative view of themselves and feel an increased need for peer relationships (Hertzog, Morgan, Diamond & Walker, 1996). In a study conducted by the Consortium on Chicago School

Research, researchers found that ninth graders grappled with the physical and social rites of passage into adolescence.

Parental involvement generally decreases after a student leaves middle school (Mizelle, 2005). Many times parents find that fundraising is the only situation where their involvement is needed once a student gets to high school (Morgan & Hertzog, 2001). Researchers have noted that some parents believe school involvement is more important during the elementary years versus grades 7-12; this causes a decrease in parental involvement during high school years. Lynch, Hurford, and Cole (2002) studied parents of ninth grade students and found that “parents of at-risk students engage in more parental enabling than parents of honors students” (p. 542). By enabling students’ poor behavior choices, adolescents failed to learn that there are consequences for their actions.

By the time students enter ninth grade, they tend to experience several types of social changes in addition to physical changes associated with being an adolescent. One of the social changes is the tendency for parents to allow their student more freedom when he or she enters high school (Neild, 2009). Unfortunately, this freedom is not well-timed and often results in parents becoming less involved with their child’s education. If a student is having trouble with high school transition and his or her parents have decided to allow the student more autonomy in dealing with problems, this may result in feelings of abandonment. Also, the result of a students’ increased autonomy may result in an increase of risk-taking behaviors because parents are less involved and peers become more important (Neild, 2009).

Even students who found themselves the star athlete or most popular in middle school may lose this title as they shift into a bigger pool of students found in high school,

making this transition difficult even for the seemingly well-adjusted eighth grader (Grossman & Cooney, 2009). In researching Erik Erickson's stages of psychosocial development, he states that an adolescent is more concerned with how he appears to others and would rather "act shamelessly in the eyes of his elders, out of free choice, than be forced into activities which would be shameful in his own eyes or in those of his peers" (Erikson, 1956, p. 65). This may sum up the results of multiple research studies that conclude that 9<sup>th</sup> grade discipline referrals more than double the referrals in other grades on many high school campuses across the country (United States Department of Education [USDOE], 2008).

Oxley, Croninger, and DeGroot (2000) discovered that by ninth grade, students have gained the cognitive ability to reflect on themselves and often experience self-consciousness, and they have begun to interact with wider, more diverse groups that are removed from their family and neighborhood. These are conditions that permit adolescents to explore and experiment with different roles and interests. Instead of school environments being structured in such a way that builds a student's confidence while providing the supports necessary to successfully transition from middle to high school, the internal structures of many schools inadvertently contribute to ninth grade failures.

This chapter provides a review of literature connected to transition problems that many ninth graders face upon entering high school and the reasons for these problems. Then, it reviews the research on the primary types of small learning community structures being implemented at various schools across the country, specifically stand-alone ninth grade centers. This chapter concludes with a review of strategies and interventions used, and their effect on attendance rates and academic performance.

### **Academic and Transitional Pitfalls**

There is no doubt that change is difficult and this is especially true as it relates to students being promoted from eighth grade to ninth grade. The transition from one school to the next leads to a series of events that has resulted in many students failing ninth grade (Wheelock & Maio, 2005). Queen (2002) has identified two different types of transitions “one form of transition is systematic and built into the structure of the public school system; the other is developmental and incorporates physical, intellectual, social and emotional change” (p. 2). The first type of transition includes basic processes involved with changing schools, such as changing classes, use of lockers, crowded hallways or wings, and new teachers. The second type of transition includes the feelings and attitudes of the individual student. There is no hierarchy in which key components have the greatest impact, but when so many academic, social and behavioral issues confront an incoming ninth grader early and often, they all merge to form the perfect storm that pulls a student down into the abyss.

Researchers have found this especially true for students moving from smaller and more supportive middle schools to larger high schools, where they no longer have the same peer groups or familiar teachers to rely on if needed (Herlihy, 2007). Not to mention that they are “still young, immature, and vulnerable with peers and older students” (Smith-Mumford, 2004, p. 3). So in addition to academic obstacles, students are faced with social challenges posed by a new, more demanding school environment – challenges that lead to student disengagement (Wise, 2008).

Transition problems impact students in many ways and perhaps the most disturbing outcome of this is an increase in dropout rates. Many students who end up

dropping out typically begin experiencing academic and social difficulties during their ninth grade year. According to the research of Neild (2009), first-time freshmen, in Philadelphia public schools, who repeat ninth grade have a greater chance of dropping out of high school; in fact, 57% of those retained in ninth grade failed to graduate. It has been noted by Alspaugh (2000) that students who make multiple transitions between fifth and tenth grade dropout of high school at significantly higher rates. He also found that boys drop out at a higher rate than girls while those who made only one transition from elementary to high school had the lowest dropout rates.

When students transition to high school, teachers expect more from them, both in study habits and maturity. In addition to higher behavioral expectations, students are required to earn credits in order to move from one grade level to the next which also incorporates high stakes standardized testing that also serves as a prerequisite to graduating. Research shows that some of the benefits of being a high school graduate are better health and lower mortality rates, higher earning potential resulting in more contributions to the community in the form of taxes, reduced likelihood of receiving public assistance, and a reduced likelihood to commit crimes or be incarcerated (Grossman & Cooney, 2009).

There are numerous factors that impact ninth graders' lack of readiness for high school, and one of the contributing factors to this includes the fact that students may not be ready for the rigor of high school coursework. Students may underestimate the importance of completing coursework, its relationship to course grades, and the accumulation of course credits (Allensworth & Easton, 2007). "The ninth grade, for many students, marks the first time that each course they take counts for something more

than just seat time in a classroom” (Marshall, 2003, p. 1). Unlike middle school, in high school the successful completion of courses, including meeting the attendance requirement as well as passing the course, counts toward course credits (Allensworth & Easton, 2007).

Upon entering high school, students may not be accustomed to the heightened importance of completing coursework, earning passing grades and earning course credits as a means of advancement to the next grade, but they eventually learn that these are the measures of high school success. A student experiencing success during his or her ninth grade year establishes a foundation on which future success throughout high school can be built (Allensworth & Easton, 2007).

Lan and Lanthier (2003) found that students’ academic challenges during their freshmen year can “accelerate the deterioration process that eventually leads to dropping out” (p. 326). According to Allensworth (2008), the more courses a student fails during the 9<sup>th</sup> grade year, the greater the risk the student will not graduate from high school. Academic measures of student performance include attendance, course grades, GPA, and the number of course credits earned. Each of these factors play an important role in whether or not students fail the ninth grade and whether or not they graduate from high school.

According to Allensworth and Easton (2007), “More than half the non-graduates can be identified by the end of the first semester using either absences or failure rates” (p. 6). Students with five or more absences experience greater difficulty in completing their coursework and are at risk of falling behind in the class. Allensworth and Easton (2007) claim that the likelihood of a student graduating from high school can be identified with

80% accuracy by the end of the ninth grade by using the student's GPA and the number of course failures.

Research studies done in major urban cities such as Philadelphia tell a chilling story of academic deficiencies throughout most urban comprehensive high schools. According to Pugh (2003), the ninth grade population in nearly all of Philadelphia's comprehensive high schools more than doubles that of the 12<sup>th</sup> graders. Additionally, of the 54% who graduate on time from the School District of Philadelphia, only 47% are males compared to 61% who are female. Pugh (2003) further states that teachers with the highest retention rates, the least amount of experience, and no certification are assigned to schools where minority students are in the majority and economically disadvantaged students make up 80% of the school's population. These are also the teachers more than likely assigned to teach freshmen.

Regardless the reason a student is considered at-risk, educators can influence the likelihood of academic success. A student's motivation for learning can be associated with teachers who know, support, challenge, and encourage their students. Case (2006) discovered that "teacher behavior and homework practices, rather than transition programs, were cited by students as key factors accounting for the differences in student performance during the transition from eighth to ninth grade" (p. 2). Students who feel comfortable and safe within the school tend to have better attendance, behavior, and perform better academically (Smith-Mumford, 2004). Kennelly and Monrad (2007) asserted, "Paying attention to the key predictors during important transition years, such as ninth grade, is crucial for targeting resources for dropout prevention" (p. 5).

Hassinger and Plourde (2005) studied qualities of high achieving Hispanic students who had overcome adversity and addressed common elements in the students' support systems that contributed to academic success. They found that although educators could not change the factors that cause a student to be considered at-risk, educators could create a supportive school environment that would increase the likelihood of educational success. According to Hassinger and Plourde (2005), "Teachers can become that caring relationship missing in so many students' lives. Schools can in a sense try and build that support system that will lay the foundation to set many at-risk students up for success. Resiliency challenges educators to focus more on a student's strengths instead of deficits" (p. 10). Akos and Galassi (2004) stated, "If teachers are knowledgeable and sensitive to potential stumbling blocks for students and parents, they are in a pivotal position to provide the necessary academic and social support that is essential to addressing these challenges successfully" (p. 213).

When today's high school teachers look at many of our students, they see reflections of what lies beneath the hormones and hairstyles. They see abuse, fear, pain, alienation, optimism, distrust, confidence, and other characteristics and attitudes born of the circumstances each person has been fortunate to experience or forced to endure (Holland & Mazzoli, 2001). Many students are rebellious towards school personnel, engage in inappropriate behaviors in an attempt to mask pain and rejection, are unaware of proper dress for public affairs, and lack the skills to persevere beyond the level of frustration to fill out a job application (Holland & Mazzoli, 2001). Duchesne & Ratelle (2010) noted that problem behaviors are important precursors of academic functioning at the beginning of high school and that adolescents who exhibit external behaviors such as

aggression, or internal behaviors, such as depression, are more at risk of experiencing difficulties related to their academic functioning and ultimately of dropping out of school.

Researchers Barber and Olsen (2004) found that ninth graders perceived that they received less support and monitoring from teachers and principals than they did in middle school. In another study, students reported that social concerns, such as bullying and establishing high school peer relationships, often took precedence over academics (Zeedyk et al., 2003). Declines in achievement are often due in part to lower levels of engagement, lack of study skills and feelings of displacement in the new, larger, less personal environment of high school (Heller, Calderon, & Medrich, 2003). With the academic demands of high school being more intense than that of the middle school, many students find that their study skills are inadequate and if they have not made personal connections with their new teachers, they may not be willing to ask for assistance which results in them falling further and further behind in their classes (Mizelle, 2005).

Schiller (1999) has found that the transition to high school involves “disrupting relationships with teachers and peers at a time when teenagers are becoming more independent from their families and experiencing less parental involvement in their schooling” (p. 216). When parents are involved in a student’s transition to high school and school experiences, students tend to achieve more, are better adjusted, and are less likely to drop out of school (Mizelle & Irvin 2000). Parental involvement in a child’s education is often determined through the presence of specific parent behaviors: participation in school activities, communication with teachers about their children, communication with their child about the importance of an education, having aspirations

for their child's education, and the implementation of rules in the home environment that highlight the significance of a quality education (Fan & Chen, 2001). Epstein (2001) identifies six types of involvement that may be utilized to help develop more comprehensive programs of school, family, and community partnerships. The framework of involvement consists of parenting, communicating, volunteering, learning at home, decision making, and collaborating with the community.

### **Attendance**

Attendance is closely related to academic success. Ninth grade had the lowest attendance of any grade level with the average of 78% compared to 92.5% in the first grade and 80% in the twelfth grade (Hertzog & Morgan, 1998). Research states that ninth graders who have missed up to five days of school stand a 29% chance of failing a core subject. The rate more than doubles to 61% for those who have missed fifteen or more days. High school students who have high absenteeism frequently score lower in the areas of academics, self-esteem, social competence, and discipline (Corville-Smith, Ryan, Adams, & Dalicandro, 1998). In addition to being in attendance, students must also engage in the learning process in order to be successful.

Almost all students, even those who end up graduating and entering college, experience a decline in attendance in ninth grade. However, research indicates that relative to students who graduate high school, those who leave school prematurely have experienced steeper ninth grade declines (Grossman & Cooney, 2009). Fredericks, Blumenfeld, and Paris (2004) identified three components of school engagement – behavioral, which is measured by a student's involvement in school activities; emotional, which is measured by a student's relationship with friends, teachers, and the school itself;

and cognitive, which is measured by the student's effort to learn and improve themselves both academically and socially.

### **Ninth Grade Retention and the Dropout Rate**

Ninth grade retention is one of the leading indicators of a student dropping out of high school (Nola-Gainey, 2007). Nationwide, students retained in the ninth grade are 5 to 11 times more likely to dropout than students who are promoted to the tenth grade. Researchers conclude that students who are retained are at greater risk of dropping out of high school. Many ninth graders drop-out because they are not excited about their education or have failed to establish a relationship with adults on campus.

In reviewing the literature concerning dropouts, it is evident that students who drop out of school are usually males from poor, minority single-parent households. The National Center for Dropout Prevention conducted research during the past decade that showed three common dropout indicators; these indicators were academic failure, high absenteeism, and disciplinary problems (Nola-Gainey, 2007). These three indicators are merely characteristics shown by potential dropouts rather than root causes of dropping out of school.

Most of the root causes for students dropping out of school are not related to academic achievement but to some of the following causes: lack of social skills, lack of understanding the value of a high school education, pregnancy, drug use, family issues, and feelings of alienation and isolation. According to statistics from the U.S. Department of Education (2008), students drop out of school for some of the following reasons: they detest being in school, poor academic achievement, experiences of grade retention, no sense of belonging to the school, and being lost in a larger school setting.

### **Transitioning to High School**

To date, there are various approaches that have been taken in the implementation of small learning community structures aimed at easing the transition of students from eighth to ninth grade. For some students, a solution to easing the transition to high school may be as simple as providing them with small hand held maps of the campus and their daily schedule (McCallumore & Sparapani, 2010; Morgan & Hertzog, 2001) but for the majority of ninth graders, this is not the case. Queen (2002) conducted a comprehensive study on the effects of transitions from middle school to high school and identified twelve factors that contribute to a successful transition:

1. The larger the high school, the greater the negative impact of transition on ninth grade students;
2. Ninth grade students' adjustment to high school are complicated by their perceptions of a bigger school, different environment, changed class schedule and smaller classes;
3. Fear of getting lost in the high school building is by far the number one fear among ninth grade students;
4. Ninth grade students view high school teachers as less helpful than middle school teachers;
5. Ninth grade students must have at least one adult in their lives for genuine support in order to become socially and academically successful;
6. The lower the students' grades drop during ninth grade transition, the higher the students' probability of dropping out of school;

7. Students who failed during the transition and drop out of school experience lifelong difficulties – physically, emotionally, socially, and economically;
8. Students, once in school, who experience two or more transitions prior to ninth grade, have a greater probability of quitting high school;
9. High school dropout rates are higher for middle school students than for those students attending K-8 schools;
10. Ninth grade students who have negative experiences during the transition period have poor attendance, low grades, and fewer friends. They tend to become behavior problems and have greater vulnerability to negative peer influence;
11. Dropout rates increase for poorly transitioned, especially minority students, in schools using high-stakes testing;
12. Social and economic factors negatively impact graduation rates, especially in large urban areas (p. 12-13).

Furthermore, attending large classes with unfamiliar students from other middle schools throughout a school district may also contribute to feelings of isolation and confusion, potentially resulting in frequent absences and academic failure because it seems no one cares (McIntosh & White, 2006; Fritzer & Herbst, 1996). With such a strong correlation between students' ninth grade course performance and the likelihood of graduating from high school (Allensworth & Easton, 2007), the ninth grade has become an area of focus for many school districts across the country.

One method of improving ninth grade course performance is to improve school conditions influencing the actions and behaviors responsible for ninth grade failure (Allensworth & Easton, 2007). One condition viewed as being instrumental in ninth grade student performance is the size of the school. Raywid (1997), in a compilation of studies on small schools, found that “size had more influence on student achievement than any other factor controllable by educators” (p. 6). McMullan, Sipe, and Wolf (1994) compared student data from small high schools and traditional high schools in Philadelphia. When examining the attendance, number of credits earned, and number of courses passed, there was a significant difference between the ninth grade students in the small high school and those in the traditional high school. In fact, “the differences between the two groups are quite substantial, ranging from 11 to 15 percentage points across nine distinct indicators of academic performance” (p. 38).

Cotton (1996) reported that students in small schools have a more positive attitude. This attribute may be noted in their attendance and increased participation in extracurricular activities when compared to students in large high schools. Additionally, “interpersonal relations between and among students, teachers, and administrators are more positive in small schools” (Cotton, 1996, p. 18). Perhaps this is due to the fact that small schools “encourage stronger bonds between students and teachers while generating a level of genuine caring and mutual obligation between them that’s found far less frequently in comprehensive high schools” (Toch, 2003, p. 13).

The most effective model of home-school communication relationships view parents and teachers as partners that are collaborating to meet the needs of students where both parties are equally responsible for the educational success of the child (Nelson &

Guerra, 2009). Parents and teachers that work collaboratively are less likely to fault the other party for possible academic shortcomings of the child. These positive attitudes and relationships help students “take more responsibility for their own learning” (Cotton, 1996, p. 18) which aids in improving academic performance.

In researching practices that impact student achievement, the Southern Regional Education Board (2005) suggested that “high schools assign highly qualified teachers to ninth grade classrooms, balance teacher/student ratios in ninth grade to ensure freshmen get the attention they need, establish schedules that give students more time in critical subject areas, work with parents to create individualized school completion and career goal plans, provide students with academic mentors to monitor progress towards graduation, and enroll ninth grade students at risk of failing in at least one vocational/technical course to connect the school curriculum with career preparation” (p. 23). The implementation of these practices provides opportunities for all stakeholders to communicate and submit input aimed at fostering ninth grade student success.

In an effort to improve students’ academic performance, schools attempt to emulate the positive effects of small school size in larger schools by downsizing the student body into smaller units within the larger school setting. The intent of these restructuring efforts is to provide, “smallness inside the larger whole....to transform the way the school feels to those who learn there” (George & McEwin, 1999, p. 15). Large high schools are oftentimes reorganized into smaller units know as houses, academies, schools-within-a-school, or small learning communities. Regardless of the label, these smaller units exhibit three common characteristics: “small size, an organizational structure departing significantly from the conventional, and a setting that operates more

like a community than a bureaucracy” (Raywid, 1997, p. 34). Of each of the types of downsizing units, schools most often implement small learning communities to address the condition of ninth grade student’s academic performance (United States Department of Education [USDOE], 2008).

According to Reents (2002), a successful transition to high school should incorporate a separate physical location on campus for ninth grade students, as it has a positive effect on their learning success. By physically separating the ninth grade students’ classrooms from the rest of the high school student body, schools are providing the new high school students with additional support to learn the building and to become more familiar with the school’s academic curriculum while avoiding the potential pitfalls of students becoming overwhelmed in the larger school setting (Reents, 2002). This setup also aids students in developing relationships with other ninth graders while receiving academic support from teachers.

### **Small Learning Communities**

A small learning community is “any separately defined, individualized learning unit within a larger school setting” (Cotton, 2001, p. 8). The concept of small learning communities actually began with the work of Barker and Gump in the 1960s; they described a “campus model” that included a group of students who shared a group of teachers to facilitate social bonds and improve learning (Lee & Friedrich, 2007). In addition, *A Nation At Risk*, published in 1983, shed light on the idea that small learning communities could make a difference for students (Lee & Friedrich, 2007). “The label of ‘small learning communities’ makes clear that the central focus is to create conditions that engage students, support learning, and enhance development” (Felner et al., 2007, p.

210). These conditions are inclusive of various strategies aimed at personalizing the learning experience by fostering a sense of community among teachers and students (United States Department of Education [USDOE], 2008).

Ideally, small learning communities should occupy their own physical space that is separate from other groups of students within the school by assigning the community to a separate wing, floor, or building (Cotton, 2001; Felner et al., 2007; Raywid, 1997). According to Oxley (2005) while the practice of organizing secondary schools into smaller units was not a new one, the terminology has changed throughout the last four decades. School-within-a-school is a term that appeared in the 1960s and emphasized small structure. Oxley identified the terminology of the 21<sup>st</sup> century as small learning community that emphasized not only small structure, curricular specialization and choice, but also “a focus on the learner and learning, and in particular, the active and collaborative nature of teachers’ and students’ work” (p. 44).

Smallness is relative, and researchers agree that it alone does not induce improvements in academic performance (Cotton, 2001; Oxley, 2004; Raywid, 1996), but it does lend itself to improvements in learning. Oxley (2004) stated that “small size creates conditions to carry out student work that is active and collaborative” (p. 2). “It facilitates the use of organizational arrangements and instructional methods that lead to a more positive school climate and higher levels of student learning” (Cotton, 2001, p. 21).

As important as the various small learning community structural designs may be in improving students’ academic performance, there are some key concepts that are just as important in ensuring student success such as student enrollment, class size, common planning time for teachers, instructional tracking, and length of class periods (Felner et

al., 2007). Small learning communities are promising learning environments that have the potential to reverse the harmful effects of large, impersonal high schools. Small schools have a significant impact on student achievement outcomes as teachers are able to modify their instruction and curriculum to meet the individual academic needs of each student.

According to Lee and Friedrich (2007) tangible evidence exists to suggest that “small learning communities improve academic achievement, academic equity, graduation rates, and safety” (p. 262). The data also suggest that smaller learning communities can have a positive effect on the achievement of all racial subgroups as well (Lee & Friedrich, 2007). Small learning communities have the potential to make an improvement in the achievement of minority students; they foster a more pronounced emphasis on creating a strong relationship between the student and his or her teachers, and they help to align perfectly with interventions utilized in supporting at-risk students that value the extended family concept.

### **Ninth Grade Centers**

Small learning communities containing only ninth graders are often referred to as ninth grade centers. A ninth grade center is a school that is specifically designed for ninth graders in which the curriculum is arranged around the special needs of a 14- to 15-year old student transitioning into high school. Ninth grade centers are implemented “as an organizational structure to combat poor performance in ninth grade” (Smith et al., 2008, p. 33). Smith et al. (2008) also noted that the main purpose of a ninth grade center is to create a sense of community, often absent in large high schools, and to ease the academic and social transition from middle to high school.

A distinguishing feature of a ninth grade center is having its own dedicated space whether an entire building or wing (Clark & Hunley, 2007). Ideally, the most effective ninth grade centers are stand-alone campuses that separate ninth graders from other grade level students. Although this is a more expensive option, many districts garner the support of the community to erect these facilities to better serve ninth grade students. According to the United States Department of Education (2008), the ninth grade center is one of the most widely implemented types of small learning communities.

Housing the majority of what students need in close proximity helps the larger school environment feel smaller and it allows freshmen to take the majority of their classes only with other freshmen (Clark & Hunley, 2007). This may result in ninth grade classes being substantially smaller than in other grade levels. We can assume that smaller classes would enable teachers to spend more time providing individualized instruction, and in doing so, the quality of instruction should improve as well as student results. One other advantage of smaller classes is that it may lead to teachers staying in the profession longer thus increasing continuity at the ninth grade level.

Another advantage to this model is that students are more likely to get involved in extracurricular activities, such as band, choir, and athletics. "Extracurricular school programs that involve students in activities with their friends are instrumental in providing opportunities for positive peer interaction" (Queen, 2002, p. 45). When ninth grade students are grouped together in the ninth grade center, they tend to develop strong friendships with other freshmen that can carry them through tough times, such as when they experience bullying or peer pressure from older students. Paglin and Fager (1997)

also found that parents of female students appreciated the fact that their daughters were not exposed to older male students.

Gary (2004) stated that the ninth grade center “has the heart of an elementary school, the teaming of a middle school, and the curriculum of a high school” (p. 56). According to the United States Department of Education (2008), “a hallmark of freshman centers is the organization of students among teams of teachers, with common planning time provided so that teachers can discuss and resolve various student issues” (p. 94). The teaming affords teachers the opportunity to get to know their students, increasing their sense of support (Klump, 2008), and gives teachers the opportunity to focus “solely on the student’s academic and social development” (Smith et al., 2008, p. 33). The complete team usually consists of an administrator, a counselor, and possibly a social worker dedicated to the students in addition to the teacher teams (Chute, 1999).

The tenets of Dufour and Eaker’s (1998) work on professional learning communities highlight the significance of teaming and teacher collaboration. When teachers collaborate through professional learning communities, they are able to rely on each other for suggestions on how to best intervene with difficult students. Additionally, successful professional learning communities contribute to a positive school-wide culture that provides emotional and social support for teachers (Sawyer & Rimm-Kaufman, 2007). In a survey of Florida high schools, schools noted the following as reasons for implementing interdisciplinary teams: “easing the transition to high school, reducing the amount of failure in ninth grade, especially for ESOL students, and providing a more personal atmosphere for teachers and students” (George & McEwin, 1999, p. 15).

Common planning is another feature commonly used in ninth grade centers and may occur on a daily or weekly basis (McIntosh & White, 2006). During common planning sessions, teachers have the opportunity to collaborate with someone who teaches the same subject or with other core teachers to plan cross-curricular units for their shared group of students. This time is also used to discuss individual student concerns, scheduling issues, and other items that might need whole group discussion (Clark & Hunley, 2007).

Although the structural framework is important, it is extremely critical that the right people are placed in the ninth grade center as research validates that support from teachers was a significant predictor of early adolescents' perceived competence, motivation, and academic achievement (Wentzel, 1997). A successful ninth grade center will consist of teachers who will always put students first before their own personal needs and will exhibit the following characteristics (Lencioni, 2007):

1. Flexibility, persistence, dedication and a positive attitude,
2. An ability and willingness to work with at-risk students,
3. A belief that content is important,
4. A belief that all students can learn the content,
5. A belief that teachers can make a difference, and
6. Possess effective communication skills.

In addition to this, there must other initiatives put in place to help students become successful such as:

1. Collaboration among administrators, teachers, parents/guardians, and students,
2. A culture that is welcoming and accepting to change

3. An established, consistent routine for students to abide by,
4. Effective use of organization and time management,
5. Positive student recognition,
6. Parent/guardian contact, and
7. On-going evaluations and data collection (Lencioni, 2007).

In most of the research that is available on ninth grade centers, researchers examined the impact of the setting on student attendance and academic performance. Measures of academic performance include students' GPAs, the number of course credits earned, the number of courses failed, and the promotion and retention rates. These measures of academic performance, in addition to student attendance, have been the focus of previous research studies on small schools.

Ultimately, ninth grade centers represent a preventive, rather than remedial approach (Kennedy, 2001). It supports the notion that smaller classes can help students start off on the right foot in learning how to adjust to high school and get involved in learning activities while decreasing their chances of failing classes and dropping out of school (Hertzog & Morgan, 1998). Clark and Hunley (2007) note that the goal of ninth grade centers are "to provide structure, a sense of belonging, and ease the transition into high school while integrating content and increasing communication between parents and teachers" (p. 41). Another critical by-product of the ninth grade center is that in most cases, it provides a safe and secure learning environment dedicated to improving student academic performance (Halawah, 2005).

## Research Findings

Many schools experienced desirable outcomes by implementing small learning communities. Some research has indicated that participants in ninth grade centers had better attendance rates, earned fewer discipline referrals, earned better grades, and failed fewer courses (Fraker, 2006). Nadine Kujawa, former Superintendent of Aldine Independent School District in Houston, Texas, (Reents, 2002) describes the success of ninth grade centers as, “more students are earning credit and are classified as tenth graders when they go to high school. Our test scores have risen and student behavior has improved” (p. 2). High school graduates have described their ninth grade center experience as, “teaching them to believe in their capacity to advocate for themselves and others and to embrace the challenges of high expectations” (Walsh, 2002, p. 5).

There are also findings that indicate that ninth grade centers may not be the best solution to improving ninth grade student outcomes. In 2004, Gary investigated the impact of a ninth grade center on student attendance. During the 2000-2001 school year, prior to the implementation of the ninth grade center, ninth graders accounted for 38% of the school’s absences. In the first year of the ninth grade center (2001-2002), this figure increased to 43%; after the second year of the ninth grade center (2002-2003), ninth graders only accounted for 28% of the school’s absences. Although the second year of the ninth grade center produced a decrease of 15% in the number of absences, Gary concluded that “the ninth grade center approach was having little or no impact upon improving attendance” (p. 51-52). This may be attributed to what researchers refer to as the *implementation dip*, where outcomes may temporarily worsen during the first year of implementation of the small learning community (United States Department of Education

[USDOE], 2008). However, there are other studies that target the attendance of ninth graders attending a traditional high school as compared to those who are housed at a ninth grade center. Glanton (2001) and Torres' (2004) studies both concluded that there was a significant difference between the ninth grade center and traditional high school in the number of days students were absent. Ninth grade center students had fewer absences than those attending the traditional high school in the same district.

Those who are skeptical assert that because there are so many different ways to implement and structure small learning communities, it may not be possible to fully attribute success strictly to the redesign concept itself, but instead the change is a result of a feature of the small learning community (Lee & Friedrich, 2007). Kahne, Sporte, de la Torre, and Easton (2008) reported mixed results in whether or not small learning communities improved the dropout rate and found that student achievement was not improved. "Implementing small learning communities is likely to improve the climate of school but will not, in and of itself, increase student achievement. It may help to do so, but the studies do not provide conclusive evidence on this point" (Quint, 2006, p. 4).

Other disadvantages noted by researchers regarding stand-alone ninth grade centers are that some parents may have children at two or more campuses, making it difficult for them to become involved, as well as the challenges that different bell and bus schedules may pose to families. Some ninth grade only schools may not be able to offer a wide variety of elective classes and may have to focus only on academic core classes (Paglin & Fager, 1997). One way around this is for school districts to employ teachers with multiple certifications and specialized areas of interest which allows them to

facilitate these classes while allowing students the opportunity to have a broader variety of course offerings.

Another disadvantage is that older students are not able to serve as mentors to ninth grade students. Paglin & Fager (1997) found that some students may not mature academically and behaviorally as quickly without the positive role modeling from older students. Howley (2002) found that students need multi-age grouping more than they need single grade-level schools. Howley further states, “It’s the way we engage kids personally, the way we teach, and the overall climate of the school that are more important” (p. 6).

Gifford and Dean (1990) compared ninth graders in junior high who have yet to make a transition to high school to ninth graders in high school. The ninth graders in junior high school had higher GPAs (Grade Point Averages) than the ninth graders in high school. Glanton (2001) and Torres (2004) also found that the Grade Point Average (GPA) of first-time ninth graders was significantly lower than the comparison group of ninth graders attending a traditional high school in the same district. In regards to the number of credits earned and performance on standardized tests, many researchers (Gary, 2004; Torres, 2004; Raywid, 1997) found that the data shows a significant number of ninth grade center students earning the maximum number of course credits and performing satisfactorily on standardized tests, thus illustrating the positive impact this structure has on student achievement. In addition, Torres (2004) noted that the retention rate was lower for ninth grade center students in the first and second year of its implementation as compared to those attending ninth grade at a traditional high school.

A published report from the United States Department of Education entitled, *Implementation Study of Smaller Learning Communities* (2008), examined data from 119 campuses who received grant funding to implement small learning communities at the high school level in an effort to “create a more personalized high school experience for students, and thus improve student achievement” (United States Department of Education [USDOE], 2008, p. 2). The report states, “although ninth grade promotion rates appear stable, on average, across all years of data collection, there is a statistically significant positive trend in the percentage of ninth graders being promoted to tenth grade during the post-grant period” (United States Department of Education [USDOE], 2008, p. 123).

### **Conclusion**

An extensive amount of literature has examined the importance of providing ninth graders with the necessary structures and supports needed to become successful in high school and beyond. The transition from middle school to high school is a time of great academic loss for a number of students and in order to minimize dropouts, increase graduation rates and standardized test scores, schools must find effective transition interventions to assist their students during the middle to high school transition.

The job of educators is to find ways to keep students engaged in the learning process while growing into socially responsible, productive citizens. The research is clear in that establishing a school specifically for ninth graders is one way to achieve this. Howley (2002) supports the theory that in a single grade-level school the number of transitions students must make affects their academic achievement. Renschler (2002) also states that the more transitions students make within their educational career, the higher

their stress level. Transitions are never easy but putting the necessary supports in place can ease the process and improve the desired outcomes for many students.

## **Chapter 3**

### **Methodology**

#### **Introduction**

This chapter contains an explanation of the quantitative research methods used in this study to determine if a relationship exists between the academic performance, as measured by retention rates and achievement on standardized tests, attendance rates, and dropout rates of ninth graders housed at stand-alone ninth grade centers as compared to those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. The archival data that will be used in this study come from all comprehensive high schools and ninth grade centers located in Region 4 (Houston). The research methodology is inclusive of the type of research design used, the setting, a description of the comparison groups of students and their formation, the data collection process used in the study, a description of the statistical test used to analyze the data and the limitations of the study.

#### **Research Design**

A true experimental design is not appropriate for this study since the manipulation of the independent variable, ninth grade students housed at stand-alone ninth grade centers versus those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, has already occurred and the groups of students in this study have already been established making random selection of each group impossible. Also, all of the data used in this study was pre-existing, historical data archived by the Texas Education Agency (TEA). Under these conditions, a quasi-experimental design with a causal-comparative, or ex post facto, approach was the most appropriate methodology for this study.

Causal-comparative designs allow the researcher to compare two or more groups to identify the effects or outcomes associated with a cause under conditions where experimental manipulation is difficult or impossible. This also holds true in using quantitative research as it is used to test hypothesis, examine cause and effect, and make predictions. Based upon the research questions designed for this study, it is necessary to use the quantitative method in order to determine differences in performance of ninth grade students housed in both educational settings.

In this study, there were two groups of participants under comparison – one receiving the treatment and one who did not receive the treatment – during their ninth grade year of high school. The treatment, or independent variable, was participation in a ninth grade center. The dependent variables of attendance, retention rates, dropout rates, and standardized test scores (TAKS) were used to measure the effects of the treatment, if any, by comparing the outcomes achieved by each experimental group. Attendance was measured using attendance rates throughout the academic year. Academic performance was measured using standardized test results, as well as the total number of students retained at the end of the ninth grade year. Dropout rates were used to measure the impact that participation in ninth grade centers had on student success.

In order to determine if relationships exist between the academic performance, as measured by retention rates and achievement on standardized tests, attendance rates, and dropout rates of ninth grade students housed at stand-alone ninth grade centers and ninth grade students housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, this study examined the following research questions and hypothesis:

## Research Questions

1. In Region 4, is there a difference in the attendance rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting?
2. In Region 4, is there a difference in the retention rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting?
3. In Region 4, is there a difference in the dropout rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting?
4. In Region 4, is there a difference in the standardized test scores, as measured by the Texas Assessment of Knowledge and Skills (TAKS), of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting?

## Hypotheses

Each null and alternative hypothesis coincides with the research question of the same number in the preceding section.

- H<sub>10</sub>: There is no significant difference in the proportion of attendance of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H<sub>11</sub>: There is a significant difference in the proportion of attendance of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.

- H2<sub>0</sub>: There is no significant difference in the proportion of retention of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H2<sub>1</sub>: There is a significant difference in the proportion of retention of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H3<sub>0</sub>: There is no significant difference in the proportion of dropouts of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H3<sub>1</sub>: There is a significant difference in the proportion of dropouts of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H4<sub>0</sub>: There is no significant difference in the proportion of students that met TAKS passing standard of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.
- H4<sub>1</sub>: There is a significant difference in the proportion of students that met TAKS passing standard of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.

### **Setting**

The traditional high schools used in this study are all comprehensive in nature, meaning they offer more than one course of specialization in its academic program, and all reside within the Greater Houston area or Region 4. At the end of the 2010-11 school year, there were 132 comprehensive high schools in Region 4, which encompass 53 school districts covering 7 counties. The Region 4 students come from a number of diverse backgrounds. The overall racial composition is 43% Hispanic, 29% Caucasian, 22% African American, 6% Asian, and 0.2% Native American, although these ratios vary widely between school districts. About 75% of students from Region 4 come from economically disadvantaged families and 19% have limited English proficiency.

The ninth grade centers used in this study are separate buildings that provide a comprehensive academic and extracurricular experience for all ninth grade students. In total, there are 10 stand-alone ninth grade centers in Region 4. Each campus used in this study has its own administrative staff consisting of a principal and several assistant principals and truly functions independently of the 10<sup>th</sup>-12<sup>th</sup> grade campus it feeds into. Typically, ninth grade center students have access to all the amenities afforded to students in the traditional high school setting, but on a smaller scale.

### **Population and Sample**

The purpose of this study was to determine if relationships exist between participation in ninth grade centers and student achievement, as measured by retention rates, standardized test scores, attendance rates, and dropout rates. Although this is a causal-comparative study and does not exhibit a true experimental design, there were still two populations of participants included in the study – one serving as the control group

while the other served as the treatment group. The first population, serving as the control group, included ninth graders who attended class in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting between 2007 and 2010, within Region 4. This group of students was referred to as the Region 4 group of ninth graders. The second population, serving as the treatment group, examined the effects of the cause and included ninth grade students who completed the ninth grade at a stand-alone ninth grade center between 2007 and 2010, within Region 4. This group of students was referred to as the ninth grade center group of ninth graders. This study compared data from each population to identify if any differences exist in their levels of achievement. Being that random sampling was not possible since the groups of ninth graders were previously established and each has already received the treatment, convenience sampling was used for this study.

### **Sample Size**

The Region 4 comparison group consists of three co-horts of ninth graders who were enrolled in a traditional 9<sup>th</sup>-12<sup>th</sup> grade high school setting. The first group of Region 4 ninth grade students (R4-1) completed ninth grade during the 2007-2008 school year. The second group of Region 4 ninth grade students (R4-2) completed ninth grade during the 2008-2009 school year and the third group of Region 4 ninth grade students (R4-3) completed ninth grade during the 2009-2010 school year.

The ninth grade center comparison group consists of three co-horts of ninth graders who were enrolled at stand-alone ninth grade centers in various school districts throughout Region 4 (Houston). The first group of ninth grade center students (NGC-1) completed ninth grade during the 2007-2008 school year. The second group of ninth grade center students (NGC-2) completed ninth grade during the 2008-2009 school year

and the third group of ninth grade center students (NGC-3) completed ninth grade during the 2009-2010 school year.

### **Data Collection**

The Texas Education Agency (TEA) believes the public has a right to know how its schools are doing. With that said, Texas has one of the largest education data bases in the world, known as the Public Education Information Management System (PEIMS), which provides access to a limitless amount of information for researchers, parents and the public to mine and learn about the workings of all school districts and campuses throughout the state. All of the data used to conduct this study was retrieved from this database and contained neither names nor information that would identify individual ninth grade students.

Since the public data provided by the Texas Education Agency was limited to the overall campus data in some cases and were not specific to ninth grade, the researcher contacted a representative at the Texas Education Agency (TEA) in order to get ninth grade specific statistics. Being that this research study used archival data and no human subjects were used for data collection, consent from the school districts under investigation was not required. However, a formal request to conduct research was submitted to the University of Houston's Institutional Review Board (IRB) via the Research Administration Management Portal (RAMP). A copy of the IRB approval notification letter from the university is included as Appendix A.

## Attendance Rates

The Texas Education Agency provides access to the attendance rates of every public school in the state. The instrument most commonly used to view annual attendance rates are the Academic Excellence Indicator System (AEIS) reports. These reports pull together a wide range of information on the performance of students in each Texas school and district annually. The attendance rate is calculated by taking the total number of days students were in attendance divided by the total number of days students were in membership or enrolled. Because the AEIS data for attendance was calculated for the total school population, the researcher contacted a representative at the Texas Education Agency (TEA) to get ninth grade specific statistics. The following tables show the attendance rates of the Region 4 and ninth grade center comparison groups.

Table 1

### *Region 4 Ninth Grade Attendance Rates*

Region 4 Group (R4#)	Number of Participants	Attendance Rate (%)
R4-1 (2007-2008)	88,068	95.5
R4-2 (2008-2009)	86,258	95.6
R4-3 (2009-2010)	86,777	95.6

Table 2

### *Ninth Grade Center Attendance Rates*

Ninth Grade Center Group (NGC#)	Number of Participants	Attendance Rate (%)
NGC-1 (2007-2008)	8,990	93.0
NGC-2 (2008-2009)	11,031	93.0
NGC-3 (2009-2010)	11,594	93.8

## **Retention Rates**

Traditionally, grade retention has been defined as “the practice of requiring a child to repeat a particular grade” (Rafoth, Dawson, & Carey, 1988). This definition of retention applies primarily to Grades K-6; repeating the same grade level in successive years in high school does not necessarily represent the repetition of a full year’s curriculum as it does in elementary school. Retention rates are calculated by comparing grade level attendance records from the previous year with enrollment records of the current year. Simple division is then used to calculate the rate by dividing the total number of students retained by the total student count. In order to be promoted to the next grade level, the school districts used in this study have established the attainment of a set number of credits as the minimum standard for promotion from ninth to tenth grade.

There was a discrepancy in the total number of participants involved in the data collection and reporting process for determining retention, as data was not inclusive of all enrolled ninth graders. Students who left the Texas public school system for any reason other than graduation were excluded from the total student count. Students new to the Texas public school system in the fall semester of the years under investigation (2007-2010) were also excluded. Therefore, because of the criteria used, student counts differed from those noted on other data tables used in the study. The researcher used reports from the Texas Education Agency’s Public Education Information Management System (PEIMS) to determine ninth grade retention rates for the corresponding school years used in this study. The following tables show the retention rates of the Region 4 and ninth grade center comparison groups.

Table 3

*Region 4 Ninth Grade Retention Rates*

Region 4 Group (R4#)	Number of Participants	Number Retained	Retention Rate (%)
R4-1 (2007-2008)	82,497	12,789	15.5
R4-2 (2008-2009)	81,307	10,374	12.8
R4-3 (2009-2010)	82,048	9,446	11.5

Table 4

*Ninth Grade Center Retention Rates*

Ninth Grade Center Group (NGC#)	Number of Participants	Number Retained	Retention Rate (%)
NGC-1 (2007-2008)	8,551	1,587	18.5
NGC-2 (2008-2009)	8,329	1,027	12.3
NGC-3 (2009-2010)	9,791	870	8.8

**Dropout Rates**

According to the National Center for Education Statistics (2006), a dropout is defined as a student who is enrolled in a public school in grades 7-12, does not return to public school the following fall, is not expelled, and does not graduate, receive a GED, continue school outside of the public school system, begin college or die. The Texas Education Agency (TEA) provides withdrawal codes to campuses to categorize students who leave high school. Some of the codes inclusive of a dropout include expulsion, incarceration, students enrolling in adult education programs and those removed from school due to lack of attendance, just to name a few. The dropout rate is calculated by the number of students with a withdrawal code that defines the student as a dropout divided

by the number of students that attended a particular school. Because the AEIS data for dropout rates were calculated for the total school population, the researcher contacted a representative at the Texas Education Agency (TEA) to get ninth grade specific statistics. The following tables show the dropout rates of the Region 4 and ninth grade center comparison groups.

Table 5

*Region 4 Ninth Grade Dropout Rates*

Region 4 Group (R4#)	Number of Participants	Dropout Rate (%)
R4-1 (2007-2008)	88,068	3.6
R4-2 (2008-2009)	86,258	2.9
R4-3 (2009-2010)	86,777	2.5

Table 6

*Ninth Grade Center Dropout Rates*

Ninth Grade Center Group (NGC#)	Number of Participants	Dropout Rate (%)
NGC-1 (2007-2008)	8,990	2.5
NGC-2 (2008-2009)	11,031	2.2
NGC-3 (2009-2010)	11,594	1.7

## Standardized Test Scores

The researcher used ninth grade student results from the Texas Assessment of Knowledge and Skills (TAKS) as a measure of academic performance. These assessments are designed to measure the extent to which students have learned and are able to apply the defined knowledge and skills at each tested grade level. Ninth grade students only test in the area of reading and mathematics; these are the two assessments that will be used to measure ninth grade student achievement. The researcher gathered data from the Academic Excellence Indicator System (AEIS) reports to determine results. The following tables show the percentage of students that met passing standards on Reading and Math TAKS of the Region 4 and ninth grade center comparison groups.

Table 7

### *Region 4 Ninth Grade TAKS Results*

Region 4 Group (R4#)	Number of Participants	Reading (%)	Math (%)
R4-1 (2007-2008)	88,068	87	65
R4-2 (2008-2009)	86,258	90	71
R4-3 (2009-2010)	86,777	92	74

Table 8

### *Ninth Grade Center TAKS Results*

Ninth Grade Center Group (NGC#)	Number of Participants	Reading (%)	Math (%)
NGN1 (2007-2008)	8,990	88	65
NGN2 (2008-2009)	11,031	90	73
NGN3 (2009-2010)	11,594	93	76

### **Data Analysis**

The data contained in the tables were plugged into Statistical Analysis Software (SAS) to calculate descriptive statistics for each group. The results of this analysis provided the descriptive characteristics of each group of participants. SAS was used to calculate the means and standard deviations for the combined Region 4 and ninth grade center groups for each dependent variable under investigation – attendance rates, retention rates, dropout rates, and student performance on standardized tests, specifically TAKS. The Pearson chi-squared test of homogeneity of proportions was used to identify any differences between the variables under analysis at the alpha equal to .05 level of significance. This test classified the experimental units into one of two categories: students in attendance as compared to those absent; students retained as compared to those promoted; students identified as dropouts as compared to those who complete school; students meeting passing standard on TAKS as compared to those failing to meet standard.

The first research question examined if any differences exist in the attendance rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders house in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. Student attendance is indicated by the number of days a student is absent from school. In the first analysis, the attendance rate of the Region 4 ninth grade groups were compared to that of the ninth grade center groups using Pearson's chi-squared test of homogeneity of proportions. The results of the analysis answered the first research question and tested both the null and alternative hypothesis. The null hypothesis for question one ( $H_{10}$ ) states there is no significant difference in the attendance of ninth graders housed at stand-alone ninth grade centers as

compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, while the alternative hypothesis ( $H1_1$ ) states there is a significant difference in attendance.

The second research question examined if any differences exist in the retention rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. The number of credits a student earns by the end of the ninth grade year determines whether a student is promoted to the tenth grade or retained in the ninth grade. Students are retained when they do not earn the required number of course credits, as determined by each respective school district, for promotion to the tenth grade.

In this analysis, the retention rate of the Region 4 ninth grade group was compared to that of the ninth grade center groups using Pearson's chi-squared test of homogeneity of proportions. The results of the analysis answered the second research question and tested both the null and alternative hypothesis. The null hypothesis for question two ( $H2_0$ ) states there is no significant difference in the retention of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting while the alternative hypothesis ( $H2_1$ ) states there is a significant difference in rates of retention.

The third research question examined if any differences exist in the dropout rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. In this analysis, the total number of students categorized as dropouts of the Region 4 ninth grade group was compared to the ninth grade center groups using Pearson's chi-squared test of homogeneity of proportions. The results of the analysis answered the third research question and tested both the null and

alternative hypothesis. The null hypothesis for question three ( $H3_0$ ) states there is no significant difference in the proportion of dropouts of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting while the alternative hypothesis ( $H3_1$ ) states there is a significant difference in dropout rates.

The fourth research question examined if any differences exist in the standardized test scores, as measured by the Texas Assessment of Knowledge and Skills (TAKS), of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. In this analysis, the total number of Region 4 ninth graders, who met passing standard on the reading and mathematics TAKS test, were compared to the ninth grade center groups using Pearson's chi-squared test of homogeneity of proportions. The results of the analysis answered the fourth research question and tested both the null and alternative hypothesis. The null hypothesis for question four ( $H4_0$ ) states there is no significant difference in the proportion of students who met passing standard on TAKS for ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting while the alternative hypothesis ( $H4_1$ ) states there is a significant difference in the proportion of students that met passing standards.

### **Limitations**

There are many variables that can impact student achievement during the ninth grade year of high school; however, every effort was made to ensure that the population representing the ninth grade groups used in this study were similar enough to produce valid and reliable results. In regards to the research, there were several limitations noted

and each should be acknowledged and taken into consideration when generalizations are made regarding the findings:

1. Although the study used performance data from the ninth grade, the broad scope of districts from which this data was obtained does not ensure similar demographic composition of students and levels of performance may have been influenced by variables not taken into consideration during the course of this study, such as change in administrative leadership.
2. The length of this study covers three school years, 2007-2008, 2008-2009, and 2009-2010; the length of the treatment for the ninth grade center groups being studied was only one year. The researcher acknowledges that a one-year treatment is a relatively short period of time to produce results.
3. Because the research design used in this study does not allow for manipulation of a variable and the causes are studied after they have exerted their effect on another variable, determining causal patterns with any degree of certainty is difficult.

### **Conclusion**

This chapter addressed the study's methodology, data collection procedures, and data analysis techniques used in determining responses to research questions. The results of the data analysis are presented in the next chapter.

## **Chapter 4**

### **Results**

This chapter provides the results of this causal comparative study that identifies if there is a difference in the achievement levels of ninth graders who participate in ninth grade centers as compared to those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. The first population, serving as the control group, included ninth graders who attended class in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting between 2007 and 2010, within Region 4. This group of students was referred to as the Region 4 group of ninth graders. The second population, serving as the treatment group, examined the effects of the cause and included ninth grade students who completed the ninth grade at a stand-alone ninth grade center between 2007 and 2010, within Region 4. This group of students was referred to as the ninth grade center group of ninth graders.

In order to investigate the impact ninth grade centers have on student achievement, Pearson's chi-squared test of homogeneity of proportions was used to answer each research question and test the accompanying hypotheses. The data for the Region 4 groups were combined for each of the four variables under investigation and compared to that of the ninth grade center groups. The data for each group was analyzed to determine if there was a statistically significant difference in performance between any of the groups. The results of the data analysis pertaining to each research question and the accompanying hypotheses are discussed in this chapter. The variables under investigation are used to identify each section which explains if a relationship exists between ninth grade center participation and student achievement.

## Presentation of Data

### Attendance

The first research question examines if any differences exist in the attendance rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. The null hypothesis for question one ( $H_{10}$ ) states there is no significant difference in the attendance of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, while the alternative hypothesis ( $H_{11}$ ) states there is a significant difference in attendance. Pearson's chi-squared test of homogeneity of proportions was utilized to determine if the difference between the attendance rates of the two types of campuses under comparison were statistically significant. Table 9 shows the mean attendance rate for Region 4 and ninth grade center student groups, both individually and combined.

Table 9

*Mean Attendance Rate for All Groups (Mean N)*

Group	R4-1	R4-2	R4-3	Region 4	NGC-1	NGC-2	NGC-3	9 <sup>th</sup> Grade Centers
MAR	.955	.956	.956	.955	.935	.930	.939	.934

The comparison revealed that students attending school in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting had statistically significant higher attendance rates ( $M = .955$ ) during the three years under investigation (2007-2010) when compared to that of the stand-alone ninth grade centers ( $M = .934$ ). The results from both the combined and individual analyses of student attendance showed a significant difference exists between groups. The difference is in favor of those attending classes with other grade level students in a

traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. Therefore, the null hypotheses for question one (H1<sub>0</sub>) stating that there is no significant difference in the attendance of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting is rejected at the .05 level of significance. With regard to the first research question, participation in ninth grade centers may have a negative relationship on student attendance.

### **Student Retention**

The second research question examines if any differences exist in the retention rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. The number of credits a student earns by the end of the ninth grade year determines whether a student is promoted to the tenth grade or retained in the ninth grade. Students are retained when they do not earn the required number of course credits for promotion to the tenth grade. The null hypothesis for question two (H2<sub>0</sub>) states there is no significant difference in the retention of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, while the alternative hypothesis (H2<sub>1</sub>) states there is a significant difference in rates of retention.

Two comparisons were used to identify if there was a significant difference between those students participating in ninth grade centers (NGC 1, NGC2, and NCG3) and those whom did not (R4-1, R4-2, and R4-3) in the number of students retained/promoted at the end of their ninth grade year. Pearson's chi-square test was utilized to determine if the difference between the two proportions were statistically significant. To test the hypotheses, a two by two chi-square design was used to compare

those retained vs. promoted and like year ninth grade groups (R4-1 vs. NGC-1). Table 10 shows the mean number of students retained and promoted for Region 4 and ninth grade center student groups, both individually and combined. Table 11 shows the total number of students retained and promoted at traditional 9<sup>th</sup> -12<sup>th</sup> grade campuses and stand-alone ninth grade centers during the three years under investigation.

Table 10

*Proportion of Ninth Grade Students Retained/Promoted for All Groups (Mean N)*

Group	R4-1	R4-2	R4-3	Region 4	NGC-1	NGC-2	NGC-3	9 <sup>th</sup> Grade Centers
MRet.	.155	.128	.115	.132	.185	.123	.088	.132
MPro.	.845	.872	.885	.867	.815	.877	.912	.868

Table 11

*Proportion of Ninth Grade Students Retained/Promoted for All Groups (Total N)*

Group	Students Retained	% Retained	Students Promoted
Region 4 (2007-2010)	32,609	15.3	213,243
Ninth Grade Centers (2007-2010)	3,484	15.0	23,187

The comparison revealed that students (R4-1 vs. NGC-1) attending school in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting had statistically significant lower retention rates ( $M = .155$ ) during the 2007-2008 school year when compared to that of the stand-alone ninth grade centers ( $M = .185$ ). In 2009-2010, the stand-alone ninth grade centers yielded statistically significant outcomes when comparing NGC-3 ( $M = .088$ ) to R4-3 ( $M = .115$ ) rates of retention. The results from the combined groups during the three years under investigation (2007-2010), showed that there are no statistically significant outcomes

when comparing the overall retention and promotion rates for students housed in both settings, thus the null hypothesis  $H_{20}$  cannot be rejected using the .05 level of significance. With regard to the second research question, participation in ninth grade centers did not have an impact on decreasing campus retention rates.

### **Dropout Rates**

The third research question examines if any differences exist in the dropout rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. The null hypothesis for question three ( $H_{30}$ ) states there is no significant difference in the proportion of dropouts of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, while the alternative hypothesis ( $H_{31}$ ) states there is a significant difference in dropout rates. Pearson's chi-squared test of homogeneity of proportions was utilized to determine if the difference between the dropout rates of the two types of campuses under comparison were statistically significant. Table 12 shows the mean dropout rate for Region 4 and ninth grade center student groups, both individually and combined.

Table 12

#### *Mean Dropout Rate for All Groups (Mean N)*

Group	R4-1	R4-2	R4-3	Region 4	NGC-1	NGC-2	NGC-3	9 <sup>th</sup> Grade Centers
MDR	.036	.029	.025	.030	.025	.022	.017	.021

The comparison revealed that students attending school at stand-alone ninth grade centers had statistically significant lower dropout rates ( $M = .021$ ) during the three years under investigation (2007-2010) when compared to that of the traditional 9<sup>th</sup>-12<sup>th</sup> grade

campus ( $M = .030$ ). The results from both the combined and individual analyses of student attendance showed a significant difference exists between groups. The difference is in favor of those attending classes at stand-alone ninth grade centers. Therefore, the null hypotheses for question one ( $H_{30}$ ) stating that there is no significant difference in the dropout rates of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting is rejected at the .05 level of significance. With regard to the third research question, participation in ninth grade centers may have a positive relationship on decreasing campus dropout rates.

### **Standardized Test Scores**

The fourth research question examines if any differences exist in the standardized test scores, as measured by the Texas Assessment of Knowledge and Skills (TAKS), of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. The null hypothesis for question four ( $H_{40}$ ) states there is no significant difference in the proportion of students who met passing standard on TAKS for ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, while the alternative hypothesis ( $H_{41}$ ) states there is a significant difference in the proportion of students that met passing standards.

Two comparisons were used to identify if there was a significant difference between those students participating in ninth grade centers (NGC 1, NGC2, and NCG3) and those whom did not (R4-1, R4-2, and R4-3) in the number of students passing/failing to meet standard on TAKS at the end of their ninth grade year. Pearson's chi-square test was utilized to determine if the difference between the two proportions were statistically

significant. To test the hypotheses, a two by two chi-square design was used to compare those meeting standard vs. those not meeting standard and like year ninth grade groups (R4-1 vs. NGC-1). Table 13 shows the mean number of students meeting passing standard for Region 4 and ninth grade center student groups, both individually and combined. Tables 14 and 15 show the total number of students who met standard as compare to those whom did not on the Reading and Math TAKS at traditional 9<sup>th</sup> -12<sup>th</sup> grade campuses and stand-alone ninth grade centers during the three years under investigation.

Table 13

*Proportion of Ninth Grade Students Meeting Passing Standard for All Groups (Reading/Math)*

Group	R4-1	R4-2	R4-3	Region 4	NGC-1	NGC-2	NGC-3	9 <sup>th</sup> Grade Centers
Reading	.871	.900	.921	.896	.882	.901	.931	.900
Math	.654	.712	.742	.700	.653	.732	.761	.713

Table 14

*Proportion of Ninth Grade Students Passing/Failing TAKS for All Groups (Total N-Reading)*

Group	# of Students Failed	Percentage	# of Students Passed
Region 4 (2007-2010)	27,015	11.5	234,085
Ninth Grade Centers (2007-2010)	2,992	10.4	28,620

Table 15

*Proportion of Ninth Grade Students Passing/Failing TAKS for All Groups (Total N-Math)*

Group	# of Students Failed	Percentage	# of Students Passed
Region 4 (2007-2010)	78,399	43.0	182,701
Ninth Grade Centers (2007-2010)	8,906	39.2	22,706

The comparison revealed that during two of the three years under investigation, students attending school at stand-alone ninth grade centers had statistically significant ( $\alpha = .05$ ) higher passing rates ( $M = .905$ ) on the Reading TAKS when compared to that of the traditional 9<sup>th</sup>-12<sup>th</sup> grade setting ( $M = .895$ ). While in the area of mathematics, the ninth grade center groups significantly outperformed students at the traditional high schools. In 2008-2009 and 2009-2010, the stand-alone ninth grade centers yielded statistically significant outcomes when comparing the Math TAKS scores of NGC-2 ( $M = .731$ ) to R4-2 ( $M = .713$ ) and NGC-3 ( $M = .764$ ) to R4-3 ( $M = .742$ ). The results from both the combined and individual analyses of student performance on TAKS showed a significant difference exists between groups. The difference was in favor of those attending classes at stand-alone ninth grade centers. Therefore, the null hypotheses for question four ( $H_{40}$ ) stating that there is no significant difference in the standardized test scores, as measured by TAKS, of ninth graders housed at stand-alone ninth grade centers as compared to ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting is rejected at the .05 level of significance. With regard to the fourth research question, participation in ninth grade centers may have a positive relationship on decreasing campus TAKS failure rates.

### **Summary**

Pearson's chi-squared test of homogeneity of proportions was used to answer each research question and test the accompanying hypotheses. The data for the Region 4 groups were combined for each of the four variables under investigation and compared to that of the ninth grade center groups. The data for each group was analyzed to determine

if there was a statistically significant difference in performance between any of the groups.

The results of the data analysis pertaining to each research question and the accompanying hypotheses for each of the four variables under investigation revealed a significant difference between the Region 4 group of ninth graders, those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, and the ninth grade center group, those separated from other grade levels and housed at a stand-alone campus, in their overall attendance rates. In each of these comparisons, the significant difference suggests that participation in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting does not have a negative impact on student attendance rates.

The data results used to measure the impact each campus setting had on retention rates revealed that there were no statistically significant outcomes when comparing the overall retention rates for students housed at stand-alone ninth grade centers to those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade campus setting. The results of the data pertaining to dropout rates and standardized test scores revealed that students housed at stand-alone ninth grade centers outperformed those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting on the Texas Assessment of Knowledge and Skills test and had lower dropout rates.

Various techniques and statistical analyses of data have been used by researchers over the last 10 years to prove that smaller academic structures positively impacts the quality of education a student receives. The majority of the findings by researchers show that students from smaller learning environments significantly outperformed students who were in larger class settings on both standardized and curriculum based tests, were less likely to be retained, had better attendance and lower dropout rates.

The research, and data that accompanies it, suggests that ninth grade centers are paramount in helping ninth graders clear the many obstacles they will encounter during the first year of high school. Previous research supports that when paired with other interventions, the ninth grade center has the ability to influence achievement for various types of students. Understanding how to best serve ninth grade students when they move into high schools must become a priority for all campuses. Providing a smaller learning environment, in addition to providing various types of academic and behavioral interventions, can significantly impact levels of student achievement.

The findings of this study show that participation in ninth grade centers positively impacts the desire for students to stay in school (lower dropout rates), as well as their performance on standardized tests. Results were inconclusive on the significance ninth grade center participation had on grade-level retention (at the  $\alpha = .05$  level), as the mean rate of retention was the same for both campus types during the three years under investigation. Results also revealed that attendance was significantly better for those students attending class in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting.

A summary of the study, discussion of the findings, and recommendations for further research are included in Chapter Five.

## **Chapter 5**

### **Conclusions and Recommendations**

#### **Summary of Study**

Many freshmen across the nation are confronted with the very stressful episode of ninth grade transition. Contributors to the stress include moving to a new, larger school with a different structure, new teachers and peers, and increased academic responsibilities (Clark & Hunley, 2007). Research shows that these factors play a critical role in ninth graders becoming disconnected with high school early-on, resulting in increased absenteeism, behavioral problems, deplorable academic performance and an overall negative attitude towards school (Clark & Hunley, 2007; Kennelly & Monrad, 2007).

Many leading researchers have also noted that the ninth grade year is the most significant year of a student's school career. It provides "the foundation for a successful high school experience and is an indoctrination period into the high school culture of high expectations" (Caldwell, 2007, p. 28). Statistics show that a student's attendance and academic success in his or her ninth grade year can determine, and even predict, whether the student remains on track to graduate high school in four years.

Some schools have taken easing the transition to high school to an all new level by providing separate wings or buildings that allow for an entire year of transition time before being blended with students from upper grades (Kennelly & Monrad, 2007).

These small learning community structures are known as ninth grade centers.

Implementing a ninth grade center is an organizational reform measure aimed at improving ninth grade student performance by fostering a sense of interconnectedness

among students and teachers, while isolating them from other grade levels (Barton, 2004; Smith, Akos, Lim & Wiley, 2008).

There are numerous studies that show the effects of small learning communities on attendance and academic performance. However, with regard to ninth graders, there are few studies that focus specifically on the structural design of the campus where ninth graders are housed and the effects of strategies implemented to improve attendance rates, retention rates, dropout rates, and standardized test scores.

The purpose of this quantitative study was to determine if relationships exist between participation in ninth grade centers and student achievement, as measured by retention rates, standardized test scores, attendance rates, and dropout rates. The data used in this study came from 132 traditional high schools and 10 stand-alone ninth grade centers within the Greater Houston area or Region 4, which encompass 53 school districts covering 7 counties.

The study included two groups of participants – one serving as the control group while the other served as the treatment group. The first population, serving as the control group, included ninth graders who attended class in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting between 2007 and 2010, within Region 4. The second population, serving as the treatment group, included ninth grade students who completed the ninth grade at a stand-alone ninth grade center between 2007 and 2010, within Region 4. This study compared data from each population to identify if any differences exist in their levels of achievement.

The data used in this study was plugged into Statistical Analysis Software (SAS) to calculate descriptive statistics for each group. SAS was used to calculate the means

and standard deviations for the combined Region 4 and ninth grade center groups for each dependent variable under investigation – attendance rates, retention rates, dropout rates, and student performance on standardized tests, specifically TAKS. The Pearson chi-squared test of homogeneity of proportions was used to identify any differences between the variables under analysis. This test classified the experimental units into one of two categories: students in attendance as compared to those absent; students retained as compared to those promoted; students identified as dropouts as compared to those who complete school; students meeting passing standard on TAKS as compared to those failing to meet standard. The purpose of this comparison was to answer each research question that focused on identifying if a relationship existed between ninth grade center participation and student performance.

The results of the data analysis pertaining to each research question and the accompanying hypotheses for each of the four variables under investigation revealed a significant difference between the ninth grade center group, those separated from other grade levels and housed at a stand-alone campus, and the Region 4 group of ninth graders, those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, in their dropout rates and student performance on standardized tests. The Region 4 group of ninth grades had significantly higher attendance rates when compared to that of the ninth grade center group. The data results also revealed that there was no significant difference between these groups when analyzing retention rates.

### Discussion of Findings

The research questions used to guide this study focused on identifying if relationships exist between participation in ninth grade centers and student achievement, as measured by retention rates, standardized test scores, attendance rates, and dropout rates. In regards to attendance, which is addressed in the first research question, the comparisons revealed that there is a significant difference in the attendance rates of those students housed at the 9<sup>th</sup>-12<sup>th</sup> grade campuses ( $M = .955$ ) and students housed at ninth grade centers ( $M = .937$ ). The difference between these groups are small (.018) and, though statistically significant, may not have practical significance when trying to establish the relationship between student participation in ninth grade centers and attendance. In this study, the statistical significance is in favor of ninth grade students attending the traditional 9<sup>th</sup>-12<sup>th</sup> grade high school. These findings contradict those of Glanton (2001) and Torres' (2004) whose studies both concluded that there was a significant difference between the ninth grade center and traditional high school in the number of days students were absent. Ninth grade center students had fewer absences than those attending the traditional high school.

The second research question targets if differences exist in the retention rates of students housed at stand-alone ninth grade centers as compared to those housed at a traditional 9<sup>th</sup>-12<sup>th</sup> grade campus. The comparison revealed that students (R4-1 vs. NGC-1) attending school in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting had statistically significant lower retention rates ( $M = .155$ ) during the 2007-2008 school year when compared to that of the stand-alone ninth grade centers ( $M = .185$ ). In 2009-2010, the stand-alone ninth grade centers yielded statistically significant outcomes when comparing NGC-3 ( $M = .088$ ) to

R4-3 ( $M = .115$ ) rates of retention. Although previous research done by Torres (2004) noted that the retention rate was lower for ninth grade center students as compared to those attending ninth grade at a traditional high school. For this study, the results from the combined groups during the three years under investigation (2007-2010) are identical for grade retention ( $M = .132$ ) and showed that there are no statistically significant outcomes when comparing the overall retention rates for students housed in both settings.

The third research question addressed the difference in dropout rates of students participating in ninth grade centers as compared to those attending school in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. The comparison revealed that students attending school at stand-alone ninth grade centers had statistically significant lower dropout rates ( $M = .021$ ) during the three years under investigation (2007-2010) when compared to students attending school at a traditional 9<sup>th</sup>-12<sup>th</sup> grade campus ( $M = .030$ ). The results from both the combined and individual analyses of student dropout rates showed a significant difference exists between groups. The difference is in favor of those attending classes at stand-alone ninth grade centers. This research will add to the findings in this area as researchers Kahne, Spote, de la Torre, and Easton (2008) previously reported mixed results in whether or not ninth grade centers improved the dropout rate. Although the difference between the groups are statistically significant, it is small (.009) and may not have any practical significance in determining whether there is a relationship between participation in ninth grade centers and dropout rates.

The fourth and final research question guides the assessment of any differences in the standardized test scores, as measured by the Texas Assessment of Knowledge and Skills (TAKS), of ninth graders housed at stand-alone ninth grade centers as compared to

ninth graders housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting. The comparison revealed that during two of the three years under investigation, students attending school at stand-alone ninth grade centers had statistically significant higher passing rates ( $M = .905$ ) on the Reading TAKS when compared to the performance of students attending the traditional 9<sup>th</sup>-12<sup>th</sup> grade campus ( $M = .895$ ). While in the area of mathematics, the ninth grade center groups significantly outperformed students at the traditional high schools. In 2008-2009 and 2009-2010, the stand-alone ninth grade centers yielded statistically significant outcomes when comparing the Math TAKS scores of NGC-2 ( $M = .731$ ) to R4-2 ( $M = .713$ ) and NGC-3 ( $M = .764$ ) to R4-3 ( $M = .742$ ). The results from both the combined and individual analyses of student performance on TAKS showed a significant difference exists between groups. The difference was in favor of those attending classes at stand-alone ninth grade centers; however, the difference is small which limits its practical significance and ability to establish a relationship with ninth grade center participation and standardized test scores. These findings support that of previous researchers (Gary, 2004; Torres, 2004; Raywid, 1997) who found that a significant number of ninth grade center students exhibited satisfactory performance on standardized tests, thus illustrating the positive impact this structure has on student achievement.

The results of the data analysis pertaining to each research question for the four variables under investigation revealed a significant difference between the ninth grade center group, those separated from other grade levels and housed at a stand-alone campus, and the Region 4 group of ninth graders, those housed in a traditional 9<sup>th</sup>-12<sup>th</sup> grade setting, in their dropout rates and student performance on standardized tests. The Region 4 group of ninth grades had significantly higher attendance rates when compared

to that of the ninth grade center group. The data results also revealed that there was no significant difference between these groups when analyzing retention rates, which suggest there is no relationship between ninth grade center participation and student retention. In most cases, the statistical difference in each analysis was very small which limits the practical significance of the results in establishing a relationship between ninth grade center participation and each variable.

### **Recommendations**

This quantitative study provides an indication that participation in ninth grade centers can be advantageous to students during their transition into high school. This was achieved by examining the data of students attending class at stand-alone ninth grade centers and those attending class in a traditional 9<sup>th</sup>-12<sup>th</sup> setting. More specifically, this study revealed that the isolation of ninth graders improved student performance in some of the more academically significant areas, such as fewer dropouts and better scores on standardized tests.

Student achievement is the standard by which all schools are measured and in Texas, the TAKS test is the gold standard used to evaluate the quality of teaching and learning at all public schools. As improving levels of student achievement continues to be a top priority, school districts will continue to research and employ innovative techniques aimed at providing students every opportunity to achieve academic success. When students do not experience success, dropping out of school becomes a viable option for them. In light of the reality that there are more students enrolled in the ninth grade than any other grade level, the researcher proposes three recommendations for future research.

First, the researcher recommends continued analysis of student attendance beyond grade nine as it can be hypothesized that once positive attendance habits are developed in ninth grade, it will continue throughout the duration of high school. Second, additional research should examine the long-term effects participation in ninth grade centers have on the variables of dropout rates, graduation rates, and standardized test performance.

The final recommendation made by the researcher for future study is the impact a ninth grade center staff has on student achievement. Although the structural framework is important, it is extremely critical that the right people are placed in the ninth grade center as research validates that perceived support from teachers was a significant predictor of early adolescents' perceived competence, motivation, and academic achievement (Wentzel, 1997). A successful ninth grade center will consist of teachers who will always put students first before their own personal needs (Lencioni, 2007). The researcher would like to see a study done examining the qualities possessed by faculty members at ninth grade centers and the approach used by campus leadership to professionally develop staff members in dealing with ninth grade transition issues. This study would hypothesize if levels of student achievement are due to the isolation of ninth graders or from a freshmen-specific faculty.

This study of relationships between student participation in ninth grade centers and student achievement is now realized and it is recommended that the three variables noted by the researcher be further analyzed to determine the long-term effects it has on student performance beyond the ninth grade as measured by the school or district's dropout rate, graduation rate, and standardized test scores. If ninth grade centers and the

philosophy behind them are truly making an impact, then the performance indicators used in this study should also realize significant improvements annually.

Understanding how to better serve ninth grade students when they transition into high school must become a paramount goal for all campuses. This research and the findings obtained may encourage school leaders to evaluate their current practices in attending to the needs of ninth graders so that gains in student achievement are realized.

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APPENDIX A:  
UNIVERSITY OF HOUSTON  
APPROVAL LETTER TO CONDUCT RESEARCH

## Appendix A

### University of Houston Approval Letter to Conduct Research

# UNIVERSITY of HOUSTON

## DIVISION OF RESEARCH

March 14, 2012

Charles Ned  
c/o Dr. Allen R. Warner  
Dean, Education

Dear Charles Ned,

Based upon your request for exempt status, an administrative review of your research proposal entitled "A STUDY OF RELATIONSHIPS BETWEEN PARTICIPATION IN NINTH GRADE CENTERS AND STUDENT ACHIEVEMENT" was conducted on March 8, 2012.

At that time, your request for exemption under **Category 4** was approved pending modification of your proposed procedures/documents.

The changes you have made adequately respond to the identified contingencies. As long as you continue using procedures described in this project, you do not have to reapply for review. \* Any modification of this approved protocol will require review and further approval. Please contact me to ascertain the appropriate mechanism.

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

Sincerely yours,



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

\*Approvals for exempt protocols will be valid for 5 years beyond the approval date. Approval for this project will expire **March 1, 2017**. If the project is completed prior to this date, a final report should be filed to close the protocol. If the project will continue after this date, you will need to reapply for approval if you wish to avoid an interruption of your data collection.

Protocol Number: 12303-EX